# INFLUENCE OF PUBLIC PARTICIPATION IN PROJECT LIFE CYCLE MANAGEMENT ON IMPLEMENTATION OF RAIL INFRASTRUCTURE PROJECT IN KENYA: A CASE OF STANDARD GAUGE RAILWAY PHASE 1

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**A Research Project Report Submitted in Partial Fulfillment of the Requirements for the Award of Degree of Master of Arts in Project Planning and Management of the University of Nairobi**

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## DECLARATION

This research project report is my original work and has not been presented for any award in any University.

**Signature……..... Date……**

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**L50/10283/2018**

This research project report has been submitted for examination with my approval as the University Supervisor

**Signature…… Date……**

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## DEDICATION

I dedicate this research study to my late sister, Ms. Annette Muhuzani Muyonga, a Bachelor of Commerce graduate of the University of Nairobi, who encouraged me to pursue my Master's degree and took care of my daughter so I could attend evening classes.

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## TABLE OF CONTENT

**Page**

## LIST OF TABLES

**Page**

## LIST OF FIGURES

## ABBREVIATIONS AND ACRONYMS

| | | |
|---|---|---|
| **AEC** | : | Architecture, Engineering and Construction |
| **CBO** | : | Community Based Organizations |
| **CDF** | : | Constituency Development Fund |
| **ICED** | : | International Centre for Enterprise and Sustainable Development |
| **NACOSTI** | : | National Council of Science and Technology |
| **NGO** | : | Non-Governmental Organization |
| **SPSS** | : | Statistical Package for Social Sciences |
| **UNESCO** | : | United Nations Educational, Scientific and Cultural Organization |
| **USAID** | : | United States Agency for International Development |

## ABSTRACT

Public participation in project life cycle management and implementation of infrastructure projects is a multifaceted activity, which involves contribution and participation of different stakeholders. Efficient and effective implementation of projects is an important component in ensuring their sustainability. The aim of this study was to investigate the influence of public participation in project life cycle management on implementation of rail infrastructure project in Kenya: a case of standard gauge railway phase 1. The objectives were to determine how public participation in project initiation influence implementation of rail infrastructure project in Kenya, to assess how public participation in project planning influence implementation of rail infrastructure project in Kenya, to establish how public participation in project execution influence implementation of rail infrastructure project in Kenya, to determine how public participation in project monitoring influence implementation of rail infrastructure project in Kenya, and to establish how public participation in project closure influence implementation of rail infrastructure project in Kenya. The study used descriptive research design. This method of research is preferred because the researcher is able to collect both quantitative and qualitative data to answer questions concerning the status of the subject of study. The target populations were the project managers, the project contractors, site agents and committees of nine community members each. Each site is evaluated by a team made up of one project manager, one project contractor, one site agent and a committee of nine community members (who are the beneficiaries of the rail projects) for a total of 144 people. The project is therefore monitored by 144 personnel. The study used the census method which is a method of statistical enumeration where all respondents (144) of the population were used in the study. Census was used because the number was manageable within the constraints of the study and because the method provides a true measure of the population and also has the highest degree of accuracy. A questionnaire was used to collect primary data. Quantitative data from the field was checked to ensure completeness, consistency and accuracy. The data was then coded and tabulated to facilitate data analysis. The researcher presented the results in form of percentages, frequencies, and tables. The study found that project initiation through public participation helps identify project stakeholders. The study also found that the measures to enhance public participation include building relationships and networks, bringing in diverse perspectives which will increase the chances of success of the decision or solution. The respondents further stated that the proponents of a participatory process may need to conduct outreach to attract and engage stakeholders, raise the visibility and transparency of the process, and inform stakeholders about progress and results. There is need for project stakeholders to develop effective frameworks for civic education to ensure citizen engagement in the planning and implementation of projects. The sub-county administrators ward administrators, village administrators at the county should conduct civic education sessions to enlighten the residents on the issues that may come up for public participation.

# CHAPTER ONE

# INTRODUCTION

## 1.1. Background of the Study

The concept of public participation is not a new aspect of development and management of community projects (Guijt and Shah, 2013). Public participation however, varies from region to region depending on different underlying socioeconomic, cultural and leadership factors. The decision to participate in planning and implementation processes of infrastructure projects at community levels is usually determined and influenced by a number of factors. Studies on public participation in implementation of projects in community and institutional settings such as Ainul (2011), Bell (2013), and Esther and Ndalahwa (2012) have found out that it promotes efficiency, effectiveness and sustainability of such projects. Moreover, involvement by the public in processes of project management was observed by World Bank (2014) to have contributed to projects' success in the Mediterranean. In a related study conducted in India on management of water resources also observed that public involvement is an important aspect of projects' decentralization because it involves different stakeholders (UNESCO, 2015). Through participation, the public feel recognized and identified with projects' planning, implementation, monitoring and evaluation.

However, in Malaysia, it was observed that meaningful and effective public participation is sometimes a delicate political process, which requires serious and wide consultation (Ainul, 2011). Consequently, Ainul (2011) further argued that information flow to the public on planning processes of projects is an important aspect necessary towards achieving projects' goals. Globally, participation of the public in management of projects has been viewed to act as a bridge between community members and other stakeholders whose interest and welfare are vested in such projects. In certain situations, differences arising from projects' participants due to misunderstanding can be easily reconciled by adequately involving local community members. Accordingly, Bell (2013) emphasized that full involvement and participation of the public at all levels of project planning and implementation is not negotiable.

Similarly, while investigating the influence of public involvement in management of Integrated Water Resources in Tanzania, Esther and Ndalahwa (2012) found out the importance of community members in projects' management processes. They further observed that one of the main reasons for public participation is to reduce conflicts in projects' management cycles. Moreover, the study showed the need of prioritizing community interests and demand in all processes of planning, implementing and managing projects at community levels. Moreover, according to Gikonyo (2014), public participation is both a process toward an end and an outcome in itself.

In Kenya, public participation is currently a political principle provided for under Article 10(2) (a) of the constitution. It is an important factor in all aspect of project management and sustainability. Generally, the objective behind public participation in any aspect of development is to facilitate the involvement of those who are potentially affected by or interested in making a decision (USAID, 2009). Effective project management practices mainly involve the participation of community members in processes of identification, planning, implementation, monitoring and evaluation. While investigating on the influence of public participation on implementation of projects funded by Constituency Development Fund (CDF) in Kirinyaga County, Mwea constituency, Kenya, low involvement of community members was observed (Nyaguthii and Oyugi, 2013). They further observed that only 8% of respondents agreed to have participated in the implementation processes of projects funded by the CDF in the constituency.

Similarly, Kerote (2011) agreed with Esther and Ndalahwa (2012) in their findings that the public should be adequately involved in all stages of a project cycle to ensure achievement of projects' goal. Odhiambo (2013) also pointed out that positive development outcome can be derived from infrastructure projects where public participation is sufficiently enhanced. Further, the study found out that such participation should be conducted within an environment where political interference on implementation of projects is minimized. While conducting a study on women involvement in management of community projects in Narok South Sub County of Narok County, Kenya, Mbogori (2014) observed that many water boreholes sunk were not operational due to lack of ownership. The findings further indicated that this ownership gap was brought about by inadequate involvement of women who spent most of their time at these water points. From these findings therefore, it is important to note that there is need to appropriately involve relevant

stakeholders in processes of project implementation for sustainability. In the construction of standard gauge railway, there have been reports of low involvement of the public in processes of project identification, implementation and management. This trend has been observed to mostly affect the project life cycle and making it not to be feasible (Maina, 2013). However, factors which may have led to the low participation of the public have not been adequately explained in the report. This study seeks to investigate the influence of public participation in project life cycle management on implementation of rail infrastructure project in Kenya: a case of standard gauge railway.

### 1.2. Statement of the Problem

Public participation in project life cycle management and implementation of infrastructure projects is a multifaceted activity, which involves contribution and participation of different stakeholders. Efficient and effective implementation of projects is an important component in ensuring their sustainability (Nyaguthii and Oyugi, 2013). Long term sustainability of projects usually results from planned and full participation of the public. Management of projects' risks and uncertainties to manageable levels can be effectively attained when public participation is prioritized (Maina, 2013). Management of infrastructure projects especially standard gauge railway is facing challenges due to inadequate participation by the public (SCEO, 2011). Many phases of the project have stalled and others changed because of lack of knowledge on the importance of public participation.

The construction industry in Kenya has experienced a rapid expansion supported by a robust growth in property development, a growing real estate sector and the on-going mega infrastructure projects (ESR, 2015). Kenya has experienced a thriving construction industry in recent years according to the Kenya National Bureau of Statistics. The construction industry's gross value added grew by 13.6 per cent and 13.1 per cent in the year 2015 and 2014 respectively compared to 5.8 per cent growth in the year 2013 (ESR, 2016). The Kenyan government has initiated several major projects since the 2014/15 financial year. These projects include the Standard Gauge Railway project from Mombasa port to Malaba border covering 962KM.Replacement of line 5 of the Mombasa-Nairobi 450KM pipeline with a new 20 inches' diameter pipeline at a cost of US$500 million began in 2014/15 financial year and is going on.

SGR project consist of various phases. These starts with the construction of phase 1 of the Standard Gauge Railway (SGR) at KShs 327 billion for the 609KM from Mombasa to Nairobi which was commissioned on July 2017. Construction of the 120KM rail for phase 2A of SGR started in 2016 and is estimated to cost KShs 143.8 (USD 1.5 billion) billion to Naivasha. The next phase of SGR is 262KM, phase 2B aims to start from Naivasha through Narok to Bomet and ends at new Kisumu port. Phase 2B of SGR will involve the construction of a new high capacity port at Kisumu city and is at feasibility stage. The last phase of SGR is 107KM, phase 2C. Public participation is significant for all the phases of the project which would ensure that the project is implemented successfully.

Active citizen participation underpins a democratic and inclusive society. The artery of a healthy liberal democracy is the participation of citizens in decision making and project development. Lack of participation is a missed opportunity for Kenyans to hold their leaders to account and to influence the outcomes (Boon et. al. 2013). The lack of participation has led to corruption due to lack of accountability as leaders are left to facilitate the implementation of the infrastructural projects on their own. After the promulgation of the constitution Kenyans participation in public fora and project development is increasing. However, this is not the case on infrastructure especially standard gauge railway where public participation is still very low (Brody, 2013). Sustained public participation and project implementation, poses numerous problems to planners and social service providers, especially in developing countries. In addition, project beneficiaries are still not fully participating in the identification, planning, implementation and monitoring and evaluation of projects that are meant to improve their lot (Blackman, 2013). This has led to some of these projects not fulfilling their main objectives and thus not rendering to the citizens the targeted benefits.

Without active public participation in project development decisions made by a few often deny the majority their rights to influence project development. Project initiation is an issue as it is the first stage that determines the feasibility of the project. Project planning affects the project plans and if not well addressed may affect project operation. Project execution and monitoring affects the actual activities involved in the project. Few studies have been done on public participation and project life cycle which include Boon, Bawole, & Ahenkan, 2013; Kanwal et al., 2012; Polo, Algeria, & Sirkin, 2012. However, none of these studies have dwelled on public participation in

project life cycle management on implementation of rail infrastructure project in Kenya thus creating a knowledge gap. In addition, all these studies have been done in the international context making the findings not applicable to the local context. The current study will fill this gap by investigating the influence of public participation in project life cycle management on implementation of rail infrastructure project in Kenya: a case of standard gauge railway phase 1.

### 1.3. Purpose of the Study

The purpose of the study will be to investigate the influence of public participation in project life cycle management on implementation of rail infrastructure project in Kenya: a case of standard gauge railway phase 1.

### 1.4. Objectives of the Study

The study will be guided by the following objectives:

i. To determine how public participation in project initiation influence implementation of rail infrastructure project in Kenya

ii. To assess how public participation in project planning influence implementation of rail infrastructure project in Kenya

iii. To establish how public participation in project execution influence implementation of rail infrastructure project in Kenya

iv. To determine how public participation in project monitoring influence implementation of rail infrastructure project in Kenya

v. To establish how public participation in project closure influence implementation of rail infrastructure project in Kenya

### 1.5. Research Questions

The study will answer the following research questions:

i. How does public participation in project initiation influence implementation of rail infrastructure project in Kenya?

ii. How does public participation in project planning influence implementation of rail infrastructure project in Kenya?

iii. How does public participation in project execution influence implementation of rail infrastructure project in Kenya?

iv. To what extent does public participation in project monitoring influence implementation of rail infrastructure project in Kenya?

v. How does public participation in project closure influence implementation of rail infrastructure project in Kenya?

### 1.6. Significance of the Study

The study findings may enable the researcher gain more knowledge on challenges facing public participation in management and implementation of infrastructure projects especially on the rail projects. Moreover, the findings may also hope to assist policy makers, and infrastructure stakeholders understand the existing problem of public participation in the management of these projects. This may enable them come up with ways and means of solving the problem. Similarly, the study may recommend possible strategies necessary in reducing gaps in management of infrastructure projects. It is also hoped that the government may benefit from the study by establishing and strengthening policies on public participation in management of infrastructure projects in addressing bottlenecks limiting effective management. Such policies may also assist engineers in the country and in particular, those in standard gauge railway to undertake appropriate measures in promoting public participation in project management. Consequently, the study is hoped to raise awareness among community members that low public participation in management of infrastructure projects becomes a concern for all.

### 1.7. Basic Assumptions of the Study

This study was based on the following assumptions: The study was conducted under the assumption that the respondents were available and also that they give honest responses.

### 1.8. Limitations of the Study

Due to the current Covid 19 situation, contact with the respondents was difficult. This limitation was addressed through extensive use of the internet and technology.

### 1.9. Delimitations of the Study

The study will focus on public participation in project initiation, public participation in project planning, public participation in project execution, public participation in project monitoring, and public participation in project closure influence implementation of rail infrastructure project in Kenya. The public participation in all the stages of project implementation is important for large projects to ensure the huge resources involved are adequately utilized in the right way. The study focused on standard gauge railway as the appropriate construction project in that it was able to offer the right information in relation to the various stages of project implementation. The respondents were project managers, the project contractors, site agents and community members who will be supplied with questionnaires with the aim of getting their views regarding the subject matter of the study. The choice of these respondents is because they have adequate information regarding public participation in project implementation of the standard gauge railway. The study utilized descriptive research design because it determines and reports the way things are done and also helps the study to describe a phenomenon in terms of attitudes, values and characteristics.

### 1.10. Definition of Significant Terms Used in The Study

**Infrastructure projects:** The physical and organizational structures and facilities needed for the operation of a society or enterprise. In the current study they refer to the physical and organizational structures and facilities needed for the operation of the standard gauge railway.

**Management:** Process of getting activities done efficiently and effectively in the standard gauge railway project.

**Project Closure**: The phase which involves handing over the deliverables and informing stakeholders of the closure of the project. In the current study it involved activities such as analyzing project performance, analyzing team performance, documenting project closure, and analyzing budget compliance in the standard gauge railway project.

**Project Execution**: The phase in which the plan designed in the prior phases of the project life is put into action. The purpose of project execution is to deliver the project expected results. In the

current study it involved activities such as creating tasks, creating organizing work flows, briefing team members on tasks, and managing budget in the standard gauge railway project.

**Project Initiation**: The creation of project by the project management team that entails the definition of the project's purpose, primary and secondary goals, timeframe and timeline of when goals are expected to be met. In the current study it involved activities such as undertaking feasibility study, identifying scope, identifying project stakeholders, and identifying project donors in the standard gauge railway project.

**Project Monitoring**: The process of keeping track of all project-related metrics including team performance and task duration, identifying potential problems and taking corrective actions necessary to ensure that the project is within scope, on budget and meets the specified deadlines. In the current study it involved activities such as monitoring of spending, monitoring of quality of work, keeping the project on track, and monitoring project teams in the standard gauge railway project.

**Project Planning**: The part of project management, which relates to the use of schedules such as Gantt charts to plan and subsequently report progress within the project environment. Project planning can be done manually or by the use of project management software. In the current study it involved activities such as creating a project plan, creating work flow, gathering resources, and organizing teams in the standard gauge railway project.

**Public Participation:** A process in which the public takes part in activities on management of projects.

**Implementation of Rail Infrastructure projects:** The process and activities that are involved in putting the project plan into action in implementation of rail infrastructure projects

**Public Participation in project lifecycle management:** The process of involving the members of public in all stages of project implementation.

### 1.11. Organization of the Study

The study was organized in five chapters. Chapter one is introduction featuring background of the study, statement of the problem, purpose of the study and objectives that guided the study. In this chapter, research questions, significance of the study, limitations and delimitations of the study are also included. Moreover, it also presents basic assumptions of the study and definitions of significant terms used in the study. Chapter two focuses on public participation in project initiation and implementation of rail infrastructure project, public participation in project planning and implementation of rail infrastructure project, public participation in project execution and implementation of rail infrastructure project, public participation in project monitoring and implementation of rail infrastructure project, and public participation in project closure and implementation of rail infrastructure project. Chapter three captures research methodology used, outlining introduction, research design, target population, sample size and sample selection.

Besides, it also presents data collection instruments, piloting, validity of the instruments and instruments' reliability. In addition, it also outlines the procedures used for data collection, methods that are used for data analysis, ethical considerations and operationalization of the variables. Chapter four covers data analysis, presentation, interpretation and discussion. Further the chapter will have interpretation of the findings in write up to explain the tables. Chapter five covers summary of findings, conclusions, recommendations and areas for further research.

# CHAPTER TWO

# LITERATURE REVIEW

## 2.1. Introduction

Chapter two provides the literature review of the study. This chapter mainly focuses on implementation of rail infrastructure project, public participation in project initiation and implementation of rail infrastructure project, public participation in project planning and implementation of rail infrastructure project, public participation in project execution and implementation of rail infrastructure project, public participation in project monitoring and implementation of rail infrastructure project, and public participation in project closure and implementation of rail infrastructure project, theoretical framework, conceptual framework, summary of literature and knowledge gaps.

## 2.2. Implementation of Rail Infrastructure Project

Project implementation in its simplest terms, can be thought of as incorporating four basic facets. A project is generally considered to be successfully implemented if it comes in on schedule, comes in on-budget, achieves basically all the goals originally set for it and is accepted and used by the clients for whom the project was intended (client satisfaction criterion). By its basic definition, a project comprises a defined time frame to completion, a limited budget, and a specified set of performance characteristics (Guijt & Shah, 2013). Further, the project is usually targeted for use by some client, either internal or external to the organization and its project team. It seems reasonable therefore, that any assessment of project implementation should at least include these four measures among others (Ainul, 2011).

The mounting of very large development projects (mega-projects) has been witnessed recently across in European and American cities (Paquin, 2015). The developments have striking similarities in private –sector involvement and market orientation but differ in how they provide affordable units and tie physical and social goals. Public-private partnerships are seen globally to provide public benefits from megaprojects though the projects are seen as risky for both public and private participants and therefore must be intended to achieve profitability and produce a landscape that discourages urbanity. Globally the appraisals of very large infrastructure

investments assume that infrastructure policies and projects operate in a predictable cause-effect relationship where things go according to plan. In reality, project initiation, planning, implementation and closure is very complicated with deliverables being achieved only with a certain probability and rarely to the scope originally intended (Flyvbjerg, Bruzelius & Rothengatter, 2013). The conventional approach to infrastructure projects is replaced with an alternative focusing on accountability.

The borderlines of public and private involvement in mega project has been redrawn globally with four specific measures to increase accountability: transparency, performance specifications, explication of regulatory regimes and involvement of risk capital (Flyvbjerg, Bruzelius & Rothengatter, 2013). The decision to build a multi-billion dollar fixed link across the Baltic Sea connecting Scandinavia and Germany was based on the four measures of accountability and can be replicated globally in other major projects. The American Interstate Highway Project is the largest mega project in the world. Mega-projects are seen to create several jobs and develop the economy within a short span of time. The architecture, engineering and construction (AEC) industry has embraced improvement in technology with advances in information and computer technology (Sabol, 2015).

## 2.3. Public Participation in Project Initiation and Implementation of Rail Infrastructure Project

Public participation is important during the project identification phase of the project life cycle. Heck (2013) reiterated the need for public participation during project initiation stage. This was based on his article on participatory development in agricultural development and rural development projects. The study asserted the importance of including people in agricultural and rural projects in the preparation and implementation phases. The active participation of people was important because members of a community hold diverse expectations and aspirations that may not coincide with the needs of people outside the community. Furthermore, Heck (2013) observed that it was important to include the rural poor in the initiation stages of a development project because these people were more likely to articulate their needs and wants more accurately than an outside observer. This accurate articulation of the community needs and desires would help the project team develop a business or development case for the project.

Other scholars Feroze and Hassin (2014) conducted a similar development study for the construction of a water supply and sanitation system in Bangladesh. Their research emphasized the involvement of the public in the project identification phase. In particular, they reiterated that it was important to involve the community during needs assessment so that members could articulate their opinions about desirable improvements, priority of goals/objectives, and negotiations with agents on the projects they deemed best suited for their needs. Parker, Chung, Israel, Reyes and Wilkins (2010) concurred with Feroze and Hassin (2014) on the need for community involvement in the project initiation stage. This was based on a study on the organization of community networks as a health development approach to improve community capacity. The study sought to find out how community organisers worked with local residents and community groups to ensure active participation in environmental projects and in policy decision-making. The findings showed that community-based participation during project initiation helped members of the community to collaborate, provide expertise, and share responsibility of the development project.

Similarly, Minkleret al. (2015) observed that public participation in project initiation was important because it strengthened community capacity and subsequently improved the overall wellbeing of the community. Their study on community-based participatory research (CBPR) on environmental issues showed that the recognition of public participation in health and environmental issues was increasing. In particular, Minkler et al. (2015) reported that it was important to involve community members during the initiation stages of a project because it improved the community capacity to identify problems, participate in decision-making, and translate problems into solutions or action. Consequently, they observed that participation in the project initiation phase helped the community address environmental, health, and social problems using practical solutions.

To add further, Freudenberg (2014) observed public participation should not be considered on a whim, but included in frameworks for development projects. The study observed that conceptualizing the community's participation was important because it helped project managers to identify the factors that affected the community ability to implement development projects. A framework to help the conceptualization process was then proposed. This framework was based on Goodman et al. (2013) conceptualization of public participation. It was adapted to reveal the

community exposure to the developmental problem and highlight the factors affecting the community ability or capacity to construct practical and efficient solutions.

Consequently, Freudenberg (2014) proposed that a framework for development projects be designed to strengthen community capacity. This capacity could be achieved by examining the community environment and how these factors affect the participation and support of the community. Furthermore, the development framework would help the project team to understand the behavioral manifestations of a particular community.

Minkler et al. (2014) extended Freudenberg‘s (2014) work by showing how a framework for development projects would help project teams design a community-based participative research model that promoted partnership and public participation in health-related projects. Parker et al. (2010) dissented to the effectiveness of Freudenberg‘s framework arguing that the effectiveness of public participation was impacted by the leadership of the project manager and the relationship between the community and the project team. Furthermore, they observed that tension between members of a community, unwillingness to compromise, and competing values and beliefs affected the level of public participation in development projects.

## 2.4. Public Participation in Project Planning and Implementation of Rail Infrastructure Project

Project planning was the second phase of the project life cycle. It involved identifying the key activities, defining the plans for the activities, their sequencing, work schedule, budget, staffing requirements, and approvals from stakeholders (Satyanarayana, 2008). This phase involved a lot of decision-making and input from relevant stakeholders. Among these stakeholders were communities involved in development projects. The World Bank (2008) concurred with the decision-making aspect of project planning phase. The institution argued that participation of stakeholders was very important in decision-making, especially when the decision affects a segment of the public. Furthermore, the institution asserted the importance of seeking public participation in decisions on development projects such as infrastructure development. This is because participation allowed the project team to take into consideration the needs and concerns of the community to create a demand-driven project and improve the planning process. This implied that involving the community in project planning allowed the project team to consider

the needs and concerns of the public regarding the schedule, budget, activity plan, and staffing of the project. A report by World Bank (2008) shows that many development organizations such as United Nations agencies, African Development Bank, and Asian Development Bank had started making public participation a key requirement for their funded projects. These organizations made it necessary for the community to be involved in the planning and implementation phases of the project life cycle. Public participation in the planning stage was termed participatory planning while participation in the implementation phase was termed participatory monitoring.

In another study, Labuschagne and Brent (2007) asserted the importance of public participation in creating sustainable projects. Their study on sustainable project life cycle management in the manufacturing sector proposed a framework for ensuring project sustainability. This framework considered a variety of factors. These factors included the corporate social responsibility strategy, economic sustainability, environmental sustainability, and social sustainability. Economic sustainability included the financial position of the project sponsor and expected benefits of the development project. Environmental sustainability included air, water, land, energy, and mineral resources influencing the success of the development project. Lastly, social sustainability involved human resources, population, stakeholder participation, and macro-social impact of the project. The social sustainability aspect of the framework confirmed the importance of public participation in project development. In particular, the framework required that the project team involve the community in the planning stage to ensure that the delivered product meets the community's needs. Furthermore, the framework provided various criteria and indicators for ensuring public participation in the planning stage.

The criteria included the influence of stakeholders and provision of information. To achieve these criteria, the study proposed that the project team calculate the number of community meetings and forums as well as the number of communication channels that the public could use to voice their complaints or feedback. Similarly, Rothman (2001) supported public participation in the planning phase. The author's article on creating community capacity on a project for tobacco education and adoption recommended the use of community organisers. The article poised that community organisers should be used to encourage and monitor public participation in planning and decision-making. These organisers would be based in key areas and would work with local residents to collect information and act as project liaisons. In addition, Rothman (2001) proposed

that community organisers could be used as key informants that represented NGOs and CBOs in the local community. This would reduce the communication complexities associated with large development projects that involve numerous community stakeholders. Furthermore, the use of community organisers would simplify the planning process because these organisers would represent the community's needs, aspirations, and concerns in the planning process and decision-making.

## 2.5. Public Participation in Project Execution and Implementation of Rail Infrastructure Project

The implementation phase of the project life cycle was concerned with transforming the development design into a physical model. The aim of this phase was to ensure that the facility being constructed conformed to the specifications, budget, and schedule outlined in the initiation phase. Consequently, the implementation process involved a variety of activities to ensure conformity. These included quality assurance tests, scope management by the project leader, daily progress reports, time management, risk reporting and correction, and communications management (Edmonton, 2016).

Edmonton (2016) asserted that stakeholder participation was very important in the construction or implementation phase. This is because this phase involved a number of people contracted to fulfil the project. These included the contractor, construction inspectors, engineering department, general supervisor, safety evaluation officers, and tender management committee members. The involvement of these diverse stakeholders increased the conflict of interests between stakeholders in the construction phase. To reduce this conflict, the author suggested that the project supervisor ensure that the community participated in monitoring the project schedule and construction. One way was through communicating these schedules to the community to enable interested members to follow up on the progress of the project, determine whether more resources were needed to ensure the project was delivered on time, and to ensure that the implementation process did not exceed the budget estimates (Edmonton, 2016).

On the issue of quality and risk management in implementation, the author suggested that the community should participate in quality assurance tests so that the final construction was in accordance with national and international standards. In addition, conducting risk analysis would

help the committee identify project deficiencies and decide how best to resolve the deficiencies such as through penalties, replacements, or removal of the deficient element. Nevertheless, Edmonton (2006) recommended that project teams should involve the community because their quality expectations and risk of project failure would have a significant impact on the community to benefit from the project.

Similarly, Dodman and Mitlin's (2011) study on the challenges in community-based involvement in climate issues touched on participation during project implementation. They observed that community-based adaptation was a key challenge to scholars and developers. Part of the challenge was how to include the views and interests of diverse stakeholders whilst conforming to institutional, social, and political structures. The research delved into the benefits of public participation and recommended that community-based developers should consider the experience and role of participation in project implementation. While the authors acknowledged the challenges of ensuring seamless public participation, they also recognized that public participation was very critical in navigating the political, social, and institutional risks hindering the success of a development project.

Again, Boon, Bawole, and Ahenkan (2013) concurred with these studies on the importance of public participation in development projects. Their agreement was based on results of their case study on the International Centre for Enterprise and Sustainable Development (ICED) model for Ghana. Their study noted that there was an increase in stakeholder appreciation during project implementation and evaluation for the success of the project. It evaluated how the ICED NGO used a project participation model to ensure that community members were involved in all aspects of project implementation. The findings showed that the NGO could achieve project success if it conducted a stakeholder analysis prior to commencing the project. This is because the analysis would help the project team identify and evaluate the different parties to the project, relationship with the community, and what contribution the community would make to the implementation process.

Two authors, Munt (2002) and Smith (2003), agreed with Boon et al. because they stated that a stakeholder analysis enabled a project team to develop strategies for enhancing group dynamics and leveraging the community's knowledge to improve the successful outcome of the project. To

achieve project success, Boon, Bawole, and Ahenkan (2013) proposed the quadripartite project participation model (QPPM). This model consisted of a three-tier structure that comprised different management teams. The bottom tier consisted of local project management teams which comprised of members of the local communities who were selected in a participatory and transparent process. This team would be responsible for mobilizing the community and coordinating project activities with the project team. The local project management team would liaise with the national project management team. This national team would be responsible for procurement, monitoring, and evaluation processes as well as diagnosing the problems and needs of the community.

The national team would be supervised by an international project management team. The international team would comprise of representatives of development partners, donor agencies, NGOs, CBOs, and quality assurance teams. From the study, the benefit of QPPM model is that it sought to build consensus during project implementation. This consensus was very important because it reduced misunderstandings between community members and the project team. The QPPM model built consensus by stipulating the procedures for submitting progress reports and feedback. The model also allowed communities, through representatives on the local project management teams, to plan open market forums where the community could express its concerns on the project implementation such as financing and shared costs for labour. Furthermore, the QPPM model created opportunities for active involvement and fair representation of different segments of the community (Boon, Bawole, & Ahenkan, 2013). Although the model achieved the outlined benefits, Biggs (1989) suggested that project teams customise their stakeholder participation process. Broody (2003) also added that it was vital that the project team came up with a fair and transparent strategy for selecting people who would represent the community in the local management team. This would ensure that the QPPM facilitated consensus building during implementation stage.

## 2.6. Public Participation in Project Monitoring and Implementation of Rail Infrastructure Project

Participation in project monitoring is another area discussed in various studies (Boon, Bawole, & Ahenkan, 2013; Kanwal et al., 2012; Polo, Algeria, &Sirkin, 2012). Furthermore, Institutions such as the World Bank (2008) had advocated the adoption of participatory monitoring to ensure

that the project achieved the desired objectives. According to the World Bank (2008), the concept of participatory monitoring referred to the involvement of the community in monitoring practices such as detecting problems and resolving them to ensure that work progresses and the finished product meets the objectives outlined in the initiation phase. Lechner (2014) concurred that the monitoring and evaluation phase focused on anticipating and planning for issues or problems that could occur with the end product. The author observed that 20% of the time in this phase was used in planning while 80% was consumed in tracking and controlling the project outcome. This tracking and control ensured that the deliverable produced the desired results at the right time, costs, and with the right resources. Once this goal was achieved, the project leader would then follow up with the end product/deliverable and implemented upgrades when an issue warranted revisiting the project.

Additionally, Boon, Bawole and Ahenkan (2013) emphasized the need for public participation in project execution phase. This is because development projects were designed for and by actors whose contributions could cause the success or failure of the project. Thus, the authors showed that involving people who would affect or be affected by the project was a vital part of successful development projects. Their participation in the project would not only improve the likelihood of finding a local solution unique to their circumstances, but would enhance the sustainability of the project and societal harmony among different stakeholders. In addition, involving stakeholders would create trust among members of the community, increase their understanding of the problem, increase their support for the project, and improve their awareness of local issues. The authors poised that the role of stakeholders in the monitoring process should not be ignored. They argued that the active participation of the community through meetings, task forces, advisory committees, focus groups, surveys, public hearings, and interviews was very important in determining whether the final product complied with their interests and constraints.

Similarly, Reid (2012) confirmed the assertion that the active participation of stakeholders in the monitoring process was a very powerful empowerment tool. He observed that participation reduced alienation of the community by empowering the public to voice their opinions and suggestions on how the project could be improved or adapted to changing political, social, cultural, and economic environments. In his study on the power of public participation, Reid noted

that public participation in the monitoring stage increased the level of volunteerism and community spirit because the public no longer felt alienated or marginalized by external agents.

Additionally, Yang et al. (2011) in their study on the typology of stakeholder analysis and engagement methods reiterated the importance of public participation in project implementation and execution. This reiteration was informed by their awareness of the basic rights of humans to participation. Their research showed that public participation facilitated the monitoring process by increasing the public self-confidence and skills learned throughout the project to help the participants to respond more effectively to local problems. Furthermore, the research showed that public participation in local development projects not only improved economic conditions but the social conditions and networking as well.

Worth noting, however, is that Yang et al. placed a caveat on public participation in the project management process. The authors suggested that a stakeholder analysis should be performed in the initial project stages because it would help the project team determine who would participate, to what extent, and why. This suggestion was articulated by Munt (2012) and Broody (2013) who observed that public participation did not necessarily contribute to project success where stakeholder analysis was not performed. Kambonesa (2014) on her study on public participation in a Kensington development project revisited the need to perform a stakeholder analysis to ensure that the project deliverable achieved the desired results. Kanwal et al. (2012) and Polo, Algeria, and Sirkin (2012) introduced cultural and social perspectives to public participation by arguing that the selection of community representatives should be based on the person's ability to engage in constructive dialogue and participate in shared decision-making.

## 2.7. Public Participation in Project Closure and Implementation of Rail Infrastructure Project

Project closure refers to the process of formally ending the project activities. Although a lot has been written about starting and executing a project successfully, Havila, Medlin and Salmi (2013) point out that closing the project doesn't find a lot of presence in the project management literature and that fewer than 5% of the pages in a typical literature artefact discuss project closure requirements. Not all the projects undergo a smooth journey culminating in a successful end and some of the projects need to be terminated even before they have accomplished the planned goals

and objectives (Havila, et al., 2013). Project completion inspection is important and should be planned for as part of the project closure processes.

The practice of project close-out finalizes all project activities completed across all phases of the project to formally close the project and transfer the completed or cancelled project as appropriate (Rohaniyati, 2009). Project closure involves verification by the client, contractor and consultant that all activities have been finalized, documentation has been done and storing relevant information. It also entails verifying that the project has addressed the terms and conditions of the contracts, finalizing of exit criteria for contract termination, validating exit criteria and formally closing out all contracts associated with the completed project (Guyer, 2011).

The purpose of project close-out is to assess the project, ensure completion, and derive any lessons learned and best practices to be applied to future projects. The project closure is foreseeable but how it is handled and when it is handled have a huge impact on the success of the project. De (2012) writes that improper handling of project closure can result in several unfavorable effects such as time over run, cost over-run, tarnishing the image and credibility of the project team, locking up valuable human and other resources, that could have been gainfully utilized elsewhere, and stress on the project personnel.

Public participation is very important in the last stage. Often the closure of a project is underestimated. There is not enough time invested in the actual closing of a project or it could be that the project is prematurely closed by a manager (Havila, Medlin, and Salmi, 2013). Availability of project documentation meets the criteria of project close-out process. Historic project data is an important source of information to help improve future projects. All records, both electronic and hard copy should be stored according to record retention guidelines (Parson, 2005). The technical records will be turned over to the personnel responsible for maintenance and operating of the system or program after it has been deployed. The project archive includes a description of the files being stored, the application used to create the archived materials, the location where they are stored, and point of contact for further information (Guyer, 2011). Key among the contractor-related documents archived includes those of internal communication, minutes of meetings, progress reports and contract documents (Rohaniyati, 2009).

## 2.8. Theoretical Framework

This section presents the theories applicable in the study. The study will utilize Arnstein's Theory of Public participation and Stakeholder Theory which are discussed in subsequent sections.

### 2.8.1. Arnstein's Theory of Public Participation

The proponent of Arnstein's theory of public participation is Arnstein and was propounded in the year 1969. This theory proposed a ladder of participation in undertaking community activities. The assumption of the theory is that activities in any community setting are influenced by different factors; including group leadership, participants' attitude to a project, center of power, and issues of processes and capacity in conducting a given activity. In relation to this study, the important section of the theory is its recognition of different levels of participation, which includes manipulation of community, consultation and the real participation. At these levels, Arnstein's refers to it as that where partnership and community control exists.

The strength of this theory is that it promotes public participation in terms of empowering them to actively participate in decision making while implementing and managing processes of projects' activities. It further emphasizes the need to understand participation as empowering community members as individuals and group of individuals. However, this theory has been criticized for its approach to public participation in terms of steps, where each step represents broad category of issues. By this approach, processes of informing community members at every level could lead to significant differences in terms of type and quality of information being conveyed. As a result, this could lead to projects' planning inefficiency. The use of a ladder in the theory implies that more control is always better than less control at each level. However, the public may not always desire for increased control to participate. This sometimes can lead to project failure if not adequately managed through elaborate public participation.

The theory is applicable to the independent variable which is public participation as the researcher will use this theory in investigating the influence of public participation in project life cycle management on implementation of rail infrastructure project in Kenya: a case of standard gauge railway. This is because it provides the base on which factors influencing public participation in given activities rest upon. Application of this theory will also enable the researcher to investigate the study variables by assessing their relationships towards answering the research questions.

### 2.8.2. Stakeholder Theory

The proponent of Stakeholder Theory is Ian Mitroff who propounded the theory in 1983 and later advanced by Freeman in late 1983. The assumption of the theory is that the relationship between project stakeholders and the organization is one that is designed to create value for the stakeholders. The theory explains how to manage the various interests of the legitimate stakeholders that exist in a project. There are stakeholders who have contractual obligations and derivatively legitimate stakeholders whose relationship to the project is derived from their ability to affect the project work, organization or other stakeholders (Kolesnikov, 2014).

Implementation of megaproject deliverables is critically dependent upon stakeholder management skills. The need to achieve project objectives that fully address stakeholder expectations throughout the project life-cycle is of priority concern to the project team. However, one major task that needs to be undertaken in developing a project's strategic aims is to identify stakeholders in order to develop a project brief that best addresses their often conflicting range of needs and wishes (Kolesnikov, 2014). The theory is based on the principle that project managers must connect into the organizational grid, identify key stakeholders and their value propositions in a project and manage them.

The theory is applicable in explaining the dependent variable which is implementation of rail infrastructure project. In this context, megaproject managers are unlikely to deliver project success without paying attention to the expectations and needs of key influential project stakeholders. The stakeholders may cumulatively exert a significant impact on the perception of project success. A project that does not meet expectations of influential stakeholders is not likely to be regarded as successful, even if it remains within the original time, budget and scope. This theory guides public participation in the standard gauge railway project for effective implementation of SGR project.

## 2.9. Conceptual Framework

A conceptual framework is a diagrammatical research tool intended to assist the researcher to develop awareness and understanding of the situation under scrutiny and to communicate this (Roberts, 2011). The conceptual framework shows the relationship between the dependent variable and the independent variable. An independent variable is one that is presumed to affect

or determine a dependent variable (Van der Waldt, 2008). It can be changed as required, and its values do not represent a problem requiring explanation in an analysis, but are taken simply as given. The independent variables in the study are Public participation in project initiation, Public participation in project planning, Public participation in project execution, Public participation in project monitoring, and Public participation in project closure. The dependent variable will be implementation of rail infrastructure project in Kenya. The intervening variable will be government policies and environmental factors. The relationship between the variables is depicted in figure 1.

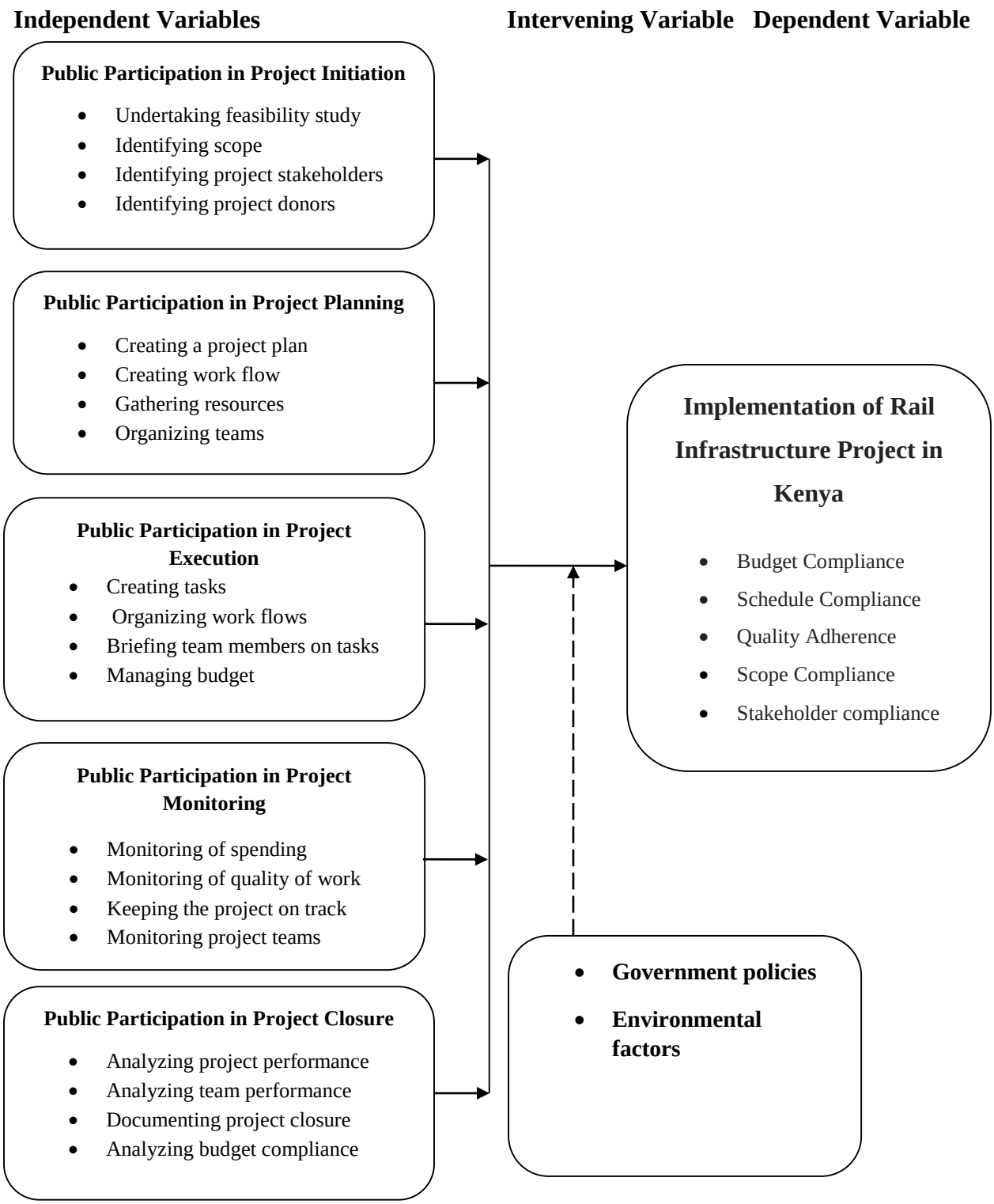


**Figure 1: The Conceptual Framework showing the influence of public participation in project life cycle management on implementation of rail infrastructure project in Kenya**

**Source:** Author (2020)

## 2.10. Knowledge Gap

The knowledge gaps are summarized in table 2.1.

**Table 2.1: Knowledge Gap**

| Author | Title | Objectives | Findings | Knowledge gap |
|---|---|---|---|---|
| Feroze and Hassin (2014) | public participation during project initiation stage | To establish the influence of public participation during project initiation stage | The study found that it was important to involve the community during needs assessment so that members could articulate their opinions about desirable improvements, priority of goals/objectives, and negotiations with agents on the projects they deemed best suited for their needs | The study did not focus on how public participation in project initiation influence implementation of rail infrastructure project in Kenya |
| Labuschagne and Brent (2007) | sustainable project life cycle management in the manufacturing sector proposed a framework for ensuring project sustainability | To establish the importance of public participation in creating sustainable projects | The study found that project team should involve the community in the planning stage to ensure that the delivered product meets the community‘s needs. | The study did not focus on how public participation in project planning influence implementation of rail infrastructure project in Kenya |
| Edmonton (2016) | stakeholder participation in the construction or implementation phase | To establish the influence of stakeholder participation in in the construction or implementation phase | The study found that stakeholder participation was very important in the construction or implementation phase. This is because this phase involved a number of people contracted to fulfil the project | The study did not focus on how public participation in project execution influence implementation of rail infrastructure project in Kenya |

| | | | | |
|---|---|---|---|---|
| Dodman and Mitlin's (2011) | challenges in community-based involvement in climate issues touched on participation during project implementation | To determine the challenges in community-based involvement in climate issues touched on participation during project implementation | The study found that community-based adaptation was a key challenge to scholars and developers. Part of the challenge was how to include the views and interests of diverse stakeholders whilst conforming to institutional, social, and political structures. | The study did not focus on how public participation in project execution influence implementation of rail infrastructure project in Kenya |
| Boon, Bawole and Ahenkan (2013) | public participation in project execution phase | To assess the influence of public participation in project execution phase | The study found that involving people who would affect or be affected by the project was a vital part of successful development projects. Their participation in the project would not only improve the likelihood of finding a local solution unique to their circumstances, but would enhance the sustainability of the project and societal harmony among different stakeholders | i. The study did not focus on how public participation in project execution influence implementation of rail infrastructure project in Kenya |

## 2.11. Summary of Literature Review

The literature review has discussed different literature on public participation in the initiation, planning, implementation, and monitoring phases of the project life cycle. These studies are largely concerned with the role of the public in group decision-making and how project managers could harness the value of public participation in developing sustainable projects. Heck (2013) reiterated the need for public participation during project initiation stage. This was based on his article on participatory development in agricultural development and rural development projects. The study asserted the importance of including people in agricultural and rural projects in the preparation and implementation phases. The active participation of people was important because members of a community hold diverse expectations and aspirations that may not coincide with the needs of people outside the community. Furthermore, Heck (2013) observed that it was important to include the rural poor in the initiation stages of a development project because these people were more likely to articulate their needs and wants more accurately than an outside observer.

Project planning was the second phase of the project life cycle. It involved identifying the key activities, defining the plans for the activities, their sequencing, work schedule, budget, staffing requirements, and approvals from stakeholders (Satyanarayana, 2008). This phase involved a lot of decision-making and input from relevant stakeholders. Among these stakeholders were communities involved in development projects. The World Bank (2008) concurred with the decision-making aspect of project planning phase. The institution argued that participation of stakeholders was very important in decision-making, especially when the decision affects a segment of the public. Edmonton (2016) asserted that stakeholder participation was very important in the construction or implementation phase. This is because this phase involved a number of people contracted to fulfil the project. These included the contractor, construction inspectors, engineering department, general supervisor, safety evaluation officers, and tender management committee members. The involvement of these diverse stakeholders increased the conflict of interests between stakeholders in the construction phase. To reduce this conflict, the author suggested that the project supervisor ensure that the community participated in monitoring the project schedule and construction. One way was through communicating these schedules to the community to enable interested members to follow up on the progress of the project, determine

whether more resources were needed to ensure the project was delivered on time, and to ensure that the implementation process did not exceed the budget estimates (Edmonton, 2016).

Participation in project monitoring is another area discussed in various studies (Boon, Bawole, & Ahenkan, 2013; Kanwal et al., 2012; Polo, Algeria, &Sirkin, 2012). Furthermore, Institutions such as the World Bank (2008) had advocated the adoption of participatory monitoring to ensure that the project achieved the desired objectives. According to the World Bank (2008), the concept of participatory monitoring referred to the involvement of the community in monitoring practices such as detecting problems and resolving them to ensure that work progresses and the finished product meets the objectives outlined in the initiation phase. Lechner (2014) concurred that the monitoring and evaluation phase focused on anticipating and planning for issues or problems that could occur with the end product.

Project closure refers to the process of formally ending the project activities. Although a lot has been written about starting and executing a project successfully, Havila, Medlin and Salmi (2013) point out that closing the project doesn't find a lot of presence in the project management literature and that fewer than 5% of the pages in a typical literature artefact discuss project closure requirements. Not all the projects undergo a smooth journey culminating in a successful end and some of the projects need to be terminated even before they have accomplished the planned goals and objectives (Havila, et al., 2013). Project completion inspection is important and should be planned for as part of the project closure processes. Furthermore, most of the studies address the issue of public participation as a separate element or aspect of project management that does not seem to have a significant impact on the completion of the project. This study will influence of public participation in project life cycle management on implementation of rail infrastructure project in Kenya: a case of standard gauge railway.

# CHAPTER THREE

# RESEARCH METHODOLOGY

## 3.1 Introduction

This chapter outlines the various stages and phases that were followed in completing the study. It involved a design for the collection, measurement and analysis of data. Specifically, the subsections included are research design, target population, data collection instruments, data collection procedures and finally data analysis techniques, ethical issues and operationalization of the variables**.**

## 3.2 Research Design

The study used descriptive survey research design. This method of research was preferred because the study was able to collect data to answer questions concerning the status of the subject of study. Descriptive survey research design determines and reports the way things are done and also helps the study to describe a phenomenon in terms of attitude, values and characteristics (Mugenda and Mugenda, 1999). According to Orodho (2003), descriptive research design is a method of collecting information by interviewing or administering a questionnaire to a sample of individuals. This method was appropriate for the study in that it helped in portraying the accuracy of people's profile events and situations. A descriptive survey research design also allowed for in-depth analysis of variables and elements of the population to be studied and as well as collection of large amounts of data in a highly economical way.

## 3.3 Target Population

Population refers to all people or items (unit of analysis) with the characteristics that one wishes to study. The unit of analysis may be a person, group, organization, country, object, or any other entity that you wish to draw scientific inferences about (Bhattacherjee, 2012). The target population was a team made up of one project manager, the project contractor, a site agent and a committee of nine community members which was obtained from the construction records of the SGR. The committee comprised of the people who had been documented as the beneficiaries of the SGR. The choice of the target population was that they had the required information in relation

to the subject of the study. Therefore, the total target population was 144 respondents which was divided into strata as shown in Table 3.1.

**Table 3.1: Target population**

| Population | Frequency |
|---|---|
| Contractors | 12 |
| Project managers | 12 |
| Site managers | 12 |
| Community members who are beneficiaries of the project) | 108 |
| **Total** | **144** |

***Source: Ministry of Transport, Infrastructure Housing, Urban Development and Public Works (2020)***

### 3.4. Sample Size and Sampling Procedures

A sample according to Mugenda and Mugenda (2009) is a subgroup carefully selected to be representative of the whole population with relevant characteristics. The study used the census method which is a method of statistical enumeration where all respondents (144) of the population are used in the study. Community members were obtained from the construction records of the SGR especially on the areas where the SGR has gone through. The committee comprised of the people who have been documented as the beneficiaries of the SGR. Census was used because the number was manageable within the constraints of the study and because the method provided a true measure of the population and also has the highest degree of accuracy (Babbie, 2010).

### 3.5. Research Instruments

A questionnaire was used to collect primary data. The questionnaire comprised of questions, which seek to answer questions related to the objectives of this study. The questions entailed both closed-ended questions to enhance uniformity and open ended to ensure maximum data collection and generation of qualitative and quantitative data. The questionnaire was divided into two sections, the background information section and the research questions section. Furthermore, the research questions section was divided to sections according to the research objectives. Section

A contained information on respondent's profile. Section B, C, D, E, and F contained items on project initiation, project planning, project execution, project monitoring, and project closure respectively.

### 3.5.1. Pilot testing of instruments

Pilot study which was conducted before the actual study assisted in determining accuracy, clarity and suitability of the instruments. It helped to classify scarce and ambiguous items such that those that will not evaluate the variables intended will be modified. The pre-test method was adopted for this study where 14 respondents were chosen to contribute and were not included in the sample chosen for the study. During piloting the researcher administered the questionnaire to a different set of respondents who are not part of the groups of sampled respondents, but similar in characteristics to those sampled for the study. The piloting process played the important role of checking the respondents for their suitability, clarity, relevance of information and appropriateness of the language used. Piloting also involved validity and reliability of the research instruments.

### 3.5.2. Validity of Instruments

This study applied content validity to demonstrate whether the items under test fairly represent the whole domain of the content that the test will be designed to measure. Content validity is about how well or accurately the measurement tool provides an adequate and representative sample of all the items or aspects of the specific construct in question. Validity is threatened if some items are missing or are irrelevant. In order to ensure that the items on the research tools are valid, the researcher utilized expert's feedback on competitive strategies and competitive advantage so that credible findings are achieved. This was achieved by supervisor reviewing the research instruments to ensure they meet the required standards.

### 3.5.3 Reliability of Instruments

Reliability refers to the consistency of data arising from the use of a particular research method. A test measures what it is measuring to the degree. Mugenda (2003), states that reliability is the measure of the degree to which a research instrument yields the same result after repeated trials over a period. In this regard, test-retest was employed to check on reliability. This involved administering the same instruments twice to the same group of subjects, but after some time.

Hence, to determine stability, a measure or test was repeated on the subject at a future date. Cronbach's Coefficient alpha was used to compute the correlation co-efficient to determine the degree of consistency in responses obtained through the instrument every time it is administered. As a general rule, Cronbach's alpha value of not less than 0.70 indicates an acceptable level of internal consistency (Cronbach, and Azuma 1962). If the alpha value is below 0.7 the instruments were reviewed to ensure they meet the threshold.

### 3.6 Data Collection Procedure

The collection of Primary data was via a structured questionnaire using the drop and pick-later method. The added advantage of using questionnaires is that less time is used on data collection and it is less costly (Borg and Gall, 1996). Mugenda and Mugenda (2003), advice that questionnaires are commonly used to get key information about a population under study. The study obtained an introduction letter from the university approving collection of data and conducting the study, this was used as an introduction to the respondents. A research permit to conduct the study was obtained from the National Council of Science and Technology (NACOSTI) in order to conduct research in Kenya. Research assistants assisted to administer the questionnaires to the respondents with close supervision from the researcher. The respondents selected were briefed on how to fill in the questionnaire. The respondents were given a time frame to respond to the questionnaire after which the questionnaire were collected by the research assistant within the agreed time. To ensure informed consent and voluntary participation of the respondents, the researcher sought permission from the project manager to collect data from the mega project. Each respondent was served with a copy of the introduction letter informing them of the purpose and importance of the study

### 3.7 Data Analysis Techniques

Quantitative data from the field was checked to ensure completeness, consistency and accuracy. The data was then coded and tabulated to facilitate data analysis. The study further analyzed the data and present the results in form of percentages, frequencies, mean and standard deviation. The Quantitative data generated was subjected to the descriptive statistics feature in SPSS to generate mean, and standard deviation which was presented using tables, frequencies and percentages. The collected data from the open ended questions from the interview guide was qualitative. The data

was therefore analyzed using content analysis. It is a method used to examine artifacts of social communication. This method entails making interpretations by analytically and accurately ascertaining specific features of messages and information as the foundation to relate to trends. Content analysis provides a qualitative image of the respondents, apprehensions, thoughts, outlooks and approaches. In addition, it provides valuable historical and cultural insights through analysis of texts.

### 3.8 Ethical considerations

In research, ethical considerations are defined ensuring that the study adapts to the standards of conduct of the authorities in the area of research. Issues like deception to participants, confidentiality of information given, voluntary participation of respondents, analysis and reporting, danger or harm to participants and anonymity and any other professional code of ethics expected are some of the examples of ethical issues that may arise (SRA, December 2003). To make sure that the research is done according to the expectations of all authorities and in an ethical manner, the researcher first obtained an introductory letter from the University of Nairobi to consolidate data from Standard Gauge Railway project. Also, the study made sure that the required research authorities are consulted, permission granted and due explanations given to the respondents before the commencement of the study. The study had a moral duty to handle the sensitive information with great tact. The respondents to be involved in the study were informed that the instruments being administered were for research use only. The study also reassured respondents who may be unwilling to disclose some information, that the information would be treated with confidentiality.

### 3.9 Operationalization of variables

Operationalization is the process of strictly defining variables into measurable factors. The process defines fuzzy concepts and allows them to be measured, empirically and quantitatively. The operational definitions of variables for the current study was as shown in the table 3.2.

**Table 3.2: Operationalization of Variables**

| Objective | Variable | Indicator(s) | Measurement scale | Tools of Data Analysis | Method of Data Analysis |
|---|---|---|---|---|---|
| To determine how public participation in project initiation influence implementation of rail infrastructure project in Kenya | Public participation in project initiation | • Undertaking feasibility study<br>• Identifying scope<br>• Identifying project stakeholders | Nominal Ordinal | SPSS MS Excel | Descriptive statistics. Inferential statistics. |
| To assess how public participation in project planning influence implementation of rail infrastructure project in Kenya | Public participation in project planning | • Creating a project plan<br>• Creating work flow<br>• Gathering resources | Nominal Ordinal | SPSS MS Excel | Descriptive statistics. Inferential statistics. |
| To establish how public participation in project execution influence implementation of rail infrastructure project in Kenya | Public participation in project execution | • Creating tasks and organizing work flows<br>• Briefing team members on tasks<br>• Managing budget | Nominal Ordinal | SPSS MS Excel | Descriptive statistics. Inferential statistics. |

| | | | | | |
|---|---|---|---|---|---|
| To determine how public participation in project monitoring influence implementation of rail infrastructure project in Kenya | Public participation in project monitoring | • Monitoring of spending<br>• Monitoring of quality of work<br>• Keeping the project on track | Nominal<br>Ordinal | SPSS<br>MS Excel | Descriptive statistics.<br>Inferential statistics. |
| To establish how public participation in project closure influence implementation of rail infrastructure project in Kenya | Public participation in project closure | • Analyzing project performance<br>• Analyzing team performance<br>• Documenting project closure | Nominal<br>Ordinal | SPSS<br>MS Excel | Descriptive statistics.<br>Inferential statistics. |

# CHAPTER FOUR

# DATA ANALYSIS, PRESENTATION, AND INTERPRETATION

## 4.1 Introduction

This chapter discusses the interpretation and presentation of findings. It presents findings on public participation in project initiation and implementation of rail infrastructure project, public participation in project planning and implementation of rail infrastructure project, public participation in project execution and implementation of rail infrastructure project, public participation in project monitoring and implementation of rail infrastructure project, and public participation in project closure and implementation of rail infrastructure project.

## 4.2 Questionnaire Response Rate

**Table 4.1: Questionnaire Response Rate**

| Response rate | Frequency | Percentage |
|---|---|---|
| Responded | 131 | 91 |
| Non-response | 13 | 9 |
| **Targeted** | **144** | **100** |

The study targeted a sample size of 144 respondents out of which 131 were filled and returned giving a response rate of 91% as shown in Table 4.1. This response rate was good and representative and conforms to Mugenda and Mugenda (1999) stipulation that a response rate of 50% is adequate for analysis; a rate of 60% is good and a response rate of over 70% is excellent. Therefore, this was found to be adequate for social science studies and the study proceeded.

## 4.3 Demographic Data Analysis

In this section, the researcher sought to get information on the respondent's age, highest academic qualification, and experience in terms of the years they have spent working in rail infrastructure projects in Kenya. These are further discussed in the following sub-sequent sub-themes:

### 4.3.1 Distribution of Respondents by Age

To establish the ages of the respondents, they were asked to indicate their age brackets. The results are presented in Table 4.2.

**Table 4.2: Distribution of Respondents by Age**

| Age Bracket | Frequency | Percentage |
|---|---|---|
| 18 – 25 years | 22 | 16.8 |
| 26 – 35 years | 51 | 38.9 |
| 36 – 45years | 38 | 29 |
| Above 46 years | 20 | 15.3 |
| **Total** | **131** | **100** |

On the age of the respondents, the study found that the majority of the respondents were between 26-35years representing 51 (38.9%), 38 (29%) were aged between 36-45years while 22 (16.8%) were aged between 18-25years. 20 of the 131 respondents were above the age of 46 years. This shows that majority of the respondents were of an adequate/ informative age and therefore have enough experience on the subject being researched on.

### 4.3.2 Distribution of Respondents by Gender

The researcher sought to establish the gender of the respondents in providing information on the influence of public participation in project life cycle management on implementation of rail infrastructure project in Kenya. The gender was important as it would establish who are mostly involved in development of infrastructure projects. This results are presented in Table 4.3

**Table 4.3: Distribution of Respondents by Gender**

| Gender | Frequency | Percentage |
|---|---|---|
| Male | 78 | 59.5 |
| Female | 53 | 40.5 |
| **Total** | **131** | **100** |

From table 4.3 it was clear that there was a fair gender representation for both male and female respondents, with the majority being male as they represented 59.5% while the female percentage was 40.5 % represented. This gave a clear illustration of involvement of both genders in the life cycle of the railway project.

### 4.3.3 Distribution of Level of Education

The study sought to determine the level of education of the respondents. This was important as it would determine the level of knowledge the respondents have with regard to the railways project. The results are presented in table 4.4.

**Table 4.4: Level of Education**

| Level of Education | Frequency | Percentage |
|---|---|---|
| Diploma | 51 | 38.9 |
| Degree | 39 | 29.8 |
| Masters | 31 | 23.7 |
| PhD | 10 | 7.6 |
| **Total** | **131** | **100** |

From table 4.4 the results show that 51(38.9%) of the respondents had a Diploma as their highest level of education, 39(29.8%) of the respondents had a Bachelor's degree as the highest level of education while another 31 of the respondents had a Master's degree; the respondents 10(7.6%) with a PhD were constituted by the contractors and site managers. This shows that majority of the respondents were adequately equipped with the required education level and intelligence to understand the process and elements of railway project.

### 4.3.4 Distribution of Respondents by Working Experience in Rail Infrastructure Projects

The study sought to establish the respondent's working experience in rail infrastructure projects. This was important as it would inform the researcher how well the respondents were conversant with the railway project. Findings are as illustrated in Table 4.5.

**Table 4.5: Distribution of Respondents by Working Experience in Rail Infrastructure Projects**

| Work Experience | Frequency | Percentage |
|---|---|---|
| Less than 1 Year | 3 | 2.3 |
| 1 – 3 Years | 44 | 33.6 |
| 4 – 6 Years | 49 | 37.4 |
| 7 Years and above | 35 | 26.7 |
| **Total** | **131** | **100** |

From table 4.5, it is evident that majority of the respondents with a percentage of 37.4% have worked in rail infrastructure projects for 4-6 years while least of the respondents with a percentage of 2.3 % have work experience of below a year. The results give a clear indication that the respondents in general have working experience in rail infrastructure projects which builds up as an advantage to the study as the responses of the research objective emanate from experienced respondents.

## 4.4 Public Participation in Project Initiation on Implementation of Rail Infrastructure Project

The study sought to establish the influence of public participation in project initiation on implementation of rail infrastructure project. The respondents had been asked to give their opinion on the extent at which they agree or disagree with the statements placed in a Five-point Likert scale ranging from Strongly Agree (1); Agree (2) Neutral (3); Disagree (4) and Strongly Disagree (5). Results are tabulated in Table 4.6

**Table 4.6: Public Participation in Project Initiation and Implementation of Rail Infrastructure Projects**

| Statements | SA | | A | | N | | D | | SD | | Total | (%) | Mean | Std.Dv |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **F** | % | **F** | % | **F** | % | **F** | % | **F** | % | **F** | % | | |
| Project initiation through public participation helps to articulate public needs in a project | **25** | 19 | **48** | 37 | **32** | 24 | **18** | 14 | **8** | 6 | 1**31** | 100 | 2.51 | 0.122 |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Project Initiation through public participation helps in establish the feasibility of a project | **15** | 11 | **58** | 44 | **42** | 32 | **10** | 8 | **6** | 5 | 1**31** | 100 | 2.50 | 0.115 |
| Public Participation during project initiation helps members of the community to participate in development of a project | **10** | 8 | **51** | 39 | **35** | 27 | **20** | 15 | **15** | 11 | **131** | 100 | 2.83 | 0.119 |
| Public Participation in project initiation strengthens community capacity in a project | **18** | 14 | **55** | 42 | **46** | 35 | **6** | 5 | **6** | 5 | **131** | 100 | 2.44 | 0.117 |
| Public participation in project initiation helps identify problems and translate them into solutions or actions | **10** | 8 | **51** | 39 | **45** | 34 | **18** | 14 | **7** | 5 | **131** | 100 | 2.70 | 0.119 |
| Project initiation through public participation helps identify project stakeholders | **15** | 11 | **58** | 44 | **42** | 32 | **10** | 8 | **6** | 5 | 1**31** | 100 | 2.50 | 0.201 |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Public participation in project initiation helps project managers identify the factors that affects the community ability to implement development projects | **13** | 10 | **60** | 46 | **46** | 35 | **6** | 5 | **6** | 5 | **131** | 100 | 2.48 | 0.119 |
| Public Participation in project initiation helps identify project scope | **10** | 8 | **51** | 39 | **45** | 34 | **18** | 14 | **7** | 5 | **131** | 100 | 2.70 | 0.119 |
| Project initiation facilitates feasibility studies and identification of project donors | **15** | 11 | **44** | 34 | **42** | 32 | **18** | 14 | **12** | 9 | 1**31** | 100 | 2.75 | 0.200 |
| Public participation in project initiation helps identify project site, costing, as well as benefits to the community | **19** | 15 | **44** | 34 | **38** | 29 | **20** | 15 | **10** | 8 | 1**31** | 100 | 2.68 | 0.118 |
| Composite | | | | | | | | | | | | | **2.61** | **0.116** |

From Table 4.6, it is clear that the respondents agree on the statements in regard to influence of public participation in project initiation with a composite mean of 2.61. On undertaking feasibility study, the respondents agreed that project initiation through public participation helps to articulate public needs in a project with a mean of 2.51 and a standard deviation of 0.122, and project initiation through public participation helps in establishing the feasibility of a project with a mean of 2.50 and standard deviation of 0.115. In addition, in the respondents agreed that public participation in project initiation helps identify project scope with mean of 2.70

and standard deviation of 0.119, and it facilitates feasibility studies and identification of project donors with a mean of 2.75 and standard deviation of 0.200; in all the project initiation through public participation helps identify project stakeholders with a mean of 2.50 and a standard deviation of 0.201. From the findings, it can be deduced that public participation is crucial during initiation of rail infrastructure projects in Kenya. This is however dependent on compatibility with proper communication channels, and accessibility of the project activities and decisions for the beneficiaries. This is in agreement with Heck (2013) on the inclusion the rural poor in the initiation stages of a development project because these people were more likely to articulate their needs and wants more accurately than an outside observer.

In relation to identifying project donors, public participation in project initiation helps project managers identify the factors that affect the community ability to implement development projects with a mean of 2.48 and a standard deviation of 0.119, and similar public participation in project initiation strengthens community capacity in a project with a mean of 2.44 and standard deviation of 0.117. This gives a clear indication as Minkler et al. (2015) reported, it was important to identify community stakeholders during the initiation stages of a project because it improved the community capacity to identify problems, participate in decision-making, and translate problems into solutions or action.

The study also sought to establish the extent to which respondents' recommended public participation on project initiation to improve implementation of rail projects. The findings are as shown in Table 4.7

**Table 4.7: Extent of Public Participation on Project Initiation to Improve Implementation of Rail Infrastructure Projects**

| Opinion | Frequency (F) | Percentage (%) |
|---|---|---|
| Very Great Extent | 36 | 27.5 |
| Great Extent | 88 | 67.2 |
| Moderate Extent | 7 | 5.3 |
| **Total** | **131** | **100** |

As shown in Table 4.7, majority of the respondents' opinion was that public participation in project initiation influence implementation of rail infrastructure projects to great extent with a frequency of 88 and percentage of 67.2 %, while the least of the respondents' opinion was that public participation in project initiation influence implementation of rail infrastructure projects to a moderate extent with a frequency of 7 and percentage of 5.3%.

### 4.5 Public Participation in Project Planning on Implementation of Rail Infrastructure Project.

The respondents were asked to give their opinion whether public participation in project planning influenced implementation of the rail infrastructure project; the results were as displayed in Table 4.8

**Table 4.8: Public Participation in Project Planning and Implementation of Rail Infrastructure Project**

| Statements | SA | | A | | N | | D | | SD | | Total | (%) | Mean | Std.Dv |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | F | % | F | % | F | % | F | % | F | % | F | % | | |
| Project Planning helps in facilitation and creation of project plans | **10** | 8 | **51** | 39 | **45** | 34 | **18** | 14 | **7** | 5 | **131** | 100 | 2.70 | 0.119 |
| Project planning ensures objectives are made in accordance to a specific plan | **19** | 15 | **47** | 36 | **35** | 27 | **20** | 15 | **10** | 8 | 1**31** | 100 | 2.66 | 0.116 |
| Every project is clearly planned for in terms of scope and budgets | **13** | 10 | **60** | 46 | **46** | 35 | **6** | 5 | **6** | 5 | **131** | 100 | 2.48 | 0.113 |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Every project is clearly planned for in terms of time and completion schedule | **17** | 13 | **54** | 41 | **46** | 35 | **8** | 5 | **6** | 5 | **131** | 100 | 2.48 | 0.116 |
| Project Planning helps in gathering of resources from various sources | **10** | 8 | **51** | 39 | **45** | 34 | **18** | 14 | **7** | 5 | **131** | 100 | 2.70 | 0.119 |
| All the Stakeholders are involved in financial detailed plan to establish the costs required during the implementation phases of the project | **14** | 11 | **51** | 39 | **41** | 31 | **13** | 10 | **12** | 9 | **131** | 100 | 2.70 | 0.119 |
| Every project requires development quality plan to monitor the quality of the outputs | **13** | 10 | **45** | 34 | **47** | 36 | **14** | 11 | **12** | 9 | **131** | 100 | 2.73 | 0.119 |
| Project planning helps to identify actions that will be used to achieve the required quality | **15** | 11 | **58** | 44 | **42** | 32 | **10** | 8 | **6** | 5 | 1**31** | 100 | 2.50 | 0.201 |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Project planning through public participation helps in organizing project teams for various tasks | **11** | 10 | **55** | 42 | **46** | 35 | **13** | 10 | **6** | 5 | **131** | 100 | 2.60 | 0.117 |
| Project planning through public participation helps in creating a work flow during project implementation | **16** | 12 | **55** | 42 | **46** | 35 | **8** | 6 | **8** | 6 | **131** | 100 | 2.49 | 0.116 |
| **Composite** | | | | | | | | | | | | | **2.60** | **0.125** |

From Table 4.8, it is clear that the respondents agree on the statements in regard to influence of public participation on project planning influence implementation of rail infrastructure project, with a composite mean of 2.60 and a standard deviation of 0.125. This gives an indication that public participation on project planning influence implementation of rail infrastructure project (Satyanarayana, 2008).

On creating a project plan, the respondents agreed that project planning helps in facilitation and creation of project plans with a mean of 2.70 and a standard deviation of 0.119, and project planning ensures objectives are made in accordance to a specific plan with a mean of 2.66 and standard deviation of 0.116. The findings give indication that every project that is clearly planned for in terms of time and completion schedule has higher rate of performing successfully as opinioned by the respondents with a mean of 2.48 and a standard deviation of 0.116; the study's findings based on the organization's planning capabilities, clarity of objectives and scope definition allows for a smooth incorporation of public participation as echoed by Brent (2007) who asserted the importance of public participation in creating sustainable projects. Their study on sustainable project life cycle management in the manufacturing sector proposed a framework for ensuring project sustainability.

In integration creation of work flow of the rail infrastructure project, the respondents agreed that every project requires development quality plan to monitor the quality of the outputs with a mean of 2.73 and standard deviation of 0.119, and that the project planning helps to identify actions that will be used to achieve the required quality with a mean of 2.50 and standard deviation of 0.201. The respondents also opinioned that project planning through public participation helps in creating a work flow during project implementation as evidenced with a mean of 2.49 and standard deviation of 0.116. The findings give an indication that, for any of the activity to be executed in the project, it ought to be embedded in the project document so as to be executed as required. From the findings, there ought to be integration of public participation practices in the project by first embedding in the project documents, roles assignments of the rail project's stakeholders, beneficiaries, and community members with execution of work at all the stages of project cycle. As echoed by Rothman (2001) who proposed that community organizers could be used as key informants in allocation of project work in the local community. This would reduce the communication complexities associated with large development projects that involve numerous community stakeholders.

Preceding the gathering of resources, the respondents agreed that every project is clearly planned for in terms of scope and budgets with a mean of 2.48 and standard deviation of 0.113, and that project planning helps in gathering of resources from various sources with a mean of 2.70 and standard deviation of 0.119. The findings gave a clear picture that the infrastructure projects should be allocated from the project budget based on the principles of budgeting as echoed by Trémolet et al. (2010).

In organization of project teams, the respondents agreed all the stakeholders are involved in financial detailed plan to establish the costs required during the implementation phases of the project with a mean of 2.70 and a standard deviation of 0.119. In addition, project planning through public participation helps in organizing project teams for various tasks with a mean of 2.60 and a standard deviation of 0.117. The findings suggest that despite of coordination of the project teams by the project manager, implementation may not be as scheduled due to the unforeseen uncertainties stemming from participation by the public. Thus, it is prudent to carry ought risk analysis and develop mitigation strategies to allow for progressing of the project activities (Irfan & Hassan, 2019).

The study also sought to establish to what extent does respondents' opinion public participation on project planning influence implementation of rail infrastructure projects. The findings are as shown in Table 4.9.

**Table 4.9: Extent of Public Participation in Project Planning on Implementation of Rail Infrastructure Projects**

| Opinion | Frequency (F) | Percentage (%) |
|---|---|---|
| Very Great Extent | 32 | 24.4 |
| Great Extent | 69 | 52.7 |
| Moderate Extent | 30 | 22.9 |
| **Total** | **131** | **100** |

As indicated in Table 4.9, majority of the respondents' opinion was that public participation on project planning influenced implementation of rail infrastructure projects to great extent with a frequency of 69 and percentage of 52.7 %, while the least of the respondents' opinion was that public participation on project planning influence implementation of rail infrastructure projects to a moderate extent with a frequency of 30 and percentage of 22.9%. The findings on the respondents' opinions on the influence of public participation on project planning in implementation of rail infrastructure projects correspond to research findings by Alelah and Mueke (2017).

## 4.6 Public Participation in Project Execution on Implementation of Rail Infrastructure Project

The respondents were requested to indicate whether they agree with the following statements on public participation on project execution influence on implementation of rail infrastructure project; the analysis was as shown in Table 4.10

**Table 4.10: Public Participation in Project Execution and Implementation of Rail Infrastructure Project**

| Statements | SA | | A | | N | | D | | SD | | Total | (%) | Mean | Std.Dv |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | F | % | F | % | F | % | F | % | F | % | F | % | | |
| The projects are executed with the involvement of all stakeholders | **19** | 15 | **47** | 36 | **35** | 27 | **20** | 15 | **10** | 8 | 1**31** | 100 | 2.66 | 0.116 |
| Project execution helps in task creation for project implementation | **11** | 10 | **55** | 42 | **46** | 35 | **13** | 10 | **6** | 5 | **131** | 100 | 2.60 | 0.117 |
| Project Execution helps in creating of team for executing particular tasks | **10** | 8 | **51** | 39 | **45** | 34 | **18** | 14 | **7** | 5 | **131** | 100 | 2.70 | 0.119 |
| Project execution ensures there is organization of work flow for the various teams | **12** | 9 | **49** | 37 | **45** | 34 | **18** | 14 | **7** | 5 | **131** | 100 | 2.69 | 0.118 |
| Project Execution helps in providing information to members on the various tasks involved | **16** | 12 | **55** | 42 | **46** | 35 | **8** | 6 | **6** | 6 | **131** | 100 | 2.49 | 0.116 |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| The personnel involved in the projects are continuously trained on executing various project tasks | **17** | 13 | **54** | 41 | **43** | 35 | **9** | 8 | **8** | 5 | **131** | 100 | 2.51 | 0.112 |
| The projects are executed and managed by staff with varied knowledge and experience | **13** | 10 | **60** | 46 | **48** | 37 | **6** | 5 | **4** | 3 | **131** | 100 | 2.45 | 0.113 |
| During execution the project recruits staff with competence and appropriate skills | **13** | 10 | **50** | 38 | **46** | 35 | **13** | 9 | **9** | 8 | **131** | 100 | 2.65 | 0.119 |
| The staff in these project possess vast understanding of principles of project management and execution to spur the performance | **18** | 14 | **56** | 43 | **50** | 38 | **7** | 5 | - | - | **131** | 100 | 2.35 | 0.110 |
| Project execution facilitate performance of tasks within the allocated budget | **16** | 12 | **55** | 42 | **46** | 35 | **8** | 6 | **8** | 6 | **131** | 100 | 2.49 | 0.116 |
| **Composite** | | | | | | | | | | | | | **2.56** | **0.116** |

From Table 4.10 it is clear that the respondents agree on the statements in regard to public participation in project execution influencing implementation of rail infrastructure project with a composite mean of 2.56 and standard deviation of 0.116.

On creation of tasks, the respondents agreed that the projects are executed with the involvement of all stakeholders with a mean of 2.66 and a standard deviation of 0.116 and project execution helps in task creation for project implementation with a mean of 2.60 and standard deviation of 0.117. In addition, the respondents agreed that project execution helps in creating a team for executing particular tasks with mean of 2.70 and standard deviation of 0.119. From the findings, it can be deduced that public participation on project execution influences implementation of rail infrastructure projects as it allows for effectiveness and efficiency. This is however dependent on compatibility with other systems in place, and accessibility of the system to the beneficiaries. This is in agreement with Ndubi et al. (2018) on the use technology allows for reduction in manual labour while increasing the efficiency of the output for a given project enhancing its sustainability.

On the aspect of organizing work flows, it is evident that the respondents agreed that project execution ensures there is organization of work flow for the various teams with a mean of 2.69 and standard deviation of 0.118, and the personnel involved in the projects are continuously trained on executing various project tasks with a mean of 2.51 and standard deviation of 0.112. On the projects are executed and managed by staff with varied knowledge and experience with a mean of 2.45 and a standard deviation of 0.113. The respondents also agreed that project execution facilitate performance of tasks within the allocated budget with a mean of 2.49 and standard deviation of 0.116. This gives a clear indication that the choice and method of organizing work and activities for the rail infrastructure project should be such that it incorporates not only the community members but ensuring work is assigned to participants who have knowledge in those areas as indicated by Edmonton (2016) who asserted that stakeholder participation during work assignment was very important in the construction or implementation phase.

On briefing team members on tasks, the respondents agreed that project execution helps in providing information to members on the various tasks involved with a mean of 2.49 and standard deviation of 0.116, and that during execution, the project recruits staff with competence and appropriate skills with a mean of 2.65 and standard deviation of 0.119; the respondents also opinioned that the staff in these project possess vast understanding of principles of project management and execution to spur the performance with a mean of 2.35 and a standard deviation of 0.110. This is evident in that for any briefing system adopted by the rail infrastructure project,

it ought to be compatible with the level of understanding of all participants involved (Yamo, 2018).

The study also sought to establish the respondents' opinion on influence of public participation on project execution influence on implementation of rail infrastructure project. The findings are as shown in Table 4.11.

**Table 4.11: Extent of Public Participation on Project Execution Influence on Implementation of Rail Infrastructure Project**

| Opinion | Frequency (F) | Percentage (%) |
|---|---|---|
| Very Great Extent | 45 | 34.4 |
| Great Extent | 70 | 53.4 |
| Moderate Extent | 12 | 9.2 |
| Little Extent | 4 | 3.1 |
| **Total** | **131** | **100** |

As shown in Table 4.11, majority of the respondents' opinion was that public participation on project execution influences implementation of rail infrastructure project to great extent with a frequency of 70 and percentage of 53.4 %, while the least of the respondents' opinion was that public participation on project execution influence implementation of rail infrastructure project to a little extent with a frequency of 4 and percentage of 3.1%.

## 4.7 Public Participation in Project Monitoring and Implementation of Rail Infrastructure Project

The respondents were asked to indicate the extent to which they agree with the following statements on public participation on project monitoring influencing implementation of rail infrastructure project, the responses were as follows;

**Table 4.12: Public Participation in Project Monitoring and Implementation of Rail Infrastructure Projects**

| Statements | SA | | A | | N | | D | | SD | | Total (%) | | Mean | Std.Dv |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | F | % | F | % | F | % | F | % | F | % | F | % | | |
| Project monitoring ensures that the goals and objectives of projects are achieved | **16** | 12 | **55** | 42 | **46** | 35 | **8** | 7 | **6** | 5 | **131** | 100 | 2.32 | 0.116 |
| Project monitoring ensures spending is monitored appropriately | **15** | 11 | **58** | 44 | **42** | 32 | **10** | 8 | **6** | 5 | 1**31** | 100 | 2.49 | 0.201 |
| Project stakeholders ensure that all projects are delivered in a timely and cost-effective manner | **16** | 12 | **55** | 42 | **46** | 35 | **8** | 6 | **6** | 6 | **131** | 100 | 2.48 | 0.116 |
| Project Monitoring assures that all factors that enhance implementation are in control | **13** | 10 | **60** | 46 | **48** | 37 | **6** | 5 | **4** | 3 | **131** | 100 | 2.45 | 0.113 |
| Project monitoring and evaluation ensures dedication by project teams | **19** | 15 | **47** | 36 | **35** | 27 | **20** | 15 | **10** | 8 | 1**31** | 100 | 2.66 | 0.116 |
| Project monitoring and evaluation ensures that | **12** | 9 | **49** | 37 | **45** | 34 | **18** | 14 | **7** | 5 | **131** | 100 | 2.69 | 0.118 |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| project results are made public to all stakeholders | | | | | | | | | | | | | | |
| Projects Monitoring ensures project costs do not exceed the allocated budget | **11** | 8 | **55** | 42 | **46** | 35 | **13** | 10 | **6** | 5 | **131** | 100 | 2.60 | 0.117 |
| Project monitoring and evaluation monitor quality during the implementation of effective and sound Quality Assurance | **15** | 11 | **58** | 44 | **42** | 32 | **10** | 8 | **6** | 5 | 1**31** | 100 | 2.49 | 0.201 |
| Project Monitoring and evaluation helps in briefing of team members on project tasks | **16** | 12 | **55** | 42 | **46** | 35 | **8** | 7 | **6** | 5 | **131** | 100 | 2.48 | 0.116 |
| Project monitoring and evaluation creates organization work flow hence appropriate implementation | **13** | 10 | **52** | 38 | **49** | 37 | **13** | 10 | **4** | 1 | **131** | 100 | 2.56 | 0.114 |
| **Composite** | | | | | | | | | | | | | **2.52** | **0.132** |

From Table 4.12, it is clear that the respondents agree on the statements in regard to public participation on project monitoring influencing implementation of rail infrastructure project with a composite mean of 2.52 and a standard deviation of 0.132. This gives an indication that monitoring is significant in determining project performance and sustainability (Biwott, Egesah, & Ngeywo, 2017).

On monitoring how the infrastructure project was spending financially, the respondents agreed that project monitoring ensures spending is monitored appropriately with a mean of 2.49 and a standard deviation of 0.201, and that project stakeholders ensure that all projects are delivered in a timely and cost-effective manner with a mean of 2.48 and standard deviation of 0.116, whereas the respondents also alluded that project monitoring ensured project costs do not exceed the allocated budget with a mean of 2.60 and standard deviation of 0.117. The findings give indication that based on the rail infrastructure project's capabilities, spending based on the budget's premises is crucial in ensuring that the finances among other resources are adequate enough to sustain the project through to its completion as echoed by Deroo et al. (2015). In addition, the personnel for monitoring activities ought to have necessary knowledge and skills necessary for executing the tasks as this allows for effectiveness and efficiency in project quality thus enhancing sustainability of rail infrastructure projects (Deroo et al., 2015).

In monitoring of quality work, the respondents agreed that project monitoring assures that all factors that enhance implementation of the rail infrastructure project are in control with a mean of 2.45 and standard deviation of 0.113, and that project monitoring and evaluation should monitor quality during the implementation of effective and sound Quality Assurance with a mean of 2.49 and standard deviation of 0.201. The findings give an indication that, for any of the activity to be executed in the project, it ought to be embedded in the project document so as to be executed as required. From the findings, there ought to be integration of M & E practices in the project by first embedding in the project document with execution at all the stages of project cycle. As echoed by Ndubi et al. (2018), monitoring at all stages of project enhances transparency and accountability. In addition, adherence to M & E schedule, allows for continuous tracking inputs, processes and outputs against set targets thus providing the project manager with know-how on implementation status (Mugo et al., 2016).

On keeping the project on track, the respondents agreed that project monitoring ensured that the goals and objectives of projects are achieved with a mean of 2.32 and standard deviation of 0.116, and that project monitoring and evaluation ensured that project results are made public to all stakeholders with a mean of 2.69 and standard deviation of 0.118. The findings gave a clear picture that the finances for M& E activities should be allocated from the project budget based on the principles of budgeting as echoed by Trémolet et al. (2010).

In monitoring project teams, the respondents agreed that project monitoring and evaluation ensured dedication by project teams with a mean of 2.66 and a standard deviation of 0.116. In addition, project monitoring and evaluation helps in briefing of team members on project tasks with a mean of 2.48 and a standard deviation of 0.116; the findings suggest that the project management should have a clear monitoring plan especially on community participants involved in the project so as to weigh and gauge their input in terms of effectiveness and efficiency as stipulated by Reid (2012) confirmed the assertion that the active participation of stakeholders in the monitoring process was a very powerful empowerment tool. He observed that participation reduced alienation of the community by empowering the public to voice their opinions and suggestions on how the project could be improved or adapted to changing political, social, cultural, and economic environments.

The study also sought to establish the respondents' opinion on influence of public participation on project monitoring influence on implementation of rail infrastructure project. The findings are as shown in Table 4.13**.**

**Table 4.13: Extent of Public Participation on Project Monitoring Influence Implementation of Rail Infrastructure Project**

| **Opinion** | **Frequency (F)** | **Percentage (%)** |
|---|---|---|
| Very Great Extent | 21 | 16 |
| Great Extent | 53 | 40.5 |
| Moderate Extent | 50 | 38.2 |
| Little Extent | 7 | 5.3 |
| **Total** | **131** | **100** |

As shown in Table 4.13, majority of the respondents' opinion was public participation on project monitoring influences implementation of rail infrastructure project to great extent with a frequency of 53 and percentage of 40.5 %, while the least of the respondents' opinion was to a little extent at a frequency of 7 and 5.3%. The respondents who opinioned to a little extent cited that monitoring of an infrastructure project involved complex systems hence lack of public participation would not be felt.

## 4.8 Public Participation in Project Closure and Implementation of Rail Infrastructure Project

The respondents were asked to indicate the extent to which they agree with the following statements on public participation in project closure influencing implementation of rail infrastructure project, the responses were as follows;

**Table 4.14: Public Participation in Project Closure and Implementation of Rail Infrastructure Projects**

| Statements | SA | | A | | N | | D | | SD | | Total | (%) | Mean | Std.Dv |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | F | % | F | % | F | % | F | % | F | % | F | % | | |
| Public participation on project closure is important as it determines project performance | **19** | 15 | **47** | 36 | **35** | 27 | **20** | 15 | **10** | 8 | 1**31** | 100 | 2.66 | 0.117 |
| Public participation on project closure provides a platform to assess performance within a particular time | **16** | 12 | **55** | 42 | **46** | 35 | **8** | 7 | **6** | 5 | **131** | 100 | 2.48 | 0.114 |
| Public Participation on project closure ensures team performance is assessed | **13** | 10 | **60** | 46 | **48** | 37 | **6** | 5 | **4** | 3 | **131** | 100 | 2.45 | 0.113 |
| Public participation on project closure ensures team objectives have been achieved | **25** | 19 | **48** | 37 | **32** | 24 | **18** | 14 | **8** | 6 | 1**31** | 100 | 2.51 | 0.122 |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Public participation on project closure ensure project documents are drafted with the right information | **17** | 13 | **54** | 41 | **43** | 35 | **9** | 7 | **8** | 6 | **131** | 100 | 2.52 | 0.112 |
| Public participation on project closure ensure generation of progress reports and contract documents | **16** | 12 | **55** | 42 | **46** | 35 | **8** | 8 | **6** | 4 | **131** | 100 | 2.48 | 0.116 |
| Public participation on project closure ensures that the target output has been achieved with the provided inputs | **15** | 11 | **58** | 44 | **42** | 32 | **10** | 8 | **6** | 5 | 1**31** | 100 | 2.49 | 0.201 |
| Public participation on project closure ensures that the project has complied with the budget | **13** | 10 | **60** | 46 | **48** | 37 | **6** | 5 | **4** | 3 | **131** | 100 | 2.45 | 0.113 |
| Public Participate on project closure ensures stakeholder objectives | **12** | 9 | **49** | 37 | **45** | 34 | **18** | 14 | **7** | 5 | **131** | 100 | 2.69 | 0.118 |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| have been achieved | | | | | | | | | | | | | | |
| Public Participation on project closure ensures project objectives are met | **14** | 11 | **47** | 36 | **40** | 31 | **18** | 14 | **12** | 9 | **131** | 100 | 2.75 | 0.119 |
| **Composite** | | | | | | | | | | | | | **2.55** | **0.125** |

From Table 4.14, it is clear that the respondents agree on the statements in regard to public participation on project closure influencing implementation of rail infrastructure project with a composite mean of 2.55. This gives an indication that collaboration and networking in project closure gives understanding complexity of uncertainties that may come about by the community and the beneficiaries rejecting and/or accepting the project (Larsson & Larsson, 2019).

On analyzing project performance, the respondents agreed that public participation in project closure is important as it determines project performance with a mean of 2.66 and standard deviation of 0.117, and that public participation on project closure provides a platform to assess performance within a particular time with a mean of 2.48 and standard deviation of 0.114. The study also found out that public participation on project closure ensured stakeholder objectives are achieved with a mean of 2.69 and a standard deviation of 0.118. This indicates that analysis of project performance cannot be without the participation of all stakeholders in authenticating the project's deliverables hence determining whether its performance will be sustainable or not; De (2012) writes that improper handling of project closure can result in several unfavorable effects such as time over run, cost over-run, tarnishing the image and credibility of the project team, locking up valuable human and other resources, that could have been gainfully utilized elsewhere, and stress on the project personnel.

Table 4.14 also shows that on analyzing team performance, the respondents agreed that the public participation on project closure ensures team performance is assessed with a mean of 2.45 and standard deviation of 0.113, and that public participation on project closure ensures team objectives have been achieved with a mean of 2.51 and standard deviation of 0.122. This implies

that partners in collaboration for development of a specific project from both local, national, and international levels, ought to be assessed and their work outputs evaluated in terms of quality since this would not only involve them in the process but will ensure an effective implementation of the project. Based on the research by Trémolet et al. (2010), the level of involvement by the partners in project closure may vary based on the project objectives based on the major elements of collaboration such as the duration, intensity and depth ought to be stated at the initial stages of project implementation.

In documenting project closure, the respondents agreed that public participation in project closure ensured project documents are drafted with the right information with a mean of 2.52 and a standard deviation of 0.112 and that Public participation on project closure ensure generation of progress reports and contract documents with a mean of 2.48 and standard deviation of 0.116. In addition, the respondents agreed that final documentation of the project closure should be made available to all stakeholders including community members among other beneficiaries of the rail infrastructure project.

Finally, on analyzing budget compliance, the respondents agreed that public participation on project closure ensures that the project has complied with the budget with a mean of 2.45 and a standard deviation of 0.113 and that public participation on project closure ensures that the target output has been achieved with the provided inputs with a mean of 2.49 and standard deviation of 0.201. The findings give an indication that it is prudent, moral and proper project implementation practice to involve public participation in gathering information, interpreting and presenting budgetary information on the rail infrastructure project for transparency and ethical purposes. This is echoed by Guyer (2011) who opinioned that project closure involves verification by the client, contractor and consultant that all budgeted activities have been finalized, documentation has been done and storing relevant information. It also entails verifying that the project has addressed the terms and conditions of the contracts, finalizing of exit criteria for contract termination, validating exit criteria and formally closing out all contracts associated with the completed project (Guyer, 2011).

# CHAPTER FIVE

# SUMMARY OF FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

## 5.1 Introduction

This chapter covers summary of the findings, conclusions, and recommendations.

## 5.2 Summary of Findings

A total of 144 questionnaires were delivered to the respondents from which 131 responses were obtained giving a response rate of 91 %. From the demographic data obtained, 59.5% were male while 40.5 % were female. The age of majority (38.9%) was between 26-35 years and on duration of working experience in rail infrastructure projects, majority (37.4%) of the respondents were between 4-6 years. In addition, on the highest level of education, 38.9% have diploma level while the rest have master's degree, bachelor's degree, and certificate level.

### 5.2.1 Public Participation in Project Initiation on Implementation of Rail Infrastructure Project

Based on the indicators of public participation in project initiation, that entail undertaking feasibility study, identifying scope, identifying project stakeholders and identifying project donors the respondents agreed on the statements from the Five-point Likert scale with a composite mean of 2.61. In addition, majority of the respondents' opinion was that public participation in project initiation influences the implementation of rail infrastructure projects to a great extent with a frequency of 88 and a percentage of 67.2%.

### 5.2.2 Public Participation in Project Planning on Implementation of Rail Infrastructure Project

Based on the indicators of public participation in project planning, that entail creating a project plan, creating a work flow, gathering resources and organizing teams, the respondents agreed on the statements from the Five-point Likert scale with a composite mean of 2.60. In addition, majority of the respondents' opinion was that public participation in project planning influence implementation of rail infrastructure project to great extent with a frequency of 69 and a percentage of 52.7 %.

### 5.2.3 Public Participation in Project Execution on Implementation of Rail Infrastructure Project

From the public participation on project execution indicators, that entail creating tasks, organizing work flows and briefing team members on tasks, the respondents agreed on the statements from the Five-point Likert scale with a composite mean of 2.56. In addition, majority of the respondents' opinion was that public participation on project execution influence the implementation of rail infrastructure projects to a great extent with a frequency of 70 and a percentage of 53.4 %.

### 5.2.4 Public Participation in Project Monitoring and Implementation of Rail Infrastructure Project

Based on the public participation in project monitoring indicators, that entail monitoring of spending, monitoring of quality of work, keeping the project on track and monitoring project teams, the respondents agreed on the statements from the Five-point Likert scale with a composite mean of 2.52.

### 5.2.5 Public Participation in Project Closure and Implementation of Rail Infrastructure Project

Based on the public participation in project closure indicators, that entail analyzing of project performance, analyzing team performance, documenting project closure and analyzing budget compliance, the respondents agreed on the statements from the Five-point Likert scale with a composite mean of 2.55.

## 5.3 Conclusions

The study concluded that project initiation through public participation helps identify project stakeholders. The study also concluded that the measures to enhance public participation in project initiation include building relationships and networks, bringing in diverse perspectives which will increase the chances of success of the decision or solution. The respondents further stated that the proponents of a participatory process may need to conduct outreach to attract and engage stakeholders, raise the visibility and transparency of the process, and inform stakeholders about progress and results.

The study concluded that the personnel involved in the projects are continuously trained on executing various project tasks. The study also concluded that the measures to enhance public participation in project initiation include direct participation in the project design phase; coordination and execution of demonstration projects and feasibility studies; recruitment of local experts for the project activities; organization of thematic events and technical meetings, education and training activities; public consultations and validation of the Strategic Action Program (SAP) process; and dissemination of information and project results through video documentaries, printed material, and publications.

The study concluded that project monitoring assures that all factors that enhance implementation are in control. The study also concluded that the measures to enhance public participation in project initiation include facilitation of involvement of communities, organizations and individual citizens from all levels in decision making in governments, recognizing and communicating needs and interests of all participants including decision makers. Public shall have access to information to enable meaningful participation.

### 5.4 Recommendations

Based on the study findings, it is recommended that;

1. In project designing, under changing environment based on the customer demand and new regulations, consideration ought to be made on the involvement of community members among other beneficiaries of a project especially in the initiation stage to avoid issues like pilferage, sabotage that are brought about by rejection of the infrastructure project.

2. Community should be involved at all the stages of the project cycle from project initiation, planning, implementation, monitoring and closure of rail infrastructure projects. This creates a sense of belonging and ownership in the projects while tapping from the local expertise enabling sustainability of the projects.

3. In designing for collaboration and networking, local, national and international partners ought to be considered for their contributions on funding, technical expertise, and

integration of projects to allow for implementation of rail infrastructure projects based on clear guidelines on the duration and depth of involvement.

4. In designing for monitoring and evaluation for rail infrastructure projects, there ought to be allocation of finances for M & E activities from the project budget and available personnel who have knowledge and expertise to execute the M & E activities and adherence to M & E schedules at all the project stages to minimize any faults that can hinder the sustainability of projects.

### 5.5 Suggestions for Further Studies

Further studies should be done on the influence of Public Participation in Project Life Cycle Management on implementation of rail infrastructure projects in other regions of Kenya, to make a comparison for any consistency.

## REFERENCES


Bell, J. (2010). Doing your research project: A guide for first-time researchers in education, health and social science (5th Edition.). Berkshire, England: Open University Press.

Boon, E., Bawole, N., & Ahenkan, A. (2013). *Stakeholder participation in community development projects: An analysis of the quadripartite model of the International Centre for Enterprise and Sustainable Development (ICED) in Ghana*. Community Development, 44(1), 38-54.

Brody, D.S. (2013). Measuring the effects of stakeholder participation on the quality of local plans based on the principles of collaborative ecosystem management. *Journal of Planning Education and Research*, 22, 407–419.

Dodman, D. & Mitlin, D. (2011). Challenges for community-based adaptation: Discovering the potential for transformation. *Journal of International Development*, 10 (1772), 1- 10.

Kambonesa, I. (2013). *Case study of the community participation process in the Kensington New Deal Project*. Unpublished thesis, University of Liverpool.

Kanwal, Z., Khalid, M., Afzal, M., & Muzaffar, A. (2012). Impact assessment of community participation in solid waste management projects in selected areas of Faisalabad City. *Journal of Urban Planning and Development*, 138(4), 319-327

Maina, B.M. (2013). *Influence of Stakeholders' Participation on the Success of the Economic Stimulus Programme*: A Case Education Projects in Nakuru County, Kenya.

Mbogori, A. K (2014). *Factors Influencing the Level of Women Participation in Community Development Projects in Narok South Sub County, Narok County, Kenya*. A research Project Report Submitted in Partial Fulfillment of the Requirements for the Award of the Degree of Master of Arts in Project Planning and Management of the University of Nairobi.

Mugenda, O.M. & Mugenda, A.G (2003). Research Methods: Quantitative and Qualitative Approaches. Nairobi. Africa Center for Technology Studies Press.

Mugenda, O.M. & Mugenda, A.G. (1999). Research methods: Quantitative and Qualitative Approaches. Nairobi: ACTS Press.

Muriu A., Rugo (2014). How does Citizen Participation Impact Decentralized Service Delivery? Lessons from the Kenya Local Authority Service Delivery Action Plan (LASDAP). Devolution and Public Policy Consultant in Kenya.

Nyaguthii, E. & Oyugi, L.A. (2013): Influence of Community Participation on Successful Implementation of Constituency Development Fund Projects in Kenya: Case Study of Mwea Constituency. *International Journal of Education and Research*, Vol. 1 No. 8: School of Human Resource Development; Jomo Kenyatta University of Agriculture and Technology, Kenya.

Nyamori, O.R. (2009). Making Development Accountable: A critical analysis of the systems of Accounting and accountability for the Constituency Development Fund in Kenya', *Journal of Accounting and Organizational Change* 5(2): 197 - 227.

Nyandika, O.F & Ngugi, K (2014): Influence of Stakeholders' Participation on Performance of Road Projects at Kenya National Highways Authority. *European Journal of Business Management*, Vol. 1 (11), 384-404.

Ondieki, W. M (2011). Factors Influencing Stakeholders' Participation in Monitoring Evaluation of Local Authority Transfer Fund Projects in Kisii Municipality, Kenya.

Polo, A., Algeria, M., &Sirkin, J. (2012). Increasing the engagement of Latinos in services through community-derived programmes: The right question project-mental health. Professional Psychology: Research and Practice, 43(3), 208-216.

Reid, J.N. (2012). Community participation: How people power brings sustainable benefits to communities. Retrieved from USDA Rural Development Office of Community Development website: *http://www.rurdev.usda.gov/rbs/ezec/Pubs/commparticrept.pdf*

Rono, P. K. & Aboud, A.A (2013). The role of popular participation and community work Ethic in rural development: the case of Nandi District, Kenya. *Journal of Social Development in Africa* Vol. 18 (2).

Rothman, J. (214). Approaches to community intervention. In: J Rothman, JL Erlich, & JE Tropman (Eds.) Strategies of community intervention (6th Edition.). Itasca: Peacock Publishers, Inc, pp. 27–64.

Satyanarayana, S.K. (2013). Introduction to project management. In Project Management in Agricultural Extension. Andhra Pradesh, India. National Institute of Agricultural Extension Management (MANAGE)

Speller, G. (2015). Improving Community and Citizen Engagement in Flood Risk Management Decision making, Delivery and Flood Response: Environment Agency; Department of Environment Food and Rural Affairs: Technical Report.

Stone, L. (2011). Cultural Cross-Roads of Community Participation in Development: A Case from Nepal, Human Organization, Vol .48. No. 3.

# Appendices

## Appendix I: Introductory Letter

**UNIVERSITY OF NAIROBI**

**SCHOOL OF OPEN AND DISTANCE LEARNING**

**P. O. BOX 30197 NAIROBI**

Dear Sir,

**REF: REQUEST FOR USE OF INFORMATION**

I am a master of arts in project planning and management student at the University of Nairobi and in the partial fulfillment of the requirements of the degree; I wish to undertake a research study on influence of public participation in project life cycle management on implementation of rail infrastructure project in Kenya: a case of standard gauge railway phase 1. The purpose of this letter is to request your permission to collect data through interviewing the respondents dealing with the Standard Gauge Railway project. Your support and responses will be helpful in the study as I will be able to summarize, conclude the findings and help me come up with the right recommendations. I take this opportunity to ensure that the data obtained will be used for academic purposes only and your identity will be held confidential.

Your cooperation will be highly appreciated.

Yours Faithfully,

## Appendix II: Questionnaire

Dear respondent. The researcher is a student of Project Planning and Management at University of Nairobi and the research is for academic purpose only and will be treated with outmost confidentiality. The research seeks to investigate the influence of public participation in project life cycle management on implementation of rail infrastructure project in Kenya: a case of standard gauge railway. Kindly provide correct and useful data and fill appropriately as logically guided. (This questionnaire has been provided as a word document that can be filled out in soft copy and returned via e-mail; or printed, filled out and mailed).

---

**Section A: General Information**

1. Gender of the respondent

   a) Male ( )  b) Female ( )

2. Indicate by ticking your age bracket

   a) 24 yrs. and below [ ]  b) 25-29 [ ]

   c) 30-34 [ ]  d) 35-39 [ ]

   e) 40-44 [ ]  f) 45-49 [ ]

   g) 50 and above [ ]

3. Kindly indicate your highest level of educational qualification (tick)

   a) Secondary education [ ]  b) Certificate or diploma [ ]

   c) Graduate [ ]  d) Postgraduate [ ]

4. How long have you participated in the rail projects?

   a) Less than 1 Year [ ]  b) 1-3 Years [ ]

   c) 4-6 Years [ ]  d) 7 Years and above [ ]

**SECTION B: PROJECT INITIATION**

5. Using a scale of 1-5, where 1= strongly agree; 2=agree; 3=Neutral; 4=disagree; 5=strongly disagree; Please indicate the extent to which you agree with the following statement in public participation on project initiation influence implementation of rail infrastructure project.

| **Statement** | **S.A** | **A** | **N** | **D** | **S.D** |
|---|---|---|---|---|---|
| Project initiation through public participation helps to articulate public needs in a project | | | | | |
| Project initiation through public participation helps to establish the feasibility of a project | | | | | |
| Public participation during project initiation helps members of the community to participate in development of a project | | | | | |
| Public participation in project initiation strengthens community capacity in a project | | | | | |
| Public participation in project initiation helps identify problems and translate them into solutions or actions | | | | | |
| Project initiation through public participation helps identify project stakeholders | | | | | |
| Public participation in project initiation helps project managers identify the factors that affects the community ability to implement development projects | | | | | |
| Public participation in project initiation helps identify project scope | | | | | |
| Project initiation facilitates feasibility studies and identification of project donors | | | | | |
| Public participation in project initiation helps identify project site, costing, as well as benefits to the community | | | | | |

6. To what extent would you recommend public participation on project initiation to improve implementation of rail infrastructure projects?

……

……

……

……

## SECTION C: PROJECT PLANNING

7. Using a scale of 1-5, where 1= strongly agree; 2=agree; 3=Neutral; 4=disagree; 5=strongly disagree; Please indicate the extent to which you agree with the following statement on public participation on project planning influence implementation of rail infrastructure project.

| **Statement** | **S.A** | **A** | **N** | **D** | **S.D** |
|---|---|---|---|---|---|
| Project planning helps in facilitation and creation of project plans | | | | | |
| Project planning ensures objectives are made in accordance to a specific plan | | | | | |
| Every project is clearly planned for in terms of scope and budgets | | | | | |
| Every project is clearly planned for in terms of time and completion schedule | | | | | |
| Project planning helps in gathering of resources from various sources | | | | | |
| All the stakeholders are involved in financial detailed plan to establish the costs required during the implementation phases of the project | | | | | |
| Every project requires development quality plan to monitor the quality of the outputs | | | | | |
| Project planning helps to identify actions that will be used to achieve the required quality | | | | | |
| Project planning through public participation helps in organizing project teams for various tasks | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| Project planning through public participation helps in creating a work flow during project implementation | | | | | |

8. To what measures would you recommend to enhance public participation on project planning to improve implementation of rail projects?

……

……

……

**SECTION C: PROJECT EXECUTION**

9. Using a scale of 1-5, where 1= strongly agree; 2=agree; 3=Neutral; 4=disagree; 5=strongly disagree; Please indicate the extent to which you agree with the following statement on public participation on project execution influence implementation of rail infrastructure project.

| **Statement** | **S.A** | **A** | **N** | **D** | **S.D** |
|---|---|---|---|---|---|
| The projects are executed with the involvement of all stakeholders | | | | | |
| Project execution helps in task creation for project implementation | | | | | |
| Project execution helps in creating of team for executing particular tasks | | | | | |
| Project execution ensures there is organization of work flow for the various teams | | | | | |
| Project execution helps in providing information to members on the various tasks involved | | | | | |
| The personnel involved in the projects are continuously trained on executing various project tasks | | | | | |
| The projects are executed and managed by staff with varied knowledge and experience | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| During execution the project recruits staff with competence and appropriate skills | | | | | |
| The staff in these project possess vast understanding of principles of project management and execution to spur the performance | | | | | |
| Project execution facilitate performance of tasks within the allocated budget | | | | | |

10. What measures would you recommend to enhance public participation on project execution to improve implementation of rail projects?

    ……

    ……

    ……

**SECTION E: PROJECT MONITORING**

11. Using a scale of 1-5, where 1= strongly agree; 2=agree; 3=Neutral; 4=disagree; 5=strongly disagree; Please indicate the extent to which you agree with the following statement on public participation on project monitoring influence implementation of rail infrastructure project.

| **Statements** | **S.A** | **A** | **N** | **D** | **S.D** |
|---|---|---|---|---|---|
| Project monitoring ensures that the goals and objectives of projects are achieved | | | | | |
| Project monitoring ensures spending is monitored appropriately | | | | | |
| Project stakeholders ensure that all projects are delivered in a timely and cost-effective manner | | | | | |
| Project monitoring assures that all factors that enhance implementation are in control | | | | | |
| Project monitoring and evaluation ensures dedication by project teams | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| Project monitoring and evaluation ensures that project results are made public to all stakeholders | | | | | |
| Project monitoring ensures project costs do not exceed the allocated budget | | | | | |
| Project monitoring and evaluation monitor quality during the implementation of effective and sound Quality Assurance | | | | | |
| Project monitoring and evaluation helps in briefing of team members on project tasks | | | | | |
| Project monitoring and evaluation creates organization work flow hence appropriate implementation | | | | | |

12. What extent would you opinion that public participation on project monitoring influences implementation of rail projects?

……

……

……

**SECTION G: PROJECT CLOSURE**

13. Using a scale of 1-5, where 1= strongly agree; 2=agree; 3=Neutral; 4=disagree; 5=strongly disagree; Please indicate the extent to which you agree with the following statement on public participation on project closure influence implementation of rail infrastructure project.

| **Statements** | **S.A** | **A** | **N** | **D** | **S.D** |
|---|---|---|---|---|---|
| Public participation on project closure is important as it determines project performance | | | | | |
| Public participation on project closure provides a platform to assess performance within a particular time | | | | | |
| Public participation on project closure ensures team performance is assessed | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| Public participation on project closure ensures team objectives have been achieved | | | | | |
| Public participation on project closure ensure project documents are drafted with the right information | | | | | |
| Public participation on project closure ensure generation of progress reports and contract documents | | | | | |
| Public participation on project closure ensures that the target output has been achieved with the provided inputs | | | | | |
| Public participation on project closure ensures that the project has complied with the budget | | | | | |
| Public participation on project closure ensures stakeholder objectives have been achieved | | | | | |
| Public participation on project closure ensures project objectives are met | | | | | |

**THE END**

**THANK YOU**

## Appendix III: Interview Guide

My name is Yolanda Alaka Muyonga. I am a student undertaking Master of Arts Degree in development studies. Currently, I am conducting a research on influence of public participation in project life cycle management on implementation of rail infrastructure project in Kenya: a case of standard gauge railway phase 1. You have been identified as a respondent in this research to assist in data collection by answering the following questions. The information you give will be treated as confidential.

1. In your own opinion, do the current and past projects include the inputs of the public?

   ……
   ……
   ……

2. In your own view, is the current and past project execution satisfactory? (If Yes/No explain)

   ……
   ……
   ……

3. In your own opinion, does public participation influence standard gauge railway project? (If yes kindly explain)

   ……
   ……
   ……

4. Does access to information influence project implementation? (If yes, indicate how and to what extent)

   ……
   ……
   ……

5. In your own opinion, how does stakeholder's engagement management influence citizen participation in standard gauge railway project? (Explain)

   ……
   ……
   ……

6. In your own view how does public participation in various stages of project life cycle management influence the implementation of standard gauge railway project?

   ……
   ……
   ……

**THANK YOU FOR YOUR COOPERATION AND PARTICIPATION**

# Appendix IV: Research Permit

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**This is to Certify that Ms.. Yolanda Alaka Muyonga of University of Nairobi, has been licensed to conduct research in Nairobi on the topic: INFLUENCE OF PUBLIC PARTICIPATION IN PROJECT LIFE CYCLE MANAGEMENT ON IMPLEMENTATION OF RAIL INFRASTRUCTURE PROJECT IN KENYA: A CASE OF STANDARD GAUGE RAILWAY In for the period ending : 25/August/2021.**

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## Appendix V: Turnitin Report

INFLUENCE OF PUBLIC PARTICIPATION IN PROJECT LIFE CYCLE MANAGEMENT ON IMPLEMENTATION OF RAIL INFRASTRUCTURE PROJECT IN KENYA: A CASE OF STANDARD GAUGE RAILWAY PHASE 1

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