PROJECT MONITORING AND EVALUATION PRACTICES AND PERFORMANCE OF ROAD INFRASTRUCTURAL PROJECTS IN KIAMBU COUNTY KENYA

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ABSTRACT

The implementation of infrastructure needs to be supervised to ensure that project developments run smoothly according to the government's vision and mission and to achieve the targets of physical growth and human development. This study therefore sought to investigate the influence of monitoring and evaluation practices on performance of road infrastructural projects in Kiambu County Kenya. Specifically, the study sought to establish the influence of Stakeholders Participation and Project M&E reporting on performance of road infrastructural projects in Kiambu County Kenya. This study used descriptive research design. The unit of analysis in this case was the road construction projects in Kenya while the unit of observation was project staff members working with KeRRA, KURA, KeNHA and County Government of Kiambu. The total target population was therefore 695 respondents. Yamane formula (1967) was used to determine the sample size. Thus, the study was administered with questionnaires of 254 respondents mentioned above. The sampling technique that was used in this study is simple random sampling. Data was collected by use of semi-structured questionnaires. Data was collected by use of the drop and pick-up later method and the questionnaires. The pilot group was 25 individuals which represents 10% of the total study sample size. The pilot group was excluded from the final study. Qualitative data collected was analysed using content analysis and presented in prose form. Quantitative data collected was analysed using descriptive statistics techniques such as frequency, percentages, and means and summary graphs, pie charts, and frequency distribution tables. Pearson R correlation was used to measure the strength and direction of linear relationship between variables. Multiple regression models were fitted to the data in order to determine how the independent variables influence the dependent variable. The findings were presented in tables and figures. The study concludes that stakeholder participation has a positive and significant effect on performance of road infrastructural projects in Kiambu County. The study also concludes that Project M&E Reporting has a positive and significant effect on performance of road infrastructural projects in Kiambu County. This study recommends that the management of road construction agencies should include regular training sessions and workshops aimed at enhancing the skills and knowledge of all stakeholders involved in road infrastructure projects.

Key Words: Project Monitoring and Evaluation Practices, Stakeholders Participation, Project M&E Reporting

Background of the Study

Road projects are essential for economic growth. Improving roads result in better access to social services, including health clinics, and increase non-agricultural income generating activities and travel from peri-urban to urban locations to work in services and construction in the informal sector. Infrastructure is an essential requirement for a country to have if it is to be categorized as a developed nation (Emmir & Juwono, 2021). Economic actors' use of infrastructure can provide opportunities for them to reap huge profits, because production costs can be minimized by the availability of manufacturing facilities and distribution activities can be reduced through the use of connectivity infrastructure, such as roads, bridges, and so on (Emmir & Juwono, 2021). Globally, governments are faced with challenges of supervising the implementation of numerous planned projects that are meant to create a foundation for future development of the country. In Kenya, the M&E framework proposed by ministry of planning and national development hasn't been effective in monitoring of government projects. Social economic development can be achieved because communities would be involved in selection and implementation of projects. By so doing a nation is able to control regional imbalances in terms of development, expanding coverage and increasing pro-poor moves by eliciting local people's participation in decision making (Abdi & Kimutai, 2018).

Project monitoring is a continuous function involving the day to day operation during the implementation of a project or programme and is a routine measurement of programme inputs and outputs delivery, and implementation of projects, in compliance with the required procedures and achievement of planned targets, the main purpose being to indicate at the earliest instance any shortcomings with regards to achieving intended objectives so that ameliorative measures can be undertaken in good time (PMI, 2019). Stakeholder Monitoring is the process that ensures follow - up of the relations within the project stakeholders and also the adaptation of the plans and strategies of the stakeholders' involvement (Riahi, 2019).

Individuals and institutions that have interest in the project, at all levels, should participate in monitoring. As with community participation and participatory management, participation in monitoring does not happen spontaneously. The advantages of participation in monitoring include a common undertaking, enhancing accountability, better decisions, performance improvement, improved design, and more information. Participative monitoring helps stakeholders to get a shared understanding of the problems facing the community or project in term of causes, magnitude, effects and implications (Orre, Ramadhani, & Yusuf, 2019). Effective M&E plays a critical role in construction project implementation given the needed attention by the project implementers/team by providing adequate resources, technical capacity building and providing a conducive project environment and the involvement and participation of stakeholder in M&E will see project performance improved (Tengan & Aigbavboa, 2018).

A road project is said to have performed if it is accomplished within the required time, cost and quality. Measurement and evaluation of performance of projects is done using performance indicators such as time, cost, quality, client satisfaction, client changes, business performance, health and safety (Wang & Kim, 2019). Time, cost and quality are however the three key performance indicators used. In Europe, An, Razzaq, Haseeb and Mihardjo, (2021) indicated that improved road construction technology and methodologies can help execute projects more efficiently and in lesser time. In China, construction technologies such as fabricated and modular construction and innovative construction materials further helped to execute road projects with reduced resources (Xu, Zayed & Niu, 2020).

Performance of road infrastructure projects is essential for the economic growth and development of any country. These projects play a critical role in the economy in terms of wealth creation and provision of employment opportunities (Banerjee, Duflo & Qian, 2020). Infrastructure covers a

range of services, from public utilities such as power, telecommunications, water supply, sanitation and sewerage, solid waste collection and disposal, and piped gas; to public works such as roads, dams and canal works, railways, urban transport, ports, waterways and airports (LaMonaca & Ryan, 2022). Massive investments are put into infrastructure projects. Throughout the world, the business environment within which construction firms operate continues to change rapidly. Firms failing to adapt and respond to the complexity of the new environment tend to experience survival problems. With increasing users' requirements, environmental awareness and limited resources and high competition, contractors have to be capable of continuously improving their performance (Kaviani, Galli & Ishtiaq, 2019).

There are several factors that impact on performance of road projects, complexity of the project, Shortage of skills of manpower, weaknesses in organizational design and capabilities, poor supervision and poor site management, unsuitable leadership, shortage and breakdown of equipment among others cause delays (Santoso & Gallage, 2020). Conflict, poor workmanship and incompetence of contractors have also negative impact on road project performance. Project contractors therefore need to look for adequate finances in order to be able to implement road infrastructure projects successfully. Project managers also need to employ qualified and competent staff to operate the plant machines and carry out other activities related to road infrastructure projects. Technological resources refer to modern tools and techniques used in the implementation and management of projects. Human resources involves recruitment of technical staff with competency and experience that will enable the implement infrastructure projects effectively and efficiently (Nicholas & Steyn, 2020).

In Indonesia, application of result-based monitoring and evaluation of infrastructure project was used in implementation of infrastructure project mandated by presidential staff office. The results-based money analysis shows that there are still problems in the management of results-based money in the Presidential Staff Office, along with issues of overlapping authority between those that carry out monitoring and evaluation (Emmir & Juwono, 2021).

Seboru (2019) designates that majority of road construction projects in Kenya do not get completed within the initially set targets of time due to delayed payments by the client, slow decision making and bureaucracy in client organization, inadequate planning and scheduling. Performance of road projects is also influenced by user involvement, technology, top management support and stakeholders' participation (Mwaura, & Karanja, 2018). This is in addition to design variations together with contractor's experience which have an influence on adherence to cost estimates (Ofori, 2019).

Statement of the Problem

Infrastructural projects have faced many challenges in Kenya. The Nairobi Mass transport system has stalled due to unknown reason despite getting Ksh 25.2 billion funding from World Bank, Nairobi Railway city which had citizens wait for nearly a decade before its ground breaking, Lamu -Garissa Road still under construction, Mombasa -Malaba standard gauge railway that has been put on hold due to lack of finances. Currently 35% of infrastructural project have already set their monitoring and evaluation, while 65% there are still struggling in setting up their monitoring and evaluation systems. The study by Koffi-Tessio (2017) also shows that M & E systems are not meeting their obligatory requirements as decision making tool; instead, their activities are viewed as controlling by a bureaucratic management. M & E is also viewed as a donor and not a management requirement (Shapiro, 2015) The challenges of M&E are many and to name a few Poor M&E system design, Inadequate staffing of M&E both in terms of quantity and quality, Missing or delayed baseline studies, Delays in analysis and presentation of results to be produced months or years after surveys are carried out when the data have become obsolete and irrelevant.

Despite the importance, economic and social value of reliable and efficient infrastructure, many projects in Kenya have experienced delays in timely completion. Only 20.8 per cent of the projects in Kenya were implemented on time and budget, while 79.2 per cent exhibited some form of failure. Road construction projects in Kenya have been getting sustainability warning owing to poor quality standards; statistics by Kenya Roads Board have indicated that at least 6,212 km of tarmacked roads are classified as being in a fair condition, with 2,429 km classified as poor. In the construction and successful completion Thika Superhighway, the cost escalated from 26.44 billion to 34.45 billion. The date of completion itself had to be revised from the earlier one of July 2011, to July 2013, a difference of two whole years. Project financing has been quoted as one of the reasons that influence project performance; For instance, 70% of the abandoned construction projects were due to financial problems of developers, contractors, the County and National governments, stakeholders like the donors and many more, up to 71% of the roads and other construction projects in a way failed or took longer than planned for.

Several studies have identified the challenges of M&E practices and performance of projects. Most studies done in regionally and Kenya including by Onyangoc(2019); Mulyungi (2018); Tengan, Aigbavboa, and Thwala (2019) Mushori, Machira and Matu (2020); Wang'aya and Kagiri (2018) focus on specific projects or specific counties and therefore makes it difficult to generalize to road infrastructural projects in Kiambu County Kenya and this study attempts to fill the gap. These studies were however done in other areas and none addressed M&E practices and performance of road infrastructural projects in Kiambu County Kenya hence the knowledge gap. Thus, this study sought to fill those gaps by investigating the influence of M&E practices on performance of road infrastructural projects in Kiambu County Kenya.

Research Objectives

General Objective

The general objective of this study sought to investigate the influence of project monitoring and evaluation practices on performance of road infrastructural projects in Kiambu County Kenya

Specific Objectives

i. To determine the influence of Stakeholders Participation on performance of road infrastructural projects in in Kiambu County.
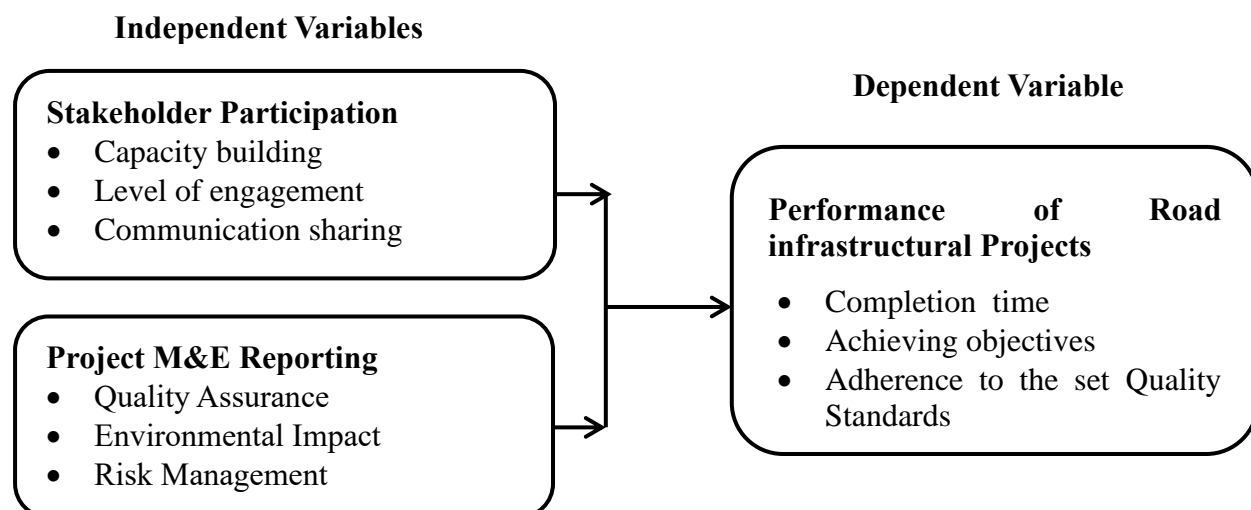ii. To establish the influence of Project M&E reporting on performance of road infrastructural projects in in Kiambu County.

Theoretical Review

Stakeholders Theory

Stakeholders Theory was developed by Professor Edward Freeman (Freeman, 1984). Stakeholder theory is a managerial concept of organizational strategy and ethics (Freeman, 1984; Freeman & Reed, 1983). The central idea is that an organization's success in its project initiatives is dependent on how well it manages the relationships with key groups such as customers, employees, suppliers, communities, financiers, and others that can affect the realization of its purpose. Stakeholder participation refers to the act of getting involved in the various aspects and stages of the project or program management cycle through material contributions and consultation (Freeman, Harrison, & Wicks, 2017).

Stakeholder participation involves the process or activity of informing the public and inviting them to have input into the decisions that affect them. Whereas minor choices and emergency situations

are generally not appropriate for stakeholder participation, complex circumstances with far-reaching impacts warrant stakeholder involvement and when done proactively, rather than in response to a problem, help to avoid problems in the future. The focus of public participation is usually to share information with and gather input from, members of the public who may have an interest in a project (Donald & Preston, 1995). Stakeholders Theory was used to determine the influence of Stakeholders Participation on performance of road infrastructural projects in in Kiambu County.

Innovation diffusion Theory

Diffusion of innovations is a theory that seeks to explain how, why, and at what rate new ideas and technology spread. The theory was popularized by Everett Rogers in his book Diffusion of Innovations, first published in 1962. Rogers argues that diffusion is the process by which an innovation is communicated over time among the participants in a social system. The theory outlines five key stages in the diffusion process: awareness, interest, evaluation, trial, and adoption. Innovations pass through these stages as they are gradually adopted by different segments of a population. The rate of diffusion is influenced by the characteristics of the innovation itself, communication channels, the social system, and the adopter's characteristics.

According to Rogers, innovations possess certain attributes that influence their rate of adoption. These attributes include relative advantage, compatibility, complexity, trialability, and observability. Innovations that are perceived as offering clear advantages, compatibility with existing values and practices, simplicity, easy trialability, and observable benefits are more likely to diffuse rapidly. The theory emphasizes the role of communication channels in spreading information about innovations. Different channels, such as mass media, interpersonal networks, and social media, play distinct roles in influencing potential adopters. Effective communication facilitates the transfer of knowledge and shapes perceptions, ultimately impacting the diffusion process. In this study Innovation diffusion Theory was used to establish the influence of M&E reporting on performance of road infrastructural projects in Kiambu County Kenya.

Conceptual Framework

The conceptual framework is an instrument of research enables a researcher to gain knowledge and conceptualize the variables under study (Mugenda & Mugenda, 2018). Stakeholders Participation and M&E Reporting are the independent variables, while Project Performance is the dependent variable.

Independent Variables

Dependent Variable

Stakeholder Participation
- Capacity building
- Level of engagement
- Communication sharing

Performance of Road infrastructural Projects
- Completion time
- Achieving objectives
- Adherence to the set Quality Standards

Project M&E Reporting
- Quality Assurance
- Environmental Impact
- Risk Management

Figure 2.1: Conceptual Framework

Project Stakeholder Participation

Stakeholders are individuals and organizations that are actively involved in the project, or whose interests may be positively or negatively affected as a result of project execution or project completion; they may also exert influence over the project and its results (PMI, 2017). They may also include people who have a strong interest in the effort for academic, philosophical, or political reasons, even though they and their families, friends, and associates are not directly affected by it. Stakeholders can be classified into three categories namely primary, secondary and key stakeholders (Kerzner, 2017). There are many challnges associated with stakeholders and this is due to the fact that the expectations of the stakeholders are not adequately met as they define success in using different factors (Silva, Jeronimo, & Viera, 2019).

Stakeholders particpation has been widely used by organizations for various puposes including: controlling risk, accomplish mangerial control, accountability and responsibility, and development of the organization image (Aken, 2017). Stakeholders approaches vary from being passive where they give information to self mobilization where they play an investigative role on the process. Different approaches of participation are appropriate in different stages of the project however, it is important to for the stakeholders to understand how they are invovled in the project, the information they provide, and their power in the decision making process. Dealing with institutions, individuals, or even groups may affect the outcome, process, and even the content of the project and this has been viewed as a crucial and complex task in project management. There are many challenges associated with stakeholders and this is due to the fact that the expectations of the stakeholders are not adequately met as they define success in using different factors (Silva, Jeronimo, & Viera, 2019).

Stakeholder involvement is important in the project life cycle management especially when interested individuals have a key role to play in implementation process and operation (Paton & Andrew, 2019). Stakeholders can be a considerable asset, contributing knowledge, insights and support in shaping a project brief as well as supporting its execution. The high failure rate of major projects has been attributed to a lack of attention to stakeholders. Stakeholders' negative attitudes towards a project can cause cost overruns and time schedule delays due to conflicts over project design and implementation (Olander & Landin, 2015). According to Kerzner (2017) considerable project management effort is devoted to managing stakeholders that begins with stakeholders identification, determining what they want and predicting what they will do, which will be based upon their perception of the project. Involvmenet of stakeholders in M&E makes better data analysis as it ensures the stakeholders have the the right to be involved in essential aspects on the project. Stakeholders involvement in PM&E increases the chances of project success. There exist variations in stakeholders' particpation in projects and it can be actice or passive. Further, the particpation of the stakeholders can be further be in form of manipulation, coercion, information sharing, or even consultation (Matyoko, 2019).

Project M&E Reporting

Monitoring and Evaluation (M&E) reporting refers to the systematic and structured process of communicating information about the performance, progress, and results of a project, program, or organization. It involves the collection, analysis, and presentation of data and findings related to key performance indicators, objectives, and outcomes (Femi, 2019). M&E reporting serves as a critical tool for informing stakeholders, decision-makers, and the public about the effectiveness and impact of interventions, ultimately supporting evidence-based decision-making, accountability, and learning (Ince & Gül, 2019).

Follow-ups are critical in the M&E reporting process to track the progress of actions taken based on previous reports. This involves a systematic review of the implementation of recommendations, lessons learned, and corrective measures identified in earlier reports. Follow-ups contribute to

accountability and demonstrate a commitment to continuous improvement. Stakeholder engagement is often integral to the follow-up process, allowing for feedback and clarification on the implementation status. By incorporating follow-ups into the reporting cycle, organizations ensure that identified issues are addressed, leading to more effective and responsive project management (Kalla, 2017).

Information sharing is the ultimate goal of M&E reporting, involving the dissemination of findings, insights, and lessons learned to various stakeholders. This communication process is multifaceted, encompassing the presentation of data, narrative analysis, and contextual information (Kibe, 2018). Effective information sharing requires clear and transparent reporting, ensuring that stakeholders can easily interpret the results. Stakeholder engagement is crucial at this stage, fostering an open dialogue between project implementers, beneficiaries, funders, and other relevant parties. The sharing of information extends beyond formal reports to include presentations, workshops, and other forums that facilitate a dynamic exchange of ideas and feedback (Vijai & Kumar, 2019).

Empirical Review

Stakeholder Participation and Performance of Projects

Kobusingye et al (2019) examined the 'influence of stakeholder's involvement on project outcomes of Water, Sanitation and hygiene (WASH) projects in Rwanda. The study established that stakeholder involvement in project implementation had the most significant influence of the project outcomes followed by project planning, while project identification had the least influence. The study focused on the influence of community participation in WASH projects (Kobusingye, Mungatu, & Mulyungi, 2019). Ngare and Cheluget (2019) in their study of the role of stakeholder involvement in the sustainability of projects at Nyeri county referral hospital. The study established that stakeholder participation was crucial for sustainability of donor funded projects as they ensured commitment to the objectives of the projects through seamless feedback communication that ascertain the requirements for each stakeholder and how to align the requirements to project implementation (Ngare & Cheluget, 2018).

Kananura et al (2019) studied PM&E approaches that influence decision making from maternal and new-borns study in Eastern Uganda. The methods used included qualitative and quantitative M&E techniques such as key informant interviews, formal surveys and supportive supervision, as well as participatory approaches, notably participatory impact pathway analysis. The study found at the design stage, the M&E approaches were useful for identifying key local problems and feasible local solutions and informing the activities that were subsequently implemented. During the implementation phase, the M&E approaches provided evidence that informed decision-making and helped identify emerging issues, such as weak implementation by some village health teams, health facility constraints such as poor use of standard guidelines, lack of placenta disposal pits, inadequate fuel for the ambulance at some facilities, and poor care for low-birth-weight infants. Sharing this information with key stakeholders prompted them to take appropriate actions. For example, the sub-county leadership constructed placenta disposal pits, the district health officer provided fuel for ambulances, and health workers received refresher training and mentorship on how to care for new-borns (Kananura, et al., 2019).

Project M&E Reporting and Performance of Projects

Femi (2019) conducted a study on the Impact of monitoring and evaluation reporting on Workers' Performance in Selected Organisations in Lagos State, Nigeria. This study examined the significant relationship between communication and workers' performance in some selected organisations in Lagos State, Nigeria. Data for the study were collected through questionnaire with sample population of 120 respondents. The result of this study revealed that a relationship exists

between effective communication and workers' performance, productivity and commitment. The study recommended that managers need to communicate with employees regularly to improve workers commitment and performance.

Kibe (2018) conducted a study on the effects of communication strategies on organizational performance: A Case Study of Kenya Ports Authority. The present research empirically evaluated four communication strategies that could have impacted organizational performance namely; open door policy, group effort, organization structure and formal channels of communication. The researcher carried out an investigation on the relationship between communication strategies and organizational performance. The research project's main objective was to investigate the effects of communication strategies on organizational performance at Kenya Ports Authority. It also sought to find out how open door policy of communication influences organizational performance, to assess how group effort enhances organizational performance, to analyze how organizational structure can improve organizational performance and to identify the roles of formal communication channels on organizational performance. The main conclusion drawn from the research was communication strategies play a central role in high-performance

Vijai and Kumar (2019) conducted a study on assessing the impact of organizational reporting on job satisfaction and job performance. Data were collected from 380 employees working at different managerial levels in various organizations in India by using Organizational Communication Scale (Roberts & O'Reilly, 1974), Job Satisfaction Survey scale (Spector, 1985), and Job Performance scale (Rodwell, Kienzle & Shadur, 1998). It was found that organizational communication had a significant effect on job satisfaction and job performance of the employees. The analysis further indicated that the employees at different levels perceived job satisfaction differently

RESEARCH METHODOLOGY

This research study used descriptive research design. Descriptive research is guided by research questions and focuses on the frequency with which something occurs or the relationship between variables (Creswell, 2014).

This study was conducted in Kiambu County. The unit of analysis in this case was the road infrastructural projects in Kiambu County while the unit of observation was project staff members working with KeRRA, KURA, KeNHA and County Government of Kiambu. Therefore, the target population for the research was all the staff members (top management and other cadres) at road agencies in Kenya which are Kenya National Highway Authority (KeNHA), Kenya Rural Roads Authority (KeRRA) and Kenya Urban Roads (KURA). This was for all the head offices personnel and the staff managing or supervising road projects at sites across the country. The total target population was therefore 695 respondents

Sample and Sampling Technique

Yamane formula (1967) was used to determine the sample size since the population was less than 10,000 (Yamane, 1967).Where:n indicates the sample size; N indicates the population under study (695); and e indicates the margin error (0.05)

$$n = \frac{N}{(1 + N(e)^2)}$$

$$n = \frac{695}{(1 + 695(0.05)^2)}$$

$$n = 254$$

Thus, the study was administered with questionnaires of 254 respondents mention above.

The sampling technique that was used in this study is simple random sampling. With simple random sampling, each unit of the population has an equal probability of inclusion in the sample (Creswell, 2014).

Table 3.2: Sample Size

	Population			Total
Designation	**KURA**	**KeRRA**	**KeNHA**	**Total**
Top Management (Director General +Directors)	2	2	2	6
Middle managers (Deputy Directors + Assistant Directors/Principal Officer)	19	24	25	68
Low Level Managers (Senior Officers/Officers	43	69	68	180
Total	**64**	**95**	**95**	**254**

Data Collection Instruments

Data was collected by use of semi-structured questionnaires. Questionnaires are ideal for research studies as they collect data as requested by the researcher, are affordable and can easily be analyzed and replicated. According to Thornhill *et al*., (2017) questionnaires are suitable when undertaking descriptive studies since they enable the researcher to identify and describe the variability in different phenomena.

Pilot Testing

MCneill (2019) defines pilot testing as a trial run done in preparation for a major study. Pilot study is conducted to determine if there are flaws, limitations, or other weaknesses within the data collection instrument to make the necessary revisions prior to the implementation of the study. According to Cauvery, Nayak, Girija and Meenakshi (2017), pilot study should be between 1% and 10% of the actual sample size. Therefore, in this study, the pilot group was 25 individuals which represents 10% of the total study sample size. The pilot group was excluded from the final study.

Data Analysis and Presentations

Quantitative data collected was analysed by the use of descriptive statistics which include percentages, means, standard deviations and frequencies. The information was displayed by use of tables, bar charts, graphs and pie charts. Content analysis was used to test data that was collected from the open-ended questions and findings were presented in tables and figures. This study also conducted inferential statistics through correlation analysis and regression analysis. Pearson correlation analysis was used to test the strength and the direction of the relationship between the independent and the dependent variables. Multiple regressions were done to establish the influence of monitoring and evaluation practices on performance of road infrastructural projects in Kiambu County Kenya.

PRESENTATION, ANALYSIS AND INTERPRETATION OF DATA

Descriptive Statistics Analysis

Stakeholders Participation and Performance of Road Infrastructural Projects

The first specific objective of the study was to determine the influence of Stakeholders Participation on performance of road infrastructural projects in in Kiambu County. The respondents were requested to indicate their level of agreement on Stakeholders Participation and

performance of road infrastructural projects in in Kiambu County. The results were as shown in Table 4.1

From the results, the respondents agreed that stakeholders have received adequate training to understand their roles in the project. This is supported by a mean of 3.996 (std. dv = 0.865). In addition, as shown by a mean of 3.819 (std. dv = 0.945), the respondents agreed that capacity-building programs have been effective in enhancing stakeholders' skills and knowledge. Further, the respondents agreed that sufficient resources (financial, material, and human) have been allocated for stakeholder capacity building. This is shown by a mean of 3.798 (std. dv = 0.611).

The respondents also agreed that the project provides ongoing support and resources for continuous learning and development. This is shown by a mean of 3.731 (std. dv = 0.908). With a mean of 3.711 (std. dv = 0.776), the respondents agreed that stakeholders were actively involved in the initial planning stages of the project. The respondents agreed that their input was considered and integrated into the project plan. This is shown by a mean of 3.675 (std. dv = 0.897).

Table 4. 1: Stakeholders Participation and Performance of Projects

	Mean	Std. Deviation
Stakeholders have received adequate training to understand their roles in the project.	3.996	0.865
Capacity-building programs have been effective in enhancing stakeholders' skills and knowledge.	3.819	0.945
Sufficient resources (financial, material, and human) have been allocated for stakeholder capacity building.	3.798	0.611
The project provides ongoing support and resources for continuous learning and development.	3.731	0.908
Stakeholders were actively involved in the initial planning stages of the project.	3.711	0.776
Their input was considered and integrated into the project plan.	3.675	0.897
Aggregate	**3.733**	**0.842**

Project M&E reporting on Performance of Projects

The second specific objective of the study was to establish the influence of Project M&E reporting on performance of road infrastructural projects in in Kiambu County. The respondents were requested to indicate their level of agreement on various statements relating to Project M&E reporting and performance of road infrastructural projects in in Kiambu County. The results were as presented in Table 4.2.

From the results, the respondents agreed that the information in M&E reports is accurate and free from errors. This is supported by a mean of 3.968 (std. dv = 0.905). In addition, as shown by a mean of 3.939 (std. dv = 0.885), the respondents agreed that data in reports is verified and validated before dissemination. Further, the respondents agreed that M&E reports comprehensively cover all relevant aspects of the project. This is shown by a mean of 3.920 (std. dv = 0.605). The respondents also agreed that reports provide sufficient detail to allow stakeholders to make informed decisions. This is shown by a mean of 3.865 (std. dv = 0.981).

The respondents agreed that the M&E reports include assessments of the project's environmental impact. This is supported by a mean of 3.851 (std. dv = 0.873). In addition, as shown by a mean of 3.817 (std. dv = 0.786), the respondents agreed that environmental impact assessments are conducted regularly and reported accurately.

Table 4. 2: Project M&E reporting on Performance of Projects

	Mean	Std. Deviation
The information in M&E reports is accurate and free from errors.	3.968	0.905
Data in reports is verified and validated before dissemination.	3.939	0.885
M&E reports comprehensively cover all relevant aspects of the project.	3.920	0.605
Reports provide sufficient detail to allow stakeholders to make informed decisions.	3.865	0.981
The M&E reports include assessments of the project's environmental impact.	3.851	0.873
Environmental impact assessments are conducted regularly and reported accurately.	3.817	0.786
Aggregate	**3.830**	**0.847**

Correlation Analysis

The present study used Pearson correlation analysis to determine the strength of association between independent variables (Stakeholders Participation and Project M&E reporting) and the dependent variable (performance of road infrastructural projects in Kiambu County Kenya) dependent variable.

Table 4. 3: Correlation Coefficients

		Project Performance	Stakeholders Participation	Project M&E reporting
Project Performance	Pearson Correlation	1		
	Sig. (2-tailed)			
	N	234		
Stakeholders Participation	Pearson Correlation	.856**	1	
	Sig. (2-tailed)	.001		
	N	234	234	
Project M&E reporting	Pearson Correlation	.859**	.189	1
	Sig. (2-tailed)	.000	.081	
	N	234	234	234

From the results, there was a very strong relationship between Stakeholders Participation and performance of road infrastructural projects in Kiambu County Kenya (r = 0.856, p value =0.001). The relationship was significant since the p value 0.001 was less than 0.05 (significant level). The findings conform to the findings of Kobusingye *et al* (2019) that there is a very strong relationship between Stakeholders Participation and project performance.

The results also revealed that there was a very strong relationship between Project M&E reporting and performance of road infrastructural projects in Kiambu County Kenya (r = 0.859, p value =0.000). The relationship was significant since the p value 0.000 was less than 0.05 (significant level). The findings are in line with the results of Ince and Gül (2019) who revealed that there is a very strong relationship between Project M&E reporting and project performance

Regression Analysis

Multivariate regression analysis was used to assess the relationship between independent variables (Stakeholders Participation and Project M&E reporting) and the dependent variable (performance of road infrastructural projects in Kiambu County Kenya)

Table 4. 4: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.925	.848	.849	.10120

a. Predictors: (Constant), Stakeholders Participation and Project M&E reporting

The model summary was used to explain the variation in the dependent variable that could be explained by the independent variables. The r-squared for the relationship between the independent variables and the dependent variable was 0.848. This implied that 84.8% of the variation in the dependent variable (performance of road infrastructural projects in Kiambu County Kenya) could be explained by independent variables (Stakeholders Participation and Project M&E reporting).

Table 4. 5: Analysis of Variance

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	12.027	2	6.014	104.069	.000[b]
1	Residual	6.568	231	.029		
	Total	18.595	233			

a. Dependent Variable: Performance of road infrastructural projects

b. Predictors: (Constant), Stakeholders Participation and Project M&E reporting

The ANOVA was used to determine whether the model was a good fit for the data. F calculated was 104.069 while the F critical was 2.411. The p value was 0.000. Since the F-calculated was greater than the F-critical and the p value 0.000 was less than 0.05, the model was considered as a good fit for the data. Therefore, the model can be used to predict the influence of Stakeholders Participation and Project M&E reporting, on the performance of road infrastructural projects in Kiambu County Kenya.

Table 4. 6: Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.325	0.089		3.651	0.000
	Stakeholders Participation	0.387	0.095	0.386	3.949	0.000
	Project M&E reporting	0.398	0.102	0.399	3.716	0.002
a Dependent Variable: Performance of road infrastructural projects						

The regression model was as follows:

$Y = 0.325 + 0.387X_1 + 0.398X_2 + \varepsilon$

According to the results, Stakeholders Participation has significant effect on performance of road infrastructural projects in Kiambu County Kenya, β1=0.387, p value= 0.000). The relationship was considered significant since the p value 0.000 was less than the significant level of 0.05. The findings conform to the findings of Kobusingye et al (2019) that there is a very strong relationship between Stakeholders Participation and project performance.

In addition, the results revealed that Project M&E reporting has significant effect on performance of road infrastructural projects in Kiambu County Kenya β1=0.398, p value= 0.002). The relationship was considered significant since the p value 0.002 was less than the significant level of 0.05. The findings are in line with the results of Ince and Gül (2019) who revealed that there is a very strong relationship between Project M&E reporting and project performance

Conclusions

The study concludes that stakeholder participation has a positive and significant effect on performance of road infrastructural projects in Kiambu County. The study revealed that capacity building, level of engagement and communication sharing influence performance of road infrastructural projects in Kiambu County

The study also concludes that Project M&E Reporting has a positive and significant effect on performance of road infrastructural projects in Kiambu County. The study revealed that quality Assurance, environmental Impact and risk Management influence performance of road infrastructural projects in Kiambu County.

Recommendations

The study recommends that the management of road construction agencies should include regular training sessions and workshops aimed at enhancing the skills and knowledge of all stakeholders involved in road infrastructure projects. This can include training on project management, technical aspects of road construction, and best practices in community engagement. By building the capacity of stakeholders, the projects will benefit from more informed and capable participants who can contribute positively to project outcomes.

The study also recommends that the management of road construction agencies should also implement rigorous project scheduling and monitoring tools to track progress against milestones. Establish clear timelines and regular progress reviews to address any deviations promptly. In addition, the management should create and enforce standardized project management frameworks and methodologies. Develop detailed guidelines and best practices tailored to road construction projects to ensure consistency and quality.

REFERENCES

Abdi, A. H., & Kimutai, G. (2018). 'M&E and Performance of constituency Development Fund projects in Garissa County, Kenya'. *International Academic Journal of Information Sciences and Project Management, 3*(2), 418-445.

Banerjee, A., Duflo, E., & Qian, N. (2020). On the road: Access to transportation infrastructure and economic growth in China. *Journal of Development Economics*, *145*, 102442.

Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of management, 17*(1), 99-120.

Donald, T., & Preston, L. (1995). The Stakeholder Theory of the Corporation: Concepts, Evidence and Implications. *Academy of Management Review, 20*, 66-67.

Fahey, T. (2005). *The Case for an EU wide measure of poverty.* Dublin: The Economic and Social Research Institute.

Kaviani, M. A., J. Galli, B., & Ishtiaq, P. (2019). Application of continuous improvement techniques to improve organization performance: A case study. *International Journal of Lean Six Sigma*, *10*(2), 542-565.

Kerzner, H. (2017). *Project Management: A systems approach to planning, scheduling, and controlling* (10th ed.). New Jersey: John Wiley & Sons, Inc.

Kibe, M. P. (2018). *'influence of PM&E on sustaianbility of community development projects in selected public schools in Gatundu South constituency in Kiambu County'.* MA. in project planning and management, University of Nairobi.

Linhares, A. (2009). 'Theory of constraints and the comination of the product mix decision in infrastructure projects'. *International Journal of Production Economics, 121*(1), 121-129.

Makori, J. O., & Wanyoike, D. (2018). *Assessment of result based monitoring and evaluation on performance of donor funded value chain projects in Kenya.* PhD Thesi, JKUAT.

Matu, J. M. (2020). *Stakeholer particpation in project life cyle mangement, risk management practices and completion of urban roads transport infrastructure projects in Kenya.* PHd Thesis, University of Nairobi.

Matyoko, P. A. (2019). *Effectiveness of M&E systems on project sustainabilityin Tanzania: A case of NGOs in Shinyanga Municipal.* M.A. thesis in Monitoring and Evaluation, University of Tanzania.

Mgoba, S. A. (2019). *Effectiveness of PM&E on achevement of commnuity based water projects in Chamwino district Tanzania.* M.A. Thesis in Project management, Sokoine University of Agriculture Morogoro.

Ngare, C. W., & Cheluget, J. (2018). The role of stakeholder involvement in the sustainability of projects: A case study of Nyeri County Referral Hospital, Nyeri, Kenya. *Journal of Humanities and Social Science, 24*(11), 35-43.

Ocharo, D. R., Rambo, C., & Ojwang, B. (2020). 'Influence of M&E frameworks on performance of public agriclutral projects in Galana Kilifi county Kenya'. *European Journal of Physical and Agricultural Sciences, 8*(1), 1-10.

Orre, F., Ramadhani, A., & Yusuf, M. (2019). Role of stakeholders on project performance of Kenya power and Lighting company last mile connectivity project in Embu county Kenya. *International Journal of Management and Commerce Innovations , 7*(2), 1186-1195.

Rumenya, H., & Kisimbi, J. M. (2020). Influence of Monitoring and Evaluation Systems on Performance of Projects in Non-Governmental Organizations: A Case of Education Projects in Mombasa County, Kenya. *Journal of Entrepreneurship and Project Management, 5*(2), 46-66.

Santoso, D. S., & Gallage, P. G. M. P. (2020). Critical factors affecting the performance of large construction projects in developing countries: A case study of Sri Lanka. *Journal of Engineering, Design and Technology*, *18*(3), 531-556.

Serrador, P. (2018). The Impact of Planning on Project Success-A Literature Review. *The*

Wang'aya, T. I., & Kagiri, A. (2018). 'Determinants of M&E on performance of humanitorian and development aid organization : a case of Finn church aid'. *The strategic journal of business & change management, 5*(4), 1307-1328.

Wekesa, W. F., & Maurice, P. (2021). PM&E on the sustainability of youth funded projects in Nairobuu and Bungoma counties Kenya. *International Journal of Strategic Management, 5*(1), 57-76.

Wang, Q., & Kim, M. K. (2019). Applications of 3D point cloud data in the construction industry: A fifteen-year review from 2004 to 2018. *Advanced engineering informatics*, *39*, 306-319.

Xu, Z., Zayed, T., & Niu, Y. (2020). Comparative analysis of modular construction practices in mainland China, Hong Kong and Singapore. *Journal of Cleaner Production*, *245*, 118861.