

Analysis of Project Monitoring Practices on Implementation of Road Construction in Rwanda. A Case of Sonatube -Bugesera Road

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Abstract

The general objective of the study was to analyze the effect of project monitoring practices on implementation of road construction projects in Rwanda. The study was carried out in Kigali, Rwanda, Kicukiro-Bugesera Road. This study was guided by the following specific objectives; determine the effect of communication, determine the effect of monitoring tools, investigate the influence of stakeholder's participation, establish the effect of staff competency on implementation of road construction projects in Kigali. The research study adopted a descriptive research design targeting 84 project managers, committee members and monitoring committee. A closed ended structured questionnaire will be used to collect primary data from 84 sampled respondents. A pilot study was conducted to ascertain the reliability and validity of the instruments. The quality and consistency of the study was further assessed using Cronbach's alpha. Data analysis was performed using Statistical Package for Social Science (SPSS) version 23. Data presentation was done using frequency counts, percentages, means, standard deviations, regression, correlation and the information were presented in form of tables. The findings revealed that 52.4% of the respondents strongly agreed that project monitoring tools affects implementation of road construction projects in Rwanda. 41.7% of the respondents agreed, with 0% of the respondent remaining neutral. 5.9 % disagreed and none strongly disagreed. This indicates that the majority of the respondent at 52.4% considers that project monitoring tools affects Project implementation of road construction projects in Rwanda. The study findings revealed that for monitoring processes to function properly it requires management support as a mediating factor for a project to succeed. The study recommends management should give their support to all levels of stakeholders for projects to succeed.

Key Words: *Communication, Monitoring Tools, Stakeholder's Participation, Staff Competency.*

Introduction

The concept of monitoring has gained much ascendancy and prominence in the last decades, and this has been due to heightened awareness to enhance performance in project management with specific focus on implementation process. The idea of monitoring process which this study seeks to interrogate is aligned to the questions about project implementation process in road construction in Kigali, and the roles played by various agencies in ensuring success of the project for the benefits of the society. Due to this, monitoring process has increasingly become important tool acting as a check and balance tool to achieve economic and social sustainability in projects and programs development (OECD, 2016 & Plumecocq, 2014). At international scales, sustainability criteria and indicators for monitoring have become important tools for defining, monitoring and reporting on economic, ecological and social trends, tracking progress towards goals, influencing policy and practices (United Nations, 2017, World Bank, 2014). At regional and sub-regional scales of monitoring is a critical element in assessing the sustainability of local practices, which is an important tool in management planning (Montaño, Arce & Louman, 2015).

In Rwanda, infrastructure has been given the highest priority to ensure that roads are in a motorable condition. However, the main question that still begs is to what extent project monitoring process has been effective and efficient in implementation of projects? According to the Ministry of Roads Service Charter report (2008), roads infrastructure accounts for about 80% of all cargoes and passengers in the country, and due to the

importance of roads in socio-economic development of the country, the government has in the recent past increased budget allocation for infrastructure in last financial year 2020/2021 to the tune of FRW 134.9 billion. This includes Frw 27 billion for low-volume seal roads financed by development partners. However, despite this effort by the governments, road projects in Rwanda still face huge challenges such as; delay in completion, cost overruns, and low completion rates, lengthy and tedious procurement procedures, project financing, low technological uptake by construction companies and exposure levels of stakeholders to international best practices, poor quality of works due to poor workmanship, unethical conduct, unfair business practices, lack of skilled and competent workforce, lack of a standard project monitoring practices framework and inadequate capacity for law enforcement of standards and regulations.

Roads are the main transport infrastructure and single public owned national asset used by millions of commuters across the world on daily basis. According to (The World Road Association, 2014 report), roads are key national asset which underpins economic activities of a country. It is unarguably regarded as a valuable and noteworthy public asset which should be constructed and carefully managed during its life cycle. In Rwanda Vision 2050, a long-term planning blueprint launched in the year 2009 recognizes the improvement of infrastructure as one of its foundations to creating a globally competitive and prosperous country with high quality of life by the year 2050.

Kigali City recorded a high unit of periodic and routine maintenance of road works amounting to US\$12 million annually. If the trend continues, there will be low value for money and low customer satisfaction by constraining the limited financial resources (RTDA, 2016). However, in Kigali City a number of major roads have been completed and many are earmarked for reconstruction, there is persistent poor projects performance associated with irregular payments amounting to over 6 USD million annually, low value for money due to shoddy works, overestimated costs and time overruns by the contractors (Juvenal, 2017). According to Germaine (2017), contract management is still a challenge in Sub Saharan Africa; contractors are not performing as per the contract. Most of them are not fully equipped in terms of personnel, equipment and financial capacity. It is partly because of poor contract management which most of times lead to cancellation and suspension of funding for a number of road projects by World Bank largely due to poor funds and contract management. According to Kigali City Statistical abstract (2016/2017), road works in good condition targeted in EDPRS II was 70% while 51 % was achieved. Hence the need for the study to analyze the effect of contract management practices on performance of the road construction projects in Kigali City.

A study by Kabega J (2015) on factors influencing the performance of road infrastructural projects in Kigali and from researcher's perspective it was concluded that, little has been done or researched on in deeper details on the effect of the monitoring process on implementation of infrastructure projects in the country more specifically in construction industry. This raises serious issues as to whether the monitoring process employed is effective enough to achieve project success, or perhaps the monitoring team may be lacking the necessary capacity or strength to carry out their work effectively, or they may be approaching their work using incorrect methodologies. The project monitoring team may also be lacking the necessary management support. It is upon this that this study seeks to investigate the effect of project monitoring practices on implementation of road construction projects in Kigali taking a case of Kicukiro-Sonatube-Bugesera Road.

The general objective of this study was to make analysis of project monitoring practices on road construction in Rwanda. The Specific Objectives of the study

- 1) To determine the effect of project communication on project implementation of road construction projects in Rwanda.
- 2) To determine the effect of project monitoring tools on implementation of road construction projects in Rwanda.
- 3) To establish the effect of project staff competency on implementation of road construction projects in Rwanda.
- 4) To investigate the effect of project stakeholder's participation on implementation of road construction projects in Rwanda.

Literature

This section reviews previous researches, studies, and other contributions made by the scholars on the influence project monitoring practices on road construction in Rwanda. It provides theoretical review, empirical review, conceptualization, and research gap basing on previous researches done on road construction in Rwanda.

The Management Theory, Social Change Theory, Theory of Constraints and Program Theory are the key theories to be used for the present study.

Management theory commonly known as Frederick Taylor's Scientific Management. In his theory, Fredrick Taylor emphasized on efficient training of workers and breaking down of a complex task (Work Breakdown Structure) into small units to optimize the performance (Harper, 2014). This theory has been regarded as his main contribution towards work management where management plays a role of performing the science and instruction while workers in each group performs "the work for which it was best suited" to optimize the performance of the subtasks (Mulder, 2015). This theory gives a modest conceptual framework and a plan that can guide a firm to achieve its objectives. Monitoring processes is regarded as one of the key instruments that guarantees effective project undertakings (Kasaija, 2015; Chapman, 2014). This however, calls for a detailed and sound management to monitor tasks of various groups at each stage of project implementation in order to improve workers performance and capacity of agencies to accomplish their central role (Muchelule, 2018). This theory therefore, serves as a theoretical basis for the current study.

The theory of constraints (TOC) was developed by Eliyahu Goldratt. The theory is based on the belief that every project has constraints or limiting factors that may hinder performance (yaoga, 2015). The theory of constraints holds that every system is faced with constraints that limits it from achieving its objectives, and identification of these constraints forms the main basis of improving the production system. Some of the limiting factors are associated with planning, production control, managing of the projects and performance measurements during project implementation. The theory is applicable in this study since capital, management skills and monitoring practices are some of the constraint's road contractors are faced with when implementing road projects. And, the most productive way to solve these problems is to devise a mechanism of countering these challenges and removing the barriers in implementing road projects.

Social Change Theory

In social change theory, most development practitioners are influenced by the work of a Brazilian scholar Paulo Freire that was developed in the context of his work with communities battling against poverty and social inequalities. For Freire, Community Mobilization involves the processes of dialogue and critical thinking by marginalized people (Mutua, 2015; Harris, 2015). Construction industries operate in a complex environment. Due to this complexity, it requires participation and inputs of all stakeholders at different levels during project implementation (Mohammed, 2013; Lukasiewicz & Baldwin, 2017; Mladenovic, 2013), facilitated by these external change agent, and addressing their concerns regarding the project, enables the project manager tackle the key problems in the stakeholder management process and any potential impact it could have on the success of the project (Eskerod & Jepsen, 2013; Nguyen, 2015; Yang, 2013; El-Sawalhi, 2015). In practice the social change theory, advocates for empowerment of all stakeholders through participation for prudent planning and coordination, surveillance and capacity building as opposed to the top-down approach, previously practiced in implementation of project, something that negatively affected project sustainability.

Program Theory

Program theory as postulated by Weiss (2012) is a theory developed to guide monitoring process in project management by identifying and relating key project elements to each other (UNDP, 2015). Using this theory project team draws data collection plan and collect data using different methods within the frame work. The collected data by different methods or sources on the same program element are triangulated. Weiss as cited by Muchelule (2018) suggested that 'use of path diagrams to model the sequences of steps between a programs' intervention and the desired outcomes helps the evaluator identify the variable to include in the monitoring, discover where in the chain of events the sequence breaks down, and stay attuned to changes in program implementation that may affect the pattern depicted in the model. This interjection anchors well with the current research study. This intervention to monitor is recognized as one of the key instruments used to

guarantee that project undertakings are effective (Kasaija, 2015; Chapman, 2014). As well put by Srivastava & Teo (2016) it is a strategic plan procedure that builds up to a scope of methodologies that will eventually lead to achievement of intended goal.

Empirical Literature

A study carried out by Nyakundi (2013) on factors influencing implementation of monitoring and evaluation processes on funded projects indicates that staff technical skills, poor budget allocation and stakeholders' participation affects the implementation of monitoring and evaluation. It observed that only 20.8% of the projects were implemented on time and budget, while 79.2% unveiled some form of failure. In his study, he attributed causes of failures to insufficient implementing strategies, poor project management, weak project design and political interference.

Rwanda's transport system is only slightly diversified, composed mainly of three means of transportation, that is to say: road, lake and air transportation. Rail transportation does not exist, but the construction of a regional railway network, linking Rwanda and Tanzania is being increasingly envisaged by the Government. Nevertheless, transportation plays a significant role in the national economy since it has been contributing to the gross national product (GDP) about 5% on the average since 1995 after the socio-political crisis, which thoroughly disorganized the entire economic system and consequently the transport industry. (ADFUND 2003) The sector is currently being completely revamped and should rapidly attain an appropriate performance level as a result of having secured the national territory and started up economic activities, two areas in which considerable progress has been made in the last few years by public authorities.

Available road transport is made up of a Trunk Road network 14 000 km long and a vehicle fleet estimated at 32 256 vehicles. Rwanda's road network, despite the small size of its linear system, has a density of 0.53 km/km² above the average density of major roads in the sub-region, which is 0.023 km/km². However, its level of service remains low despite efforts made by the Government following the socio-political crisis to ensure improvement of the mainly paved priority roads, which account for merely 20% of the classified road network. As regards the vehicle fleet, it is increasing rapidly, reaching 32 256 vehicles in 2001 compared to 17 064 in 1997. However, the quality of vehicles being supplied is declining because of the growing proportion of old vehicles (more than 10 years old), which, for the most part, are imported. In all, the global supply of road transportation exists in adequate quantity, but the condition of the vehicles requires improvement in order to allow for reduced road transportation costs and to optimize safety conditions. ADFUND 2003)

More than 80% of Rwanda's transport services are ensured by road traffic. This road transportation demand is fostered and sustained by a combination of three basic factors: i) demographic growth with a 35-growth rate these past five years; ii) increase of the population's average revenue subsequent to the poverty reduction policy committed by the authorities and iii) resumption and reinforcement of economic activities, in particular farm activities, throughout the country. The major products transported are as follows: coffee and tea (30 000 tons), products from the local brewery (800 000 hectolitres), products from the country's only cement factory located in the project area (70 000 tons) and imported products distributed throughout the country, (products of final consumption, capital goods, intermediate consumer goods and oil products. (ADFUND 2003)

Wairimu (2016) carried out a study on factors influencing completion of road construction projects in Embakasi, Nairobi County Kenya. The study aimed to identify factors that lead to successful implementation of road projects. The study identified and used the following factors: resources, competency of staff, stakeholders' participation and procurement procedures as factors that influences completion of road projects. A descriptive research design was used. The findings showed that competency of staff have a positive influence on completion of road construction projects in Embakasi, Nairobi County. It was concluded that staff are able to perform project task if they acquire skills, experience and knowledge. It also found out that stakeholder's participation has a positive and a significant influence on completion of road construction projects and those stakeholders should be encouraged to participate in road projects. A comparative study was conducted by Republic of Kenya (2014) on the state of its national highways in 43 counties, where 983 respondents were requested to give their opinion on the state national highways. The results showed that, on the issue of monitoring, 947 respondents strongly agreed that factors like; monitoring, planning, personnel, budget, communication, contractor's experience, political heat and many more influenced the M&E process. In Sudan, Omran, Abdurrahman and Pakir (2015) conducted a study to analyze construction and performance

of road projects ranging from simple to more complex road construction projects. Their findings indicated that all road construction projects are increasingly experiencing cost overruns, delay in completion, unmet project objectives and unsatisfactory quality workmanship.

The conceptual framework of this study specifies the independent and dependent variables to be studied. The framework proves how the independent variables namely Project Monitoring Practices with its main components; Project Communication, Project Monitoring Tools, Project Staff Competency and Project Stakeholders Participation affect the dependent variables (Implementation of road construction in Rwanda) in regards to project time, cost, scope, and quality.

Project communication management is a collection of processes that help make sure the right messages are sent, received, and understood by the right people. Project communication management is one of the 10 key knowledge areas in the PMBOK (Project Management Book of Knowledge). The ability to deliver projects on schedule, on budget, and aligned with business goals is key to gaining an edge in today's highly competitive global business environment. This is why it is important for the person in charge of the project to have a comprehensive understanding of project management, from project management basics to extensive experience. Project managers have an incredibly complex assignment, one that blends organizational skills, an analytical mind, and adept interpersonal abilities. *Ghasemi, A., & Zahediasl, S. (2012).

Project management tools are a set of software designed to help project teams to plan a project, track & manage the projects to achieve the defined project goals within the time. It also helps team members to collaborate effectively and accelerate the projects to meet the specified constraints. They include; Project estimation: To ensure your project succeeds, it's important to not only track the real-time progress but also to estimate the project constraints based on your current performance. This could be in the form of budget forecasts, EVM or baselines. Budgeting: Managing your costs to stay within the planned budget. Track expenses, track actual cost to invoice clients and pay employees, compare planned and actual cost, forecast budget, and analyze your budget health. Resource allocation: Making sure the right people work on the right tasks. Avoid overworking or under working your employees by using the resource utilization chart. The top project management tools also help in assigning work based on the employee workload and availability. Collaboration, Quality management and Project administration. (Bryman, A., & Bell, E. (2015).

Project managers combine a variety of skills and areas of knowledge to do their jobs effectively. Project management competencies are key qualifications that great project managers have, including skills, experience and other qualifications. The term project staff refers to people in the project team who have a certain role or function and assigned tasks. They actively work on the project and generate output that helps the project progress and reach milestones and the basic competencies include: Unconscious Incompetence. In unconscious incompetence, the learner isn't aware that a skill or knowledge gap exists. Conscious Incompetence. In conscious incompetence, the learner is aware of a skill or knowledge gap and understands the importance of acquiring the new skill. Conscious Competence. Unconscious Competence. Project management competencies are important because they can indicate the skill and experience levels of project managers. Project managers can drive the success of a project, so it's crucial to hire project managers that possess essential project management competencies. Searching for candidates who possess project management competencies can help recruiters ensure they find a qualified candidate who can excel in a project manager position and benefit their company. (Hwang B, Lim E (2013).

Participation by project stakeholders means sharing a common understanding and involvement in the decision-making process of the project. Participation by stakeholders leads to empowerment and to joint ownership of the project. Participation entails processes that enable stakeholders to understand and influence decisions and processes that may interest or affect them. Other terms for participation include involvement and engagement. When stakeholder engagement is done effectively, it improves communication channels between parties, creates and maintains support for the project, gathers information for the organization, reduces the potential for conflict or other project crippling issues and enhances the reputation of the organization. or every project, either small or large, there are always going to be stakeholders, public or community members who are impacted by the project. The amount of people affected by a project is inversely related to how big the project will be. Yet, many organizations don't put enough thought into how to successfully engage with these groups. (Aibinu, A.A., Jagboro.G.O. (2012).

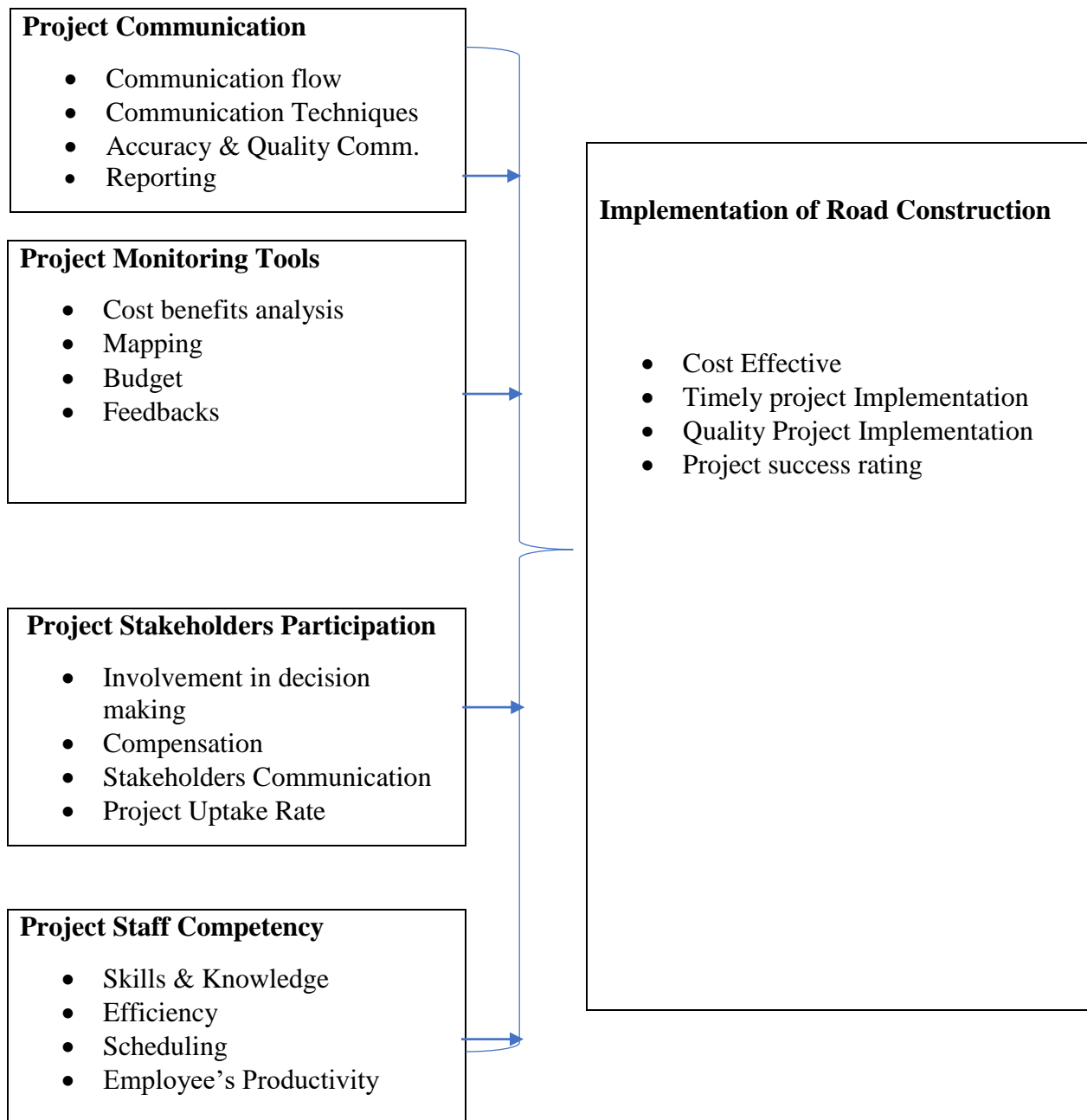
A conceptual framework is a representation of the relationship you expect to see between your variables, or the characteristics or properties that you want to study. Conceptual frameworks can be written or visual and are generally developed based on a literature review of existing studies about your topic. The independent variable in this study is the Project Monitoring Practices and the dependent variable is Implementation of Road Construction.

Independent Variable

Dependent Variable

Project Monitoring Practices.

Implementation of Road Construction



Methodolgy

According to Trochim and William (2006), a research design refers to the overall strategy that you choose to integrate the different components of the study in a coherent and logical way, thereby, ensuring you will effectively address the research problem. It is actually a blueprint for the collection, measurement, and analysis of data.

The study on the analysis of project monitoring practices on implementation of road construction in Rwanda. Will use an explanatory survey design that helps users to understand a phenomenon in terms of its likely cause (Maxiwell and Mattapalli, 2010). Explanatory survey design helped to explain relationships between project monitoring practices on implementation of road construction as two components of the design model of our study. Also, a case study approach and cross-sectional descriptive research design was used to provide characteristics of independent and dependent variables.

According to Kothari (2011), a study population is a well-defined or specified set of people, group of things, households, firms, services, elements or events which are being investigated. Thus, the population should fit a certain specification, which the researcher is studying and the population should be homogenous.

The target population should be understood as the concretely specified large group of many cases from which a researcher draws a sample and to which results from the sample are generalized. A sampling frame is a list of cases in a population, or the approximation of them (Neuman, 2014).

Population size

S/N	Category	Population size
	Construction team	25
	Supervision team	4
	Finance and Administrative team	18
	Quality assurance team	4
	Procurement team	8
	Transportation Team	10
	Technical Team	15
	Total	84

Due to the size of the target population, the researcher plans to use a census than a sample survey to collect needed data. A census collects information from all units of the population, while a sample survey collects information from only a fraction (typically a very small fraction) of units of the population (Fellegi, 2003). Each unit of the target population responded to one questionnaire developed to collect ideas and views on the relationship between project monitoring practices on road construction in Rwanda.

Sampling is the process of selecting a group of subjects for a study in such a way that the individuals represent a larger group from which they were selected (Gay, 2009). From the sample frame, purposive sampling was used to collect data from 30 respondents; while random sampling method were used to collect the data from the remaining 54 respondents who have got hands on Sonatube-Bugeseara Road Construction.

Data collection instruments for this study include research questionnaires, interview guides, and observation forms. A questionnaire is a way of collecting data in survey research that contains recorded questions that people respond to directly with limited interactions with the researcher (Monette et al., 2011).

The questionnaire allows the researcher to ask many questions about the main constructs, and control variables for establishing causal relationships between variables. However, in using a self-administered instrument completed by respondents, the data may be influenced by respondents' characteristics (Robson, 2011) which could introduce common method bias. To limit such bias, the researcher plans to conduct a pilot study towards targeted project team members to evaluate the effectiveness of the designed research questionnaire. The designed research questionnaire has two main sections. The first section includes demographic information from respondents while the second one purely evaluates research objectives.

For the sake of consistency and clarity of the information to be collected, the closed-end questionnaires in the format of Yes/No and structured questionnaires in the format of “Strongly agree, Agree, disagree or strongly disagree” were used to collect primary data from respondents. In addition, secondary data was collected and analyzed to provide the influence project monitoring practices on road construction in Rwanda.

This study utilized a questionnaire with open and close ended items some of which were on the Likert scale. Likert scale is an interval scale that specifically uses five anchors of strongly disagree, disagree, neutral, agree and strongly agree. The Likert scale measures the level of agreement or disagreement and is good in measuring perception, attitude, values and behavior. The Likert scale has scales that assist in converting the qualitative responses into quantitative values (Mugenda & Mugenda, 2003).

A researcher used semi-structured interviews to explore and reconstruct events explained through the lived experience and perspectives of the participants. Shared characteristics of interviewing techniques are the rich details and information provided in the interviews, the flexibility to elaborate, adjust, and deviate from the order while answering open-ended questions.

Objective One: To determine the effect of project communication on project implementation of road construction projects in Rwanda.

Statement	Frequency	Percent
Strongly Agree	44	52.3%
Agree	24	28.5%
Neither Agree nor Disagree	6	7.3%
Disagree	5	5.9 %
Strongly Disagree	5	5.9%
Total	84	100 %

Source: (Primary Data, 2022)

The findings revealed that 52.3% of the respondents strongly agreed that project communication affects project implementation of road construction projects in Rwanda. 28.5% of the respondents agreed, with 7.3 % of the respondent remaining neutral. 5.9 % disagreed and 5.9% strongly disagreed. This indicates that the majority of the respondent at 52.3% believes that project communication affects project implementation of road construction projects in Rwanda.

Responses on the effect of Communication flow and Communication Techniques on project implementation of road construction projects in Rwanda.

Statement	Frequency	Percent
Strongly Agree	49	58.6%
Agree	32	38.0%
Neither Agree nor Disagree	0	0%
Disagree	2	2.3%
Strongly Disagree	1	1.1%
Total	84	100 %

Source: (Primary Data, 2022)

The findings revealed that 58.6% of the respondents strongly agreed that Communication flow and Communication Techniques on project implementation of road construction projects in Rwanda. 38.0% of the respondents agreed, with 0 % of the respondent remaining neutral. 2.3 % disagreed and 1.1% strongly disagreed. This indicates that the majority of the respondent at 58.6% believes that Communication flow and Communication Techniques strongly affects project implementation of road construction projects in Rwanda.

Accuracy & Quality Communication and Reporting on project implementation of road construction projects in Rwanda.

Statement	Frequency	Percent
Strongly Agree	45	53.9%
Agree	30	35.7%
Neither Agree nor Disagree	4	4.6%
Disagree	3	3.5%
Strongly Disagree	2	2.3%
Total	84	100 %

Source: (Primary Data, 2022)

The findings revealed that 53.9% of the respondents strongly agreed Accuracy & Quality Communication and Reporting on project implementation of road construction projects in Rwanda. 35.7% of the respondents agreed, with 4.6% of the respondent remaining neutral. 3.5% disagreed and 2.3% strongly disagreed. This indicates that the majority of the respondent at 53.9% considers that Accuracy & Quality Communication and reporting on project implementation of road construction projects in Rwanda.

Objective Two: To determine the effect of project monitoring tools on implementation of road construction projects in Rwanda.

The researcher wanted to find out respondents' views concerning the effect of project monitoring tools on implementation of road construction projects in Rwanda and the table below shows their responses in percentages.

Statement	Frequency	Percent
Strongly Agree	44	52.4%
Agree	35	41.7%
Neither Agree nor Disagree	0	0
Disagree	5	5.9%
Strongly Disagree	0	0
Total	84	100 %

Source: (Primary Data, 2022)

The findings revealed that 52.4% of the respondents strongly agreed that project monitoring tools affects implementation of road construction projects in Rwanda. 41.7% of the respondents agreed, with 0% of the respondent remaining neutral. 5.9 % disagreed and none strongly disagreed. This indicates that the majority of the respondent at 52.4% considers that project monitoring tools affects Project implementation of road construction projects in Rwanda.

Cost benefits analysis and Mapping on Project implementation of road construction projects in Rwanda.

Statement	Frequency	Percent
Strongly Agree	64	76.1%
Agree	13	15.4%
Neither Agree nor Disagree	2	2.5%
Disagree	3	3.5%
Strongly Disagree	2	2.5%
Total	84	100 %

Source: (Primary Data, 2022)

The findings revealed that 76.1% of the respondents strongly agreed that Cost benefits analysis and Mapping have a big effect on Project implementation of road construction projects in Rwanda. 15.4% of the respondents

agreed, with 2.5 % of the respondent remaining neutral. 3.5% disagreed and 2.5% strongly disagreed. This indicates that the majority of the respondent at 76.1% considers that Cost benefits analysis and Mapping have a big effect on Project implementation of road construction projects in Rwanda.

Budget and Feedbacks on Project implementation of road construction projects in Rwanda.

The researcher wanted to find out respondents' views concerning the Budget and Feedbacks on Project implementation of road construction projects in Rwanda and the table below shows their responses in percentages.

Statement	Frequency	Percent
Strongly Agree	54	64.2%
Agree	22	26.1%
Neither Agree nor Disagree	3	3.7%
Disagree	4	4.7%
Strongly Disagree	1	1.3%
Total	84	100 %

Source: (Primary Data, 2022)

The findings revealed that 64.2% of the respondents strongly agreed that Budget and Feedbacks affects Project implementation of road construction projects in Rwanda. 26.1% of the respondents agreed, with 3.7% of the respondent remaining neutral. 4.7% disagreed and 1.3% strongly disagreed. This indicates that the majority of the respondent at 64.2% considers that Budget and Feedbacks affects Project implementation of road construction projects in Rwanda.

Objective Three: To establish the effect of project staff competency on implementation of road construction projects in Rwanda.

The researcher wanted to find out respondents' views concerning the effect of project staff competency on implementation of road construction projects in Rwanda. and the table below shows their responses in percentages.

Statement	Frequency	Percent
Strongly Agree	73	86.9%
Agree	4	4.7%
Neither Agree nor Disagree	7	8.4%
Disagree	0	
Strongly Disagree	0	
Total	84	100 %

Source: (Primary Data, 2022)

The findings revealed that 86.9% of the respondents strongly agreed that Project staff competency has a big effect Project implementation of road construction projects in Rwanda.4.7% of the respondents agreed, with 8.4% of the respondent remaining neutral. This indicates that the majority of the respondent at 86.9 % strongly agreed that Project staff competency has a big effect Project implementation of road construction projects in Rwanda.

Skills & Knowledge of staff on Project implementation of road construction projects in Rwanda.

Statement	Frequency	Percent
Strongly Agree	84	100%
Agree		
Neither Agree nor Disagree		
Disagree		
Strongly Disagree		

Total	84	100 %
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Source: (Primary Data, 2022)

The findings revealed that 100 % of the respondents strongly agreed that Skills & Knowledge of staff has a big effect on Project implementation of road construction projects in Rwanda. None of respondents who either agreed, disagreed, Neither Agree nor Disagree or Strongly Disagreed. This indicates that all respondents at 100 % strongly agreed that Skills & Knowledge of staff has a big effect on Project implementation of road construction projects in Rwanda.

Efficiency, Scheduling, and Employee's Productivity on Project implementation of road construction projects in Rwanda.

Statement	Frequency	Percent
Strongly Agree	79	94.1%
Agree	5	5.9%
Neither Agree nor Disagree		
Disagree		
Strongly Disagree		
Total	84	100 %

Source: (Primary Data, 2022)

The findings revealed that 94.1% of the respondents strongly agreed that Efficiency, Scheduling, and Employee's Productivity effects Project implementation of road construction projects in Rwanda. 5.9% of the respondents agreed. This indicates that the majority of the respondent at 94.1% strongly agreed that Efficiency, Scheduling, and Employee's Productivity effects Project implementation of road construction projects in Rwanda.

Objective Four: To investigate the effect of project stakeholder's participation on implementation of road construction projects in Rwanda.

Statement	Frequency	Percent
Strongly Agree	65	77.4%
Agree	15	17.8%
Neither Agree nor Disagree	4	4.8%
Disagree		
Strongly Disagree		
Total	84	100 %

Source: (Primary Data, 2022)

The findings revealed that 77.4% of the respondents strongly agreed that Project stakeholder's participation affects Project implementation of road construction projects in Rwanda. 17.8% of the respondents agreed and 4.8% of the respondent remaining neutral. This indicates that the majority of the respondent at 77.4% strongly agreed that Project stakeholder's participation affects Project implementation of road construction projects in Rwanda.

Stakeholders Communication and Involvement in decision making on Project implementation of road construction projects in Rwanda.

Statement	Frequency	Percent
Strongly Agree	70	83.4%
Agree	5	5.9%
Neither Agree nor Disagree	4	4.7%
Disagree	1	1.3%

Strongly Disagree	4	4.7%
Total	84	100 %

Source: (Primary Data, 2022)

The findings revealed that 83.4% of the respondents strongly agreed that Stakeholders Communication and Involvement in decision making on Project implementation of road construction projects in Rwanda affects Project implementation of road construction projects in Rwanda. 5.9% of the respondents agreed and 4.7% of the respondent remaining neutral. This indicates that the majority of the respondent at 83.4% strongly agreed that Stakeholders Communication and Involvement in decision making on Project implementation of road construction projects in Rwanda affects Project implementation of road construction projects in Rwanda.

Summary Of The Findings

In line with the research objectives set, the following are the major findings:

Objective One: To determine the effect of project communication on project implementation of road construction projects in Rwanda.

The findings revealed that 52.3% of the respondents strongly agreed that project communication affects project implementation of road construction projects in Rwanda. 28.5% of the respondents agreed, with 7.3 % of the respondent remaining neutral. 5.9 % disagreed and 5.9% strongly disagreed. This indicates that the majority of the respondent at 52.3% believes that project communication affects project implementation of road construction projects in Rwanda.

The findings revealed that 58.6% of the respondents strongly agreed that Communication flow and Communication Techniques on project implementation of road construction projects in Rwanda. 38.0% of the respondents agreed, with 0 % of the respondent remaining neutral. 2.3 % disagreed and 1.1% strongly disagreed. This indicates that the majority of the respondent at 58.6% believes that Communication flow and Communication Techniques strongly affects project implementation of road construction projects in Rwanda.

The findings revealed that 53.9% of the respondents strongly agreed Accuracy & Quality Communication and Reporting on project implementation of road construction projects in Rwanda. 35.7% of the respondents agreed, with 4.6% of the respondent remaining neutral. 3.5% disagreed and 2.3% strongly disagreed. This indicates that the majority of the respondent at 53.9% considers that Accuracy & Quality Communication and reporting on project implementation of road construction projects in Rwanda.

Objective Two: To determine the effect of project monitoring tools on implementation of road construction projects in Rwanda.

The researcher wanted to find out respondents' views concerning the effect of project monitoring tools on implementation of road construction projects in Rwanda and the table below shows their responses in percentages.

The findings revealed that 52.4% of the respondents strongly agreed that project monitoring tools affects implementation of road construction projects in Rwanda. 41.7% of the respondents agreed, with 0% of the respondent remaining neutral. 5.9 % disagreed and none strongly disagreed. This indicates that the majority of the respondent at 52.4% considers that project monitoring tools affects Project implementation of road construction projects in Rwanda.

The findings revealed that 76.1% of the respondents strongly agreed that Cost benefits analysis and Mapping have a big effect on Project implementation of road construction projects in Rwanda. 15.4% of the respondents agreed, with 2.5 % of the respondent remaining neutral. 3.5% disagreed and 2.5% strongly disagreed. This indicates that the majority of the respondent at 76.1% considers that Cost benefits analysis and Mapping have a big effect on Project implementation of road construction projects in Rwanda.

The researcher wanted to find out respondents' views concerning the Budget and Feedbacks on Project implementation of road construction projects in Rwanda and the table below shows their responses in percentages.

The findings revealed that 64.2% of the respondents strongly agreed that Budget and Feedbacks affects Project implementation of road construction projects in Rwanda. 26.1% of the respondents agreed, with 3.7% of the respondent remaining neutral. 4.7% disagreed and 1.3% strongly disagreed. This indicates that the majority of the respondent at 64.2% considers that Budget and Feedbacks affects Project implementation of road construction projects in Rwanda.

Objective Three: To establish the effect of project staff competency on implementation of road construction projects in Rwanda.

The researcher wanted to find out respondents' views concerning the effect of project staff competency on implementation of road construction projects in Rwanda.

The findings revealed that 86.9% of the respondents strongly agreed that Project staff competency has a big effect Project implementation of road construction projects in Rwanda. 4.7% of the respondents agreed, with 8.4% of the respondent remaining neutral. This indicates that the majority of the respondent at 86.9 % strongly agreed that Project staff competency has a big effect Project implementation of road construction projects in Rwanda.

The findings revealed that 100 % of the respondents strongly agreed that Skills & Knowledge of staff has a big effect on Project implementation of road construction projects in Rwanda. None of respondents who either agreed, disagreed, Neither Agree nor Disagree or Strongly Disagreed. This indicates that all respondents at 100 % strongly agreed that Skills & Knowledge of staff has a big effect on Project implementation of road construction projects in Rwanda.

The findings revealed that 94.1% of the respondents strongly agreed that Efficiency, Scheduling, and Employee's Productivity effects Project implementation of road construction projects in Rwanda. 5.9% of the respondents agreed. This indicates that the majority of the respondent at 94.1% strongly agreed that Efficiency, Scheduling, and Employee's Productivity effects Project implementation of road construction projects in Rwanda.

Objective Four: To investigate the effect of project stakeholder's participation on implementation of road construction projects in Rwanda.

The findings revealed that 77.4% of the respondents strongly agreed that Project stakeholder's participation affects Project implementation of road construction projects in Rwanda. 17.8% of the respondents agreed and 4.8% of the respondent remaining neutral. This indicates that the majority of the respondent at 77.4% strongly agreed that Project stakeholder's participation affects Project implementation of road construction projects in Rwanda.

The findings revealed that 83.4% of the respondents strongly agreed that Stakeholders Communication and Involvement in decision making on Project implementation of road construction projects in Rwanda affects Project implementation of road construction projects in Rwanda. 5.9% of the respondents agreed and 4.7% of the respondent remaining neutral. This indicates that the majority of the respondent at 83.4% strongly agreed that Stakeholders Communication and Involvement in decision making on Project implementation of road construction projects in Rwanda affects Project implementation of road construction projects in Rwanda.

Conclusion

On stakeholder's participation, the study concluded that stakeholder's participation has great impact in project implementation of road projects in Rwanda. In support of this, it can be noted that efficient management of stakeholders minimizes uncertainties posed by stakeholders on projects scope, cost, time, quality and objectives. It was also concluded that success of project implementation is hinged efficient management of stakeholders. On staff competency, study concluded that staff competency have a significant effect on project implementation of road construction projects in Rwanda. This concurs with other scholars' findings that staff competency is one of the organizational factors that affect project implementation in road construction industry. It was also observed that staff competency, resources, stakeholders' participation have a positive

influence on completion of road construction projects and that staff competency plays a critical role in determining the performance and success of projects.

Recommendations

Based on the findings and the subsequent analysis from the study, it was established that project communication, monitoring tools, staff competency and stakeholder's participation have great effect on project implementation in Rwanda. Based on study findings, the following recommendations on project implementation are imperative:

It emerged that to achieve successful project implementation it requires proper coordination among project participants, provision of leadership skills, monitoring and feedback by the participants, and better decision-making. The study recommends that staff and all stakeholders should be motivated to have the right attitude to enable them to cope with project implementation challenges.

The study established that qualities of infrastructures are important for export-led economic growth; to achieve successful project implementation road agencies have to develop and maintain employees with skills and expertise that can carry out their tasks efficiently. The study recommends that road construction agencies should invest more in training of their staffs to empower them to be efficient in monitoring processes.

It was found that road construction projects are faced with ineffective monitoring which ought to be done consistently with a specific end goal of identifying risks and mitigate on them early enough before they leave hand. The study recommends that monitoring should be a non-stop undertaking that uses methodical gathering of information to give administration and the fundamental partners of a continuous improvement intercession.

The study findings revealed that for monitoring processes to function properly it requires management support as a mediating factor for a project to succeed. The study recommends management should give their support to all levels of stakeholders for projects to succeed.

References

1. Aibinu, A.A., Jagboro.G.O. (2012).The effects of construction delays on project delivery in Nigerian Construction Industry. *International Journal of Project Management*, 20(2), 593-599.
2. Alhyari, S., Alazab, M., Venkatraman, S., Alazab, M. & Alazab, A. (2013). "Performance evaluation of e-government services using balanced scorecard: An empirical study in Jordan", *Benchmarking: An International Journal*, 20 (4) ,512 – 536.
3. Alinaitwe, H., Apolot, R., & Tindiwensi, D. (2013). Investigation into the Causes of Delays and Cost Overruns in Uganda's Public Sector Construction Projects. *Journal of Construction in Developing Countries*, 18(3), 33-47.
4. Alotaibi, M. (2011). *Evaluation of contractor performance for pre-selection in the Kingdom of Saudi* (Doctoral dissertation). Loughborough University, Leicestershire, UK.
5. Asaka, C. N., Aila, F. O., Odera, O., & Abongo, B. E. (2012). Projects selection and management implications in Kenyan local authorities. *Asian Journal of Business and Management Sciences*, 1(10), 65-75.
6. Azimi R, Lee S, AbouRizk SM., & Alvanchi A. (2011). *A framework for an automated and integrated project monitoring and control system for steel fabrication projects. Automation in Construction*, 20(1), 88-97.
7. Aziz, R. F. (2013). Factors causing cost variation for constructing wastewater projects in Egypt. *Alexandria Engineering Journal*, 52(5), 51-66.
8. Booth, D. and Mutebi, F.-G. (2015). Reforming the Roads Sector in Uganda; A Six Year Retrospective.
9. Bourne, L. (2015). Communication Planning – Series on effective stakeholder engagement. *PM World Journal*, 5(10), 52-58.
10. Bryman, A., & Bell, E. (2015). *Business Research Methods* (3 ed.). New York, United States: Oxford University Press Inc.
11. Burke, R. (2013). Project management: planning and control techniques.
12. Bygrave, D. (2014). The entrepreneurial process, the portable *MBA in, entrepreneurship*, Hoboken, NJ: John Wiley and Sons: 5-6.

13. Centre for Learning on Evaluation and Results (CLEAR) Initiative at Wits. (2013). *Demand and Supply: Monitoring, Evaluation, and Performance Management Information and Services in Anglophone Sub-Saharan Africa, A Synthesis of Nine Studies*. Johannesburg, South Africa: Graduate School of Public and Development Management, University of Witwatersrand.
14. Chapman, A. (2014). *Project management, tools, process, plans and project planning tips*” available from <http://www.businessballs.com/project.htm>, accessed 8-3-2019.
15. Charles, G.K. (2015). Human Bin Mohamed. Efficacy of Monitoring and Evaluation Function in Achieving Project Success in Kenya: A conceptual framework. *Science journal of business and management*, 3(3), 82-94.
16. Chin CMM (2012). *Development of a Project Management Methodology for Use in a University-Industry Collaborative Research Environment* (Doctoral Dissertation). University of Nottingham, Semenyih Selangor Darul Ehsan, Malaysia.
17. Creswell, J. W. (2013). *Research design: A qualitative, quantitative, and mixed method approaches*. Sage publications.
18. David, J. (2013). Secrets Behind Successful Management of Infrastructure projects in Columbia. *European Journal of Business Management*, 1(11), 20-24.
19. Dinsmore, P. & Cabanis-Brewin, J. (2014). *AMA Handbook of Project Management (4th Edition)*. USA: AMACON Books. Edition. <http://knowledge.apm.org.uk>
20. Elsaid, N., Okasha, A. & Abdelghaly, A. (2013). Defining and Solving the Organizational Structure Problems to Improve the Performance of Ministry of State for Environmental Affairs – Egypt. *International Journal of Scientific and Research Publications*, 3(10), 49-52.
21. Eskerod, P. & Lund Jepsen, A. (2013). *Fundamentals of Project Management: Project Stakeholder*
22. Management. England: Gower Publishing Limited. USA: Gower Publishing Limited.