EdinBurg Peer-Reviewed Journals and Books Publishers
Journal of Entrepreneurship & Project Management
Vol. 6||Issue 2||pp 1-15||August||2026
Email: info@edinburgjournals.org||ISSN: 2789-2115

Project Communication Monitoring and Performance of Road Infrastructure Projects Developed by KeRRA in Kiambu County, Kenya

Anampiu Rita Nkuene[1*], Kiarie Francis Kanyi[1], Gachengo Lydia Wanjiku[1]
[1]Department of Management Science, Kenyatta University, Kenya
*Corresponding Email: ritaanampiu@gmail.com

Accepted: 11 July 2026 || Published: 04 August 2026

Abstract

The Government of Kenya has invested heavily in road infrastructure to support economic growth and regional development. However, despite increased funding, many road projects continue to experience delays, cost overruns, and quality-related challenges. Previous studies have attributed poor performance of road infrastructure projects to factors such as inadequate funding, weak contractor capacity, poor planning, slow decision-making, and ineffective monitoring and evaluation. Although these factors explain part of the problem, they do not provide a comprehensive understanding of all the determinants of project performance. In particular, limited attention has been paid to the role of communication management, yet effective communication is essential for coordinating stakeholders involved in infrastructure projects. This study, therefore, examined the influence of communication management on the performance of road infrastructure projects developed by Kenya Rural Roads Authority (KeRRA) in Kiambu County, with a specific focus on project communication monitoring. The study was guided by the PMBOK communication management framework and adopted a positivist philosophy together with descriptive and explanatory research designs. The target population consisted of ten completed road infrastructure projects, involving 80 respondents drawn from KeRRA Head Office, Kiambu Region office, and contractors. A census approach was used. Structured questionnaires were used to gather primary data. Data were analyzed using descriptive and inferential statistics with SPSS version 20. A regression model was applied to test the relationship between communication monitoring and road infrastructure performance. The findings revealed that communication monitoring had a positive and statistically significant effect on the performance of road infrastructure projects ($R^2 = 0.590$, $\beta = .896$, $p < 0.05$). The study concluded that communication monitoring is the most influential predictor of road infrastructure project performance, serving as a dynamic control system that provides essential feedback loops to ensure projects stay aligned with their objectives. It is recommended that KeRRA should prioritize implementing robust communication monitoring systems across all road projects, utilizing digital tools and clear indicators to track information flow. This must be paired with comprehensive team training and strengthened feedback loops to ensure that insights directly inform timely corrective actions.

Keywords: *Communication Management, Communication Monitoring, Kenya Rural Roads Authority (KeRRA), Road Infrastructure Performance, Project Communication*

How to Cite: Anampiu, R. N., Kiarie, F. K., & Gachengo, L. W. (2026). Project Communication Monitoring and Performance of Road Infrastructure Projects Developed by KeRRA in Kiambu County, Kenya. *Journal of Entrepreneurship and Project Management, 6*(2), 1-15.

1. Introduction

According to Kenya Vision 2030, effective road construction is essential to the nation's overall productivity and economic growth over the next three decades. For the expansion and development of any economy, road infrastructure projects must be successfully carried out and completed. It is also important for generating revenue and jobs. As a direct consequence, the government has made substantial expenditures to expand the road network. Concerns have been raised about the poor performance of road projects, despite the government's continued considerable investments in road development. According to Macharia (2016), more than 50% of Kenya's road infrastructure faces a multitude of challenges that prevent projects from being completed on schedule due to financial constraints.

In 2018, the Kiambu County Government published an integrated development plan for the county covering 2018-2022. The plan stated that the county had a total road network of 5533 kilometers. 249 kilometers of roads have not yet been opened. The roads that adhere to bitumen standards are 865.4 kilometers long, 105 kilometers long on gravel, and 3167 kilometers long on earth. Nevertheless, despite the County's road network, a number of obstacles have been encountered in constructing them on time and within the allotted budget. For example, Kasavi (2019) found that 45% of the stakeholders surveyed experienced severe delays in the timelines of the projects they were working on, with the majority of projects surpassing their planned completion durations by more than 6 months. The findings of previous research by Gathoni and Karanja (2016) revealed that among building projects carried out in Kiambu County with the assistance of the Constituency Development Funds (CDF), 80% were not completed, and only 20% were completed and functioning well. The report that KeRRA compiled on the status of road projects in Kiambu County as of 2021 also makes this conclusion abundantly clear. According to the observations, there are still highways that are unoperational, and construction of these roads began in 2016. Furthermore, a number of road projects, such as the Gatundu - Karinga - Flyover, which started in 2012 and had a scope of 45 kilometers, were incomplete in 2019, which is a significant amount of time behind schedule. More than one billion Kenyan shillings were spent on the repair project.

In Kiambu County, Kenya, Wanjohi and Musembi (2024) found that stakeholder engagement had a significant and positive effect on the outcomes of road construction projects. Their findings confirmed this relationship. Similarly, Kasavi (2019) identified the key factors responsible for the underperformance of road infrastructure projects in Kenya. These factors include inadequate planning, insufficient financing, monitoring, and assessment, inadequate cost estimates, insufficient contractor ability, and slow decision-making. Additionally, 60% of projects in Kiambu County faced budgetary challenges, resulting in significant cost overruns beyond initial estimates. Poor coordination among stakeholders and inadequate monitoring and evaluation (M&E) systems are cited as major contributors to these inefficiencies (Rubia & Kimaru, 2022).

According to a KeRRA (2023) report, KeRRA carried out 44 projects across 30 counties between 2016 and 2021. However, during the implementation phase, the dates of 31 projects were revised, indicating that the construction was not completed by the set completion date. Kiambu is one of the counties where the project dates were revised, indicating that road completion faced challenges. In terms of contextual gaps, factors like funding, contractor capacity, project planning, stakeholders' participation, monitoring, and evaluation have been cited as the main causes of poor performance in road infrastructure in Kiambu County, Kenya (Wanjohi & Musembi, 2024; Kasavi, 2019; Maichuhie, 2017). However, none of these studies

has considered communication management strategies, such as project communication monitoring, as a factor influencing the performance of road infrastructure in the County.

1.2 Research Objective

To explore the influence of communication monitoring on the performance of road infrastructure projects developed by KeRRA in Kiambu County, Kenya.

1.3 Research Hypothesis

H_0: Communication monitoring does not have a statistically significant effect on the performance of road infrastructure projects developed by KeRRA in Kiambu County, Kenya.

2. Literature Review

2.1 Theoretical Review

Project communication management, as formalized in the Project Management Body of Knowledge (PMBOK), provides a comprehensive framework for understanding how information flows influence project success. The Project Management Institute (PMI, 2021) conceptualizes communication management as a multifaceted knowledge area encompassing three primary processes: planning communications management, managing communications, and monitoring communications. This tripartite structure recognizes that effective communication requires not only strategic planning and execution but also systematic oversight to ensure information achieves its intended purpose. The theoretical underpinnings of this framework draw on information theory, organizational behavior, and systems thinking, positioning communication as the nervous system of project management, connecting all project elements and stakeholders (Zulch, 2020).

The proponents of PMBOK's communication management framework include the Project Management Institute, the authoritative body, and numerous scholars who have validated its principles through empirical research. Kerzner (2022) champions a structured approach to communication management, arguing that formalizing communication processes distinguishes successful project organizations from those that struggle with communication monitoring and alignment. Bourne (2022) extends this perspective by highlighting that project value is primarily realized through stakeholder engagement, enabled by organized communication channels. These advocates contend that communication cannot be left to chance or to unofficial channels, especially in complex project environments where stakeholder diversity and knowledge asymmetry create inherent coordination challenges.

The PMBOK communication management framework is based on a number of fundamental presumptions that need to be critically examined. First, it assumes that information transmission follows predictable patterns accessible to managerial intervention and that communication processes can be systematically planned and controlled (Müller & Turner, 2020). Second, the framework assumes that all parties involved share a common understanding of communication norms and that communications will be understood as the sender intended. Third, it assumes that pre-established measurements and indicators can be used to objectively assess communication performance. Fourth, the paradigm is predicated on the idea that well-designed formal communication channels will outperform informal networks in terms of project outcomes. Lastly, it assumes that investments in communication processes and infrastructure will yield predictable gains in project performance (Galli, 2021).

Despite its widespread adoption, the PMBOK approach to communication management has attracted substantial criticism from scholars who identify significant limitations. Bjørkhaug and Wæhle (2022) argue that the framework's mechanistic view of communication reduces complex human interactions to information transmission models, neglecting the socially constructed nature of meaning and the role of power dynamics in shaping communication outcomes. Cooke-Davies et al. (2021) contend that PMBOK's emphasis on formal communication processes underestimates the importance of informal networks and tacit knowledge sharing, which often determine how work actually gets accomplished in project settings. Furthermore, critics assert that the framework's one-size-fits-all approach fails to account for cultural, contextual, and project-specific factors that fundamentally shape communication requirements and effectiveness (Müller et al., 2021). Additionally, the focus on sender-oriented communication overlooks the critical role of receivers in actively constructing meaning, thereby limiting the framework's explanatory power for communication failures arising from misinterpretation rather than transmission errors (Zulch, 2020).

Applying PMBOK communication management theory to the study of project communication monitoring in road infrastructure projects provides a robust theoretical lens for examining performance determinants. Drawing specifically on PMBOK's third process, monitoring communications, this study operationalizes communication monitoring as the systematic tracking, reviewing, and regulating of information flows throughout the project lifecycle. This conceptualization aligns with recent research by Buertey et al. (2022), who found that infrastructure projects with dedicated communication monitoring mechanisms demonstrated significantly higher stakeholder satisfaction and fewer costly rework incidents. The monitoring function, as theorized by PMI (2021), serves as the feedback mechanism that enables project managers to detect communication breakdowns early and implement corrective actions before they escalate into performance problems.

In the context of road infrastructure projects, characterized by multiple stakeholders including government agencies, contractors, local communities, and funding bodies, the monitoring dimension of communication management assumes particular significance. Musonda and Pretorius (2021) demonstrated that infrastructure projects in developing contexts face unique communication challenges arising from stakeholder diversity, geographical dispersion, and varying technical literacies, making systematic monitoring essential for project success. The findings of the current study, which identify communication monitoring as the dominant predictor of project performance, empirically validate PMBOK's theoretical assertion that monitoring communications constitutes a distinct and critical knowledge area requiring dedicated managerial attention. As Galli (2021) notes, while communication planning establishes the framework and communication management executes the plan, monitoring closes the loop, enabling adaptive responses to the dynamic communication environments characteristic of large-scale infrastructure projects.

This theoretical grounding positions the study's findings within established project management discourse while also extending understanding of how specific communication processes influence project outcomes. By demonstrating that monitoring functions as the central coordinating mechanism that activates and integrates other communication processes, the research provides empirical support for recent calls to elevate the status of communication monitoring within project management practice (Kerzner, 2022). Furthermore, the findings address criticisms of PMBOK's mechanistic orientation by revealing that monitoring, when properly implemented, creates the adaptive capacity necessary for projects to navigate the

complexity and uncertainty inherent in infrastructure development (Bjørkhaug & Wæhle, 2022).

2.2 Empirical Review

Mwango, Mulwa, Akaranga, and Nyonje (2019) explored the relationships among monitoring, evaluation, and communication, as well as their collective impact on performance. Their investigation focused on microfinance institutions (MFIs), which offer financial assistance to entrepreneurial endeavors. Within the framework of pragmatism, the study employed a descriptive survey technique, combining a mixed-methods approach with a correlational design. The study focused on all seven licensed microfinance institutions in Kisumu County. A total of 255 people were selected to participate in the survey, including managers and department directors within microfinance organizations responsible for supporting the county's entrepreneurship initiatives, as well as funded entrepreneurs.

Two structured questionnaires were used to collect quantitative data, and an interview guide was used to gather qualitative information. Descriptive statistical techniques, such as calculating the mean, standard deviation, frequencies, and percentages, were used to examine quantitative data. Inferential statistical methods, particularly linear regression analysis, were used to determine the kind and degree of correlations between the variables under study. According to the study's findings, most microfinance organizations have monitoring and evaluation (M&E) frameworks that include organized communication tactics. This was largely due to the realization that successful deployment of monitoring processes depends on efficient communication.

Mwango et al. (2019) further determined that most MFIs maintained well-defined communication practices within their M&E structures. Their results showed that assessment results were used in decision-making processes and that best practices in M&E were successfully shared through M&E procedures. Furthermore, timely communication of M&E-related information allowed firms to make well-informed strategic decisions. The importance of communication in improving operational efficiency was confirmed by statistical analysis using hypothesis testing, which showed a strong positive correlation ($R = 0.538$, $p < .001$) between M&E communication and MFI performance. The current study instead concentrated on road infrastructure management in Kiambu County, particularly projects supervised by the Kenya Rural Roads Authority (KeRRA), whereas the study by M&E Communication was carried out in the context of microfinance institutions. This distinction underscores the difference between the two studies in terms of their scope and sectoral focus.

In a separate study, Koima and Mukulu (2020) examined the role of Monitoring and Evaluation (M&E) in the overall performance of projects under the Kenya Agricultural and Livestock Research Organization (KALRO). Their study employed a descriptive methodology and concentrated on 175 ongoing initiatives as its target population. For additional analysis, a sample of 64 projects (37% of the target population) was selected. Questionnaires were used to gather main data, while document reviews were used to get secondary data. To achieve significant results, the study was conducted using SPSS Version 25, employing descriptive statistics and data triangulation.

The study demonstrated the relationship between M&E characteristics and project performance using regression and correlation analyses. The main conclusions showed that project performance was directly positively impacted by three independent variables: monitoring and control, assessment results, and planning in M&E. It's interesting to note that the study discovered a negative correlation between project performance and the feedback mechanism,

indicating that inefficient feedback procedures may make it more difficult to execute projects. The findings also showed that any independent variable could be used to predict a project's success. The current study examined how communication management monitoring affects the success of road infrastructure projects, in contrast to Koima and Mukulu's (2020) research, which primarily focused on M&E, planning, and monitoring issues in agricultural projects.

3. Methodology

The study adopted a positivist research philosophy, which emphasizes objectivity, empirical observation, and statistical analysis in examining relationships among variables. A descriptive and explanatory research design was used to describe communication monitoring practices and explain their influence on the performance of road infrastructure projects developed by Kenya Rural Roads Authority (KeRRA) in Kiambu County, Kenya. The target population consisted of 80 personnel involved in ten road infrastructure projects completed between 2016 and 2021, including KeRRA officers, county officials, and contractors. Because the population size was small and manageable, the study used a census sampling approach, allowing all members of the population to participate in order to enhance representativeness and minimize sampling bias.

Primary data were collected using a structured questionnaire with Likert-scale items, designed to capture demographic information and perceptions on monitoring communication practices and road infrastructure performance. A pilot study was conducted to test the instrument's validity and reliability. Construct validity was confirmed through expert review and pre-testing, while reliability was assessed using Cronbach's Alpha, yielding an overall coefficient of 0.872, indicating acceptable internal consistency. After obtaining research authorization from Kenyatta University, NACOSTI, and KeRRA, the researcher administered the questionnaires with the help of research assistants, ensuring voluntary participation and respondent confidentiality. Completed questionnaires were collected, checked, and prepared for statistical analysis using SPSS version 29, enabling the study to generate reliable findings on the influence of monitoring communications on the performance of road infrastructure projects in Kiambu County, Kenya. The study employed a simple linear regression model to determine the relationship between communication monitoring and the performance of road infrastructure.

4. Results and Discussion

4.1 Response Rate and Background Information

The study administered a total of 80 questionnaires, of which 53 were successfully returned, yielding a response rate of 66.25%, while 27 were not returned, representing a non-response rate of 33.75%. Although the response rate was slightly below the ideal threshold of 70%, it was considered adequate for social science research involving human participants, where full participation is often limited by workload, availability, and other commitments. The achieved response rate was therefore sufficient to support meaningful statistical analysis and reliable interpretation of the findings. The demographic analysis focused on respondents' gender, age, work experience, designation, and background training in communication management to determine whether the sample adequately represented personnel involved in road infrastructure projects. The gender distribution showed that the majority of respondents were male (72%) compared to 28% female, reflecting the common dominance of men in technical and infrastructure-related sectors. The age distribution indicated that most respondents were in the mid-career category, particularly between 31 and 35 years, followed by those above 41 years,

suggesting that the projects are largely handled by experienced and professionally mature personnel.

Further background information revealed that most respondents had substantial experience in road construction projects, with the largest proportion having worked for 6–10 years, followed by those with 11–15 years of experience, indicating that the study relied on participants with adequate practical exposure to project communication and implementation. In terms of designation, the majority were Road Engineers and members of the planning team, followed by surveyors, supervisors, and inspectors, demonstrating that the data was obtained from technically competent personnel directly involved in project planning, supervision, and execution. This diversity of professional roles enhanced the reliability of the responses by incorporating both strategic and field-level perspectives. However, the findings also showed that only 45% of respondents had received formal training in project communication management, while 55% had no prior training, suggesting a potential gap in stakeholders' communication skills. This lack of training may influence coordination, information flow, and overall project performance, thereby justifying the need to examine communication management practices in road infrastructure projects developed by the Kenya Rural Roads Authority in Kiambu County.

4.2 Descriptive Analysis

4.2.1 Descriptive Analysis for Communication Monitoring

This study was further set to evaluate the role of project communication monitoring in enhancing the performance of road infrastructure projects developed by KeRRA in Kiambu County, Kenya. To assess perceptions of the project communication monitoring systems, several statements were provided, and the respondents were asked to indicate their extent of agreement or disagreement. The descriptive results generated are shown in Table 1.

Table 1: Descriptive Results for Project Communication Monitoring

	SD	D	UD	A	SA	μ	σ
	f(%)	f(%)	f(%)	f(%)	f(%)		
The communication monitoring feedback has been effective in engaging and keeping stakeholders informed throughout the road infrastructure development.	3 (5.7)	0 (0.0)	3 (5.7)	29 (54.7)	18 (34.0)	4.11	.954
The tools and methods used for monitoring project communication are user-friendly and easily accessible.	0 (0.0)	0 (0.0)	3 (5.7)	39 (73.6)	11 (20.8)	4.15	.496
Status meetings and report reviews are always conducted to capture lessons learned from previous communication experiences in the road infrastructure projects.	0 (0.0)	3 (5.7)	6 (11.3)	30 (56.6)	14 (26.4)	4.04	.784
Average Score						**4.10**	**.745**

The evaluation of communication monitoring within the road infrastructure development projects reveals a consistently positive perception among respondents. The aggregated data, with a mean score of 4.10 across all items, indicate strong agreement that the current communication strategies are effective, accessible, and conducive to continuous learning. However, a closer examination of individual items, particularly their standard deviations, uncovers nuanced variations in stakeholder experience that merit discussion.

The first finding, regarding the effectiveness of communication monitoring feedback in engaging stakeholders and keeping them informed, yielded a high mean score of 4.11. The distribution of responses is heavily skewed toward agreement, with a combined 88.7% of participants either agreeing (54.7%) or strongly agreeing (34.0%) with the statement. This robust endorsement validates the current feedback mechanisms as successful tools for maintaining stakeholder involvement and information flow, which is critical in the complex and often protracted environment of infrastructure development (Project Management Institute [PMI], 2021). However, the standard deviation for this item is the highest in the set at 0.954, indicating the greatest variability in opinion. While the overall sentiment is positive, this dispersion suggests that the experience of being "kept informed" is not entirely uniform. A small but notable portion of respondents (5.7%) strongly disagreed, hinting at potential pockets of stakeholders who feel disconnected or whose feedback may not be adequately captured or acted upon. This finding underscores the challenge of achieving truly inclusive engagement in projects with diverse stakeholder groups, each with different information needs and preferences (Bourne, 2016).

In contrast, the second item, which assessed the user-friendliness and accessibility of the tools and methods for monitoring communication, shows near-universal satisfaction. With a mean of 4.15, the highest in the set, and a remarkably low standard deviation of .496, this data point signifies a strong and consistent consensus. An overwhelming 94.4% of respondents agreed or strongly agreed that the tools are easy to use and accessible. The low standard deviation indicates that this positive view is widely shared across the respondent population, with virtually no dissent. This finding is strategically significant because the usability of communication tools is a fundamental enabler of effective monitoring. If stakeholders and project team members find the tools intuitive and readily available, they are far more likely to engage with them consistently, ensuring that the data feeding into communication assessments is both rich and reliable (Müller & Turner, 2010). The success here provides a solid technological and procedural foundation upon which other communication improvements can be built.

The third finding, regarding the consistent conduct of status meetings and report reviews to capture lessons learned, achieved a mean score of 4.04. A substantial 83% of respondents agreed or strongly agreed that these reflective practices are in place. This indicates a healthy project learning culture, where past communication experiences are formally reviewed to inform future strategies. This practice aligns directly with the principles of adaptive management and continuous improvement, which are essential for navigating the uncertainties inherent in large-scale projects (Kerzner, 2017). The standard deviation of .784, while moderate, is the second highest, suggesting some variability in how consistently these sessions are perceived to be conducted or in their perceived value. The 5.7% of respondents who disagreed and the 11.3% who were undecided point to an opportunity for reinforcement. It may be that while such sessions are held, their connection to tangible changes in communication practice is not always visible to all participants, potentially diminishing their perceived effectiveness.

EdinBurg Peer-Reviewed Journals and Books Publishers
Journal of Entrepreneurship & Project Management
Vol. 6||Issue 2||pp 1-15||August||2026
Email: info@edinburgjournals.org||ISSN: 2789-2115

The respondents also gave their views on the extent to which KeRRA's project communication monitoring affected the performance of road infrastructure projects. The results are shown in Figure 1.

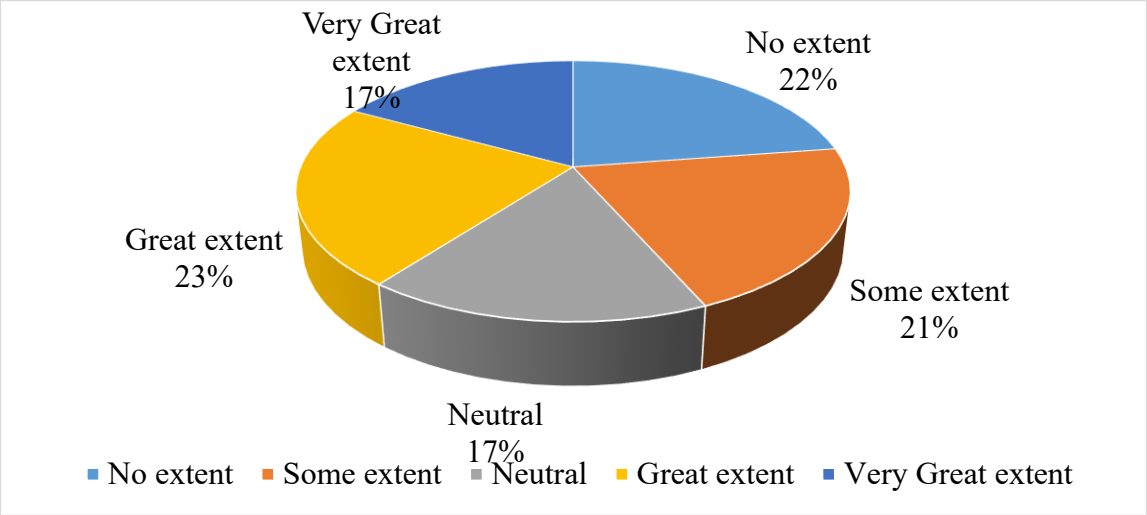

Figure 1: Extent to which Project Communication Monitoring affects Performance of Road Infrastructure Projects

The data (Figure 1) reveals a polarized and somewhat ambivalent perception regarding the specific category measured (e.g., the extent to which a particular communication tool, process, or objective is utilized or achieved). While a combined 40% of respondents indicate experiencing this category to a "Great extent" (23%) or a "Very Great extent" (17%), suggesting a strong positive endorsement from a significant portion of stakeholders, an almost equal combined total of 39% perceive it as having "No extent" (22%) or only a "Some extent" (17%). This near 40/40 split between the upper and lower extremes points to a significant lack of consensus, indicating that the experience or application of this category is highly inconsistent across the project team or stakeholder groups. The relatively small "Some extent" group (17%) suggests that few respondents perceive this as a moderate or partial reality, reinforcing the notion that stakeholders experience this category in a binary fashion—either it is definitively present, or it is definitively absent. From a project management perspective, this distribution is more concerning than a simple low average score, as it highlights a potential equity or access issue. It implies that the benefits or practices associated with this category are not being applied or experienced uniformly, which could lead to fragmented stakeholder engagement and inconsistent communication effectiveness (Bourne, 2016).

In conclusion, the overall findings indicate a project environment in which communication monitoring is functioning at a high level. The average score of 4.10 (σ = .745) in Table 1 reflects a strong, positive consensus on the core practices evaluated. The particular strength lies in the usability of the monitoring tools, which provide a dependable infrastructure for gathering insights. While feedback mechanisms are largely effective in engaging stakeholders, the higher variability in responses suggests that a more tailored approach may be needed to reach and resonate with every segment of the project audience. Furthermore, while lessons-learned practices are well established, reinforcing the link between these reviews and visible process adjustments could help solidify their value to the entire project team. These insights offer clear pathways for targeted enhancements to further optimize communication monitoring and the efficacy of project communication.

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Journal of Entrepreneurship & Project Management
Vol. 6||Issue 2||pp 1-15||August||2026
Email: info@edinburgjournals.org||ISSN: 2789-2115

4.2.2 Performance of Road Infrastructure Projects

The study sought to investigate the Performance of Road Infrastructure Developed by KeRRA in Kiambu County, Kenya. The descriptive results for the performance of road infrastructure projects are presented in Table 2.

Table 2: Descriptive Results for the Performance of Road Infrastructure

	SD	D	UD	A	SA	μ	σ
	f(%)	f(%)	f(%)	f(%)	f(%)		
The project's due dates are met.	3 (5.7)	3 (5.7)	12 (22.6)	28 (52.8)	7 (13.2)	3.62	.985
The project makes good use of the budget.	3 (5.7)	0 (0.0)	6 (11.3)	17 (32.1)	27 (50.9)	4.23	1.050
The infrastructure projects are carried out within the established parameters.	0 (0.0)	3 (5.7)	9 (17.0)	18 (34.0)	23 (43.4)	4.15	.907
Average Score						**4.00**	**.981**

The findings on the performance of road infrastructure projects by the Kenya Rural Roads Authority indicate generally strong performance, as reflected in an overall mean score of 4.00 and a standard deviation of 0.981. This suggests that respondents largely perceive the projects as performing well across key dimensions: timeliness, budget utilization, and adherence to established parameters, though with moderate variability in their perceptions. The relatively high overall mean implies that performance standards are largely being achieved, while the standard deviation indicates some differences in experience across projects or regions.

Concerning whether project due dates are met, 52.8% of respondents agreed, and 13.2% strongly agreed, totaling 66.0% positive responses. However, 5.7% strongly disagreed, 5.7% disagreed, and a notable 22.6% were undecided. The mean score of 3.62 and standard deviation of 0.985 indicate moderate agreement with relatively wide dispersion in responses. This suggests that while most projects are completed within stipulated timelines, inconsistencies may be attributable to external factors such as procurement delays, weather conditions, funding disbursement timing, or contractor capacity. The relatively high proportion of undecided respondents suggests variability in performance across project sites, indicating that schedule adherence, though satisfactory overall, may not be consistently achieved.

Regarding budget utilization, the results show strong positive perceptions. A combined 83.0% of respondents agreed (32.1%) or strongly agreed (50.9%) that projects make good use of budgets, while 5.7% strongly disagreed and 11.3% were undecided, with no respondents selecting “disagree.” The mean of 4.23, the highest among the three indicators, and a standard deviation of 1.050 suggest strong agreement but with slightly greater variability. The high mean indicates effective financial management practices, prudent resource allocation, and possibly strong oversight mechanisms. However, the relatively high standard deviation suggests that perceptions of budget efficiency vary across projects, potentially reflecting differences in cost-control practices or unforeseen expenditures in certain locations.

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Similarly, the statement that infrastructure projects are carried out within established parameters received strong support. A total of 34.0% agreed, and 43.4% strongly agreed, for a total of 77.4% positive responses. Only 5.7% disagreed, and 17.0% were undecided, with no strong disagreement recorded. The mean score of 4.15 and standard deviation of 0.907 indicate strong and relatively consistent agreement. This suggests that most projects adhere to predefined scope, quality standards, and regulatory requirements. Compliance with established parameters reflects effective project planning, supervision, and quality control systems, which are critical in public infrastructure development.

Overall, the results demonstrate that road infrastructure projects by the Kenya Rural Roads Authority are perceived to perform strongly, particularly in financial management and adherence to project specifications. While timeliness shows comparatively lower performance and greater variability, the overall high average of 4.00 confirms that project performance is generally positive. The moderate dispersion across indicators suggests that strengthening consistency in schedule management could further enhance overall project outcomes. Lastly, respondents were asked to rate whether the performance of road infrastructure developed by KeRRA in Kiambu County, Kenya, was successful. The results are shown in Figure 2.

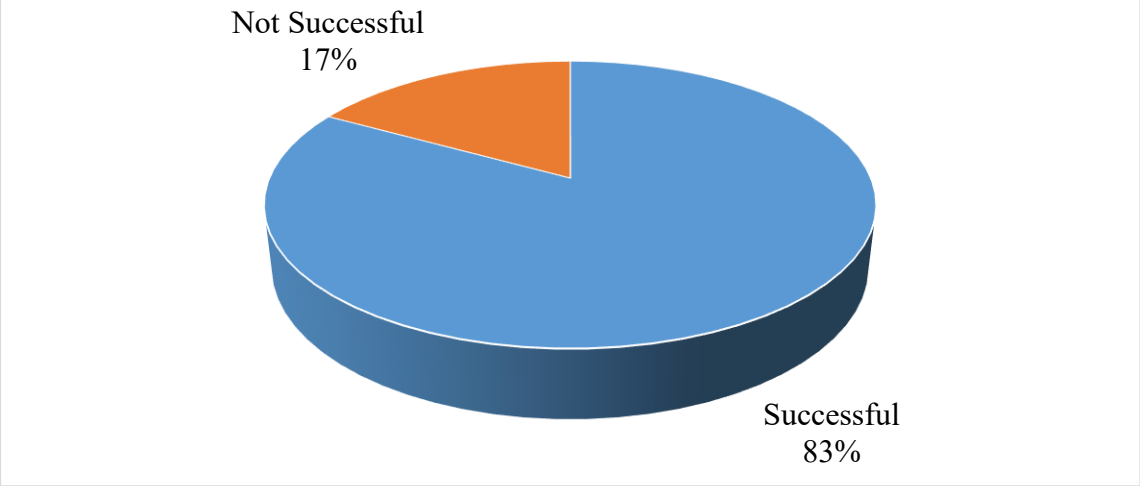

Figure 2: Performance Rating of Road Infrastructure Projects by KeRRA

The performance rating of road infrastructure projects by the Kenya Rural Roads Authority (KeRRA) presents a strongly positive outcome, with an overwhelming 83% of projects classified as "Successful." This high success rate suggests that the organization's project management practices, planning processes, and execution strategies are largely effective in delivering road infrastructure that meets predefined objectives, whether related to scope, budget, schedule, or quality standards (Project Management Institute, 2021). However, the 17% of projects rated as "Not Successful" is a non-trivial minority that warrants attention. From a strategic standpoint, this figure represents not only a failure to deliver specific project benefits but also a potential misallocation of public funds and resources (Kerzner, 2017). For KeRRA, this 17% segment offers a critical diagnostic opportunity. By conducting a comparative analysis between the successful and unsuccessful cohorts, the organization can identify specific risk factors, systemic weaknesses, or recurring challenges, such as procurement delays, community resettlement issues, or contractor performance problems, that lead to failure. Addressing the root causes behind this 17% is essential for driving continuous improvement and moving closer to the ideal of universal project success in public infrastructure development.

EdinBurg Peer-Reviewed Journals and Books Publishers
Journal of Entrepreneurship & Project Management
Vol. 6||Issue 2||pp 1-15||August||2026
Email: info@edinburgjournals.org||ISSN: 2789-2115

4.3 Relationship Between Communication Monitoring and Performance of Road Infrastructure

The study sought to establish the relationship between communication monitoring and the performance of road infrastructure developed by KeRRA in Kiambu County. A bivariate linear regression analysis was conducted to determine the relationship. Table 3 shows the results.

Table 3: Relationship between Project Communication Monitoring and Performance of Road Infrastructure

Model Summary

Model	R	R Square	Adjusted R-Square	Std. Error of the Estimate
1	.768[a]	.590	.582	1.79733

a. Predictors: (Constant), Project Communication Monitoring

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	236.721	1	236.721	73.279	.000[b]
	Residual	164.751	51	3.230		
	Total	401.472	52			

a. Dependent Variable: Performance of Road Infrastructure

b. Predictors: (Constant), Project Communication Monitoring

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.460	1.611		.285	.777
	Project Communication Monitoring	.896	.105	.768	8.560	.000

a. Dependent Variable: Performance of Road Infrastructure

Y = .460 + 0.896 (Communication Monitoring)

The simple linear regression analysis reveals a strong, statistically significant positive relationship between Project Communication Monitoring (PCM) and the Performance of Road Infrastructure (PRI). The model summary demonstrates a robust correlation coefficient (R) of .768, with Project Communication Monitoring explaining a substantial 59.0% of the variance in project performance ($R^2 = .590$, Adjusted $R^2 = .582$). The ANOVA results overwhelmingly confirm the model's exceptional fit, $F(1, 51) = 73.279$, $p < .001$. The coefficients table indicates that for every one-unit increase in the effectiveness of monitoring project communications, the

performance of road infrastructure projects increases by 0.896 units (B = 0.896, β = 0.768, t = 8.560, p < .001). Notably, the constant term is not statistically significant (p = .777). In theory, it suggests that without communication monitoring, baseline project performance approaches zero, a conceivable scenario given that unmonitored communication would likely lead to coordination failures and misunderstandings. This finding is deeply rooted in project control theory and the Project Management Institute's (2021) work, which identifies "Monitor Communications" as a critical process within the broader "Monitoring and Controlling Process Group." Effective monitoring ensures that the right information reaches the right people at the right time, enabling proactive identification of communication breakdowns, misinformation, or stakeholder concerns before they escalate into costly delays or rework. As Kerzner (2017) emphasizes in his seminal work on project management, control mechanisms are essential for translating plans into successful outcomes by providing feedback loops that facilitate timely corrective actions. The strength of this relationship also aligns with the cybernetic principle of management, where systems require monitoring and feedback to maintain course toward objectives. In the context of road infrastructure projects, characterized by high complexity, numerous stakeholders, and significant public scrutiny, the ability to actively track communication effectiveness appears to be a critical success factor. This finding suggests that practitioners should invest not only in planning and executing communications but, more importantly, in establishing robust monitoring mechanisms to ensure that communications remain aligned with project goals throughout the project lifecycle.

5. Conclusion

Project Communication Monitoring emerges as the most influential predictor of road infrastructure project performance, functioning as the central coordinating mechanism that activates and integrates all other communication processes. The findings consistently demonstrate that actively tracking, reviewing, and regulating communication flows throughout the project lifecycle provide essential feedback loops that enable project managers to detect misunderstandings, identify emerging issues, and implement timely corrective actions. This monitoring function transforms communication from passive information dissemination into a dynamic control system that keeps projects aligned with their objectives. In the context of complex infrastructure projects with multiple stakeholders and significant public scrutiny, the ability to systematically assess communication effectiveness appears to be the single most powerful communication-related lever for ensuring successful outcomes. The robustness of this finding across both simple and multiple regression analyses, as well as its persistence as the dominant predictor in the moderated model, underscores that investments in establishing rigorous communication monitoring mechanisms should be a priority for organizations seeking to enhance infrastructure project performance.

6. Recommendations

In light of the finding that project communication monitoring is the dominant predictor of project performance, with a powerful direct effect that remains robust even when other variables are considered, it is recommended that KeRRA prioritize establishing robust communication monitoring systems across all road infrastructure projects. This should include adopting user-friendly digital tools to track communication effectiveness, holding regular status meetings and review reports to capture lessons learned, and developing clear indicators to assess whether information is being received, understood, and acted upon by stakeholders. Training should be provided to project teams on effective monitoring practices, and feedback loops should be strengthened to ensure that insights gained from monitoring lead to timely corrective actions.

References

Bjørkhaug, L., & Wæhle, E. (2022). Rethinking project communication: Beyond the transmission model. *International Journal of Project Management*, 40(3), 215–228. https://doi.org/10.1016/j.ijproman.2022.01.005

Bourne, L. (2022). *Stakeholder relationship management: A maturity model for organisational implementation* (2nd ed.). Routledge.

Bourne, M. (2016). Performance measurement: Learning from the past and projecting the future. *Measuring Business Excellence, 12*(4), 67-72. DOI:10.1108/13683040810919971

Buertey, J. I. T., Amofa, D., & Atsrim, F. (2022). Communication management practices as determinants of infrastructure project success in Ghana. *Journal of Engineering, Design and Technology*, 20(4), 891-912. https://doi.org/10.1108/JEDT-12-2020-0521

Cooke-Davies, T., Crawford, L., & Lechler, T. G. (2021). Project management maturity and its implications for project performance: A critical review. *Project Management Journal*, 52(4), 343-358. https://doi.org/10.1177/87569728211017123

Galli, B. J. (2021). The relationship between communication and project success: A critical review and framework. *International Journal of Information Technology Project Management*, 12(2), 1-19. https://doi.org/10.4018/IJITPM.2021040101

Gathoni, J. & Karanja, N., (2016). Drivers of effective project performance in the National Government Constituency funded projects in Kiambu County, Kenya. *International Academic Journal of Human Resource and Business Administration*, 2(2), 22-40.

Kasavi, M.J. (2019). *Critical Factors and Their Influence on Performance of Road Construction Projects in Kiambu County, Kenya*. Published Thesis: Kenyatta University.

Kenya Rural Roads Authority (KeRRA). (2023). *Annual Report 2023*. Nairobi: KeRRA.

Kerzner, H. (2018). *Project management best practices: achieving global excellence*. 4th ed., John Wiley & Sons, Inc

Kerzner, H. (2022). *Project management: A systems approach to planning, scheduling, and controlling* (13th ed.). Wiley.

Koima, J. J., & Mukulu, E. (2020). Influence of monitoring and evaluation on project performance in Kenya Agricultural and Livestock Research Organization**.** *The Strategic Journal of Business & Change Management*, 7(3), 1195 – 1215.

Macharia, V.W. (2016). *Factors influencing completion of road construction projects in Embakasi, Nairobi County, Kenya*. Unpublished MBA Thesis, University of Nairobi.

Maichuhie, K. (2017). *Officials say roads will take 24 months to complete at Sh. 1.5 billion*. Standard Media, https://www.standardmedia.co.ke/article/2001261366/official-says-roads-will-take-%0924-months-to-complete-at-sh1-5-billion

Müller, R., & Turner, J. R. (2020). *Project-oriented leadership*. Routledge.

Müller, R., & Turner, R. (2010). Leadership Competency Profiles of Successful Project Managers. *International Journal of Project Management, 28*, 437-448. https://doi.org/10.1016/j.ijproman.2009.09.003

Müller, R., Locatelli, G., Holzmann, V., Nilsson, M., & Sagay, T. (2021). The role of communication in managing complex projects: A systematic review. *International Journal of Project Management*, 39(5), 489-503. https://doi.org/10.1016/j.ijproman.2021.03.002

Musonda, I., & Pretorius, J. H. C. (2021). Communication challenges in infrastructure projects in developing countries: A case study of road construction in South Africa. *Journal of Construction in Developing Countries*, 26(1), 87-106. https://doi.org/10.21315/jcdc2021.26.1.5

Mwango, C.O., Mulwa, A., Akaranga, S., & Nyonje, R. (2019). Influence of Monitoring and Evaluation Communication on Performance of Microfinance Institutions Funding Entrepreneurial Projects. *International Journal of Recent Research in Commerce Economics and Management (IJRRCEM)*, 6(1), 53-63.

Project Management Institute. (2021). *A guide to the project management body of knowledge (PMBOK guide)* (7th ed.). Project Management Institute.

Rubia, W.M., & Kimaru, W.S. (2022). Influence Of Monitoring and Evaluation Practices on Implementation of Road Construction Projects In Kiambu County, Kenya. *International Journal of Scientific and Research Publications*, 12(10), 692-696. https://doi.org/10.29322/IJSRP.12.10.2022.p13085

Wanjohi, N.M., & Musembi, A. (2024). Project monitoring and evaluation practices and performance of road infrastructural projects in Kiambu County, Kenya. *Int Journal of Social Sciences Management and Entrepreneurship 8*(3), 865–877.

Zulch, B. (2020). Communication management in construction projects: A conceptual framework. *Acta Structilia*, 27(1), 1–25. https://doi.org/10.18820/24150487/as27i1.1