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A Framework for Effective Stakeholder Management for County Government-Funded Construction Projects: A Case of Machakos County

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Abstract Stakeholder management is a pivotal aspect of construction projects funded by county governments in Kenya. In Kenya, public infrastructure projects often face delays and budget overruns. Therefore, robust stakeholder management practices are essential for ensuring successful project implementation and better stakeholder management performance. This study aimed to develop a framework for effective stakeholder management for County Government-funded construction projects in Kenya. The specific objectives of this study were: to determine the current state of stakeholder management performance in County Government-funded construction projects, to establish the existing stakeholder management practices in County Government-funded construction projects, and to establish the influence of stakeholder management practices on stakeholder management performance in County Government-funded construction projects. The study adopted a survey research design. The data was collected using questionnaires and measured using a 5-point Likert scale. Simple stratified sampling was used to identify the 254 respondents. The respondents included: contractors, project consultants, end users, ward development officers, PMC representatives, ward administrators, and village administrators. The collected data were coded and entered into Statistical Packages for Social Scientists (SPSS) and analysed using descriptive statistics. The overall performance level for stakeholder management at (mean = 2.25) reflected a need for substantial improvement across all dimensions of stakeholder management. The overall mean for stakeholder identification was 2.35, which showed that it had moderate effectiveness, but it needed improvements. The overall mean for planning stakeholder engagement was 2.44. Weaknesses were noted in the implementation and adherence to the engagement plan. The overall low mean score (2.45) of managing stakeholder engagement highlighted the need for the county to enhance communication strategies, feedback mechanisms, and regular stakeholder interactions. The findings of monitoring stakeholder engagement with an overall mean score of 2.26, underscored a lack of robust mechanisms for effectively addressing stakeholder dynamics and fostering meaningful collaboration. Pearson's correlation analysis was used to examine the relationship between stakeholder management practices (independent variables) and stakeholder management performance (dependent variable) in construction projects funded by the county. All the independent and the dependent variables had a positive, significant linear relationship. This signified that the independent variables and the dependent variable both increase in case of a unit increase in the independent variable. Multiple regression analysis was used to determine if a relationship existed between the dependent and independent variables. This research established that stakeholder management practices are statistically significant in explaining the stakeholder management performance in construction projects funded by the County in Machakos County. The study developed a framework for effective stakeholder management for construction projects funded by the county governments. Therefore, improving stakeholder management practices is crucial for enhancing efficiency and successfully implementing county-funded construction projects. Establishing structured feedback mechanisms will promote continuous stakeholder engagement. This will ultimately improve overall stakeholder management performance.

Keywords Stakeholder Management, Stakeholder Management Performance, Stakeholders, County Government, Framework, Construction Projects

1. Introduction

County Government-funded projects perform a substantial role in strengthening citizens' livelihoods by contributing immensely towards developing the counties' economy. These projects focus on addressing development challenges that the county governments must address to benefit all Kenyans in all regions. The CGFPs in Machakos County are founded on

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expansive strategic objectives which include the improvement of production in agriculture, promotion of common economic growth, improvement of good governance and the development of basic infrastructure geared towards effective service delivery [1].

County Government-funded construction projects in Machakos County are characterised by poor project stakeholder management performance. The County Integrated Development Plan (2018-2022) of Machakos County highlighted that stakeholders were poorly involved during the planning and implementation of projects. This led to poor adoption of these projects, lack of community ownership, delayed implementation, vandalism and theft of project materials during the implementation of the 2013- 2017 County Integrated Development Plan [1].

Auditor-general report regarding the County Executive of Machakos financial statements for 2021/2022 showed that several CGFCPs had stalled. These projects include the construction of the Mumbuni Earth Dam, the Construction of 11 Storey Thin and Tall Building, the Proposed Construction of Commercial Development Centre, Construction of Community Recreation Centre, Construction of Public Area Facility, Construction of Staff Houses in Matuu Sub-county, Construction of Executive Washrooms at Matuu County Office and Construction of 12 Storey Thin and Tall Building. These projects experienced time overruns and cost overruns. Additionally, there was no value of money in the amount spent on all the abandoned projects and the public did not accrue the envisioned benefits due to the failure to complete the projects [2].

Stakeholders permeate every phase of every project. Stakeholders are key individuals who have an interest in projects. They are those individuals or groups that could be impacted or likely to be impacted by the outcomes of the projects being executed [3]. The stakeholders involved in CGFCPs include: contractors, sub-contractors, project team members, local community, ward administrators, regulatory authorities, relevant county department officials, village administrators, among others. To manage these stakeholders effectively, project managers should be competent in all areas of stakeholder management.

Construction projects involve many stakeholders from various fields. Efficient stakeholder management is one of the vital success factors for construction projects [4]. If stakeholders are not managed effectively, the project's chance of success will decrease due to disagreements. Ineffective stakeholder management can also lead to dissatisfaction with project outcomes and a negative impact on the budget and schedule. In addition, the future work between the project team and internal stakeholders may become more difficult and the community, as external stakeholders, may have a negative reaction to the project [5]. Therefore, the main objective of this study was to develop a framework for effective stakeholder management for county government-funded construction projects in Kenya.

2. Literature Review

The Concept of Project Stakeholder Management

The concept of stakeholders was first introduced into the mainstream general management discourse by Freeman. Cleland introduced a stakeholder perspective into the project management paradigm. Since then, the role of stakeholder management as an important part of the project management process has been strengthened. Although the importance of stakeholder management has been recognized, project research still lacks theoretical knowledge and empirical evidence of various project stakeholder-related phenomena [6].

Stakeholder management has been defined by various authors. [7] Views project stakeholder management as a process that involves the management functions of planning, organizing, motivating, directing and controlling the resources used. Stakeholder management is the efficient management of relationships among project stakeholders [8]. [9] Opine that stakeholder management involves managing activities related to project stakeholders, encouraging proactive project managers to mitigate the negative impact of stakeholder activities and ensure stakeholders support project goals.

The stakeholder management process is considered necessary for managing relationships due to the diverse parties involved in a project and their possible conflicting interests which affect or may be affected by the project outcome [10]. It entails processes and techniques employed to manage relationships between project organization and stakeholders effectively, aiming to enhance the positive impacts and reduce negative influences of the stakeholder influence on project goals and objectives.

Definition and Classification of Stakeholders

Every project has stakeholders who are affected by the project or can have a positive or negative impact on the project. Project stakeholders can be internal or external to the project, they may be actively involved, passively involved, or unaware of the project. Internal stakeholders include the sponsor, resource manager, project management office, portfolio steering committee, program manager, project managers of other projects, and team members. External stakeholders include customers, end users, suppliers, shareholders, regulatory bodies, and competitors [3]. Various researchers have defined who the internal and external stakeholders in projects are. Internal stakeholders have a formal, official, or contractual relationship with the organization or are directly involved in an organization's decision-making processes [11]. Internal stakeholders include clients, sponsors, contractors, and suppliers. External stakeholders are not formal members of the project coalition, but they can influence or be affected by the project. This group is often referred to as non-business stakeholders or secondary stakeholders [12]. [13] Point out that the stakeholder perspective emphasizes the effective management of relationships between a project and its key stakeholders to ensure the project's success. Stakeholders can be classified based on their involvement in

the project, the nature of their relationship with the project, their claims and positions towards the project, their roles in the project and the degree to which their behaviours can be expected.

Stakeholders in construction projects have interests and needs related to the project, which should be understood during the construction process. The primary stakeholders in construction projects include engineers, builders, architects, contractors, owners, suppliers, and subcontractors [14]. Project managers and their teams must ensure stakeholders are correctly identified and engaged to deliver the project successfully.

Stakeholder Management in Construction Projects

Every construction project is unique; some are small and simple, while others are large and complex. Construction projects are unique and involve many processes, systems, and internal and external stakeholders that can directly or indirectly affect the project's inputs and outputs.

Stakeholder management tools are crucial in supporting decision-making, sharing information, reducing the level of subjectivity and maintaining transparency for stakeholders. They also facilitate understanding stakeholders' expectations and monitor whether the process is carried out effectively [15]. The different stakeholder management tools vary from power-interest matrix; power-impact grid; influence-interest grid; impact-probability matrix; stakeholder impact index; vested interest index; relationship matrices; stakeholder ethical responsibility matrix; to stakeholder-commitment matrix. [6] Consider stakeholder management as a Critical Success Factor (CSF). CSFs are the activities and practices that should be addressed to ensure the effective management of stakeholders in the construction industry.

Stakeholder Management Frameworks

[16] Propose a framework for successful stakeholder management in construction projects by grouping critical success factors into five categories: precondition factors, information inputs, stakeholder estimation, decision making and sustainable support. This framework is represented in Figure 2.1. This framework does not address the need to classify the stakeholders in the factors that formed the basis for the framework. This study overlooked concerns related to stakeholder management during the inception and design stages, as it did not gather sufficient information from design professionals. The latter phases of a project may be negatively affected if stakeholders are not adequately involved during its early stages.

3. Research Methods

This research adopted a quantitative research strategy. This research strategy is suitable for this study because it facilitates quick data collection, and the results are analysed using unbiased statistics. This research adopted a survey research design since data was collected at a single point in time. The researcher opted for this research design due to its versatility in exploring a wide range of topics. The research was conducted in Machakos County. Data was collected using questionnaires. A five-point Likert scale was adopted for the quantitative data.

This study adopted content validity and face validity on the research instrument. To achieve content validity, the questionnaires were formulated according to the conceptual framework of this study. This ensured that the questionnaires measured only items related to the study variables. To achieve face validity, the researcher sought opinions from experts in the field to evaluate whether the research instrument appears to measure the intended construct. These experts were the supervisors of this research, who are leading academicians in construction project management and have a strong background in research methodology. Based on their feedback, it was confirmed that the instrument effectively measured what it was designed to, ensuring its validity.

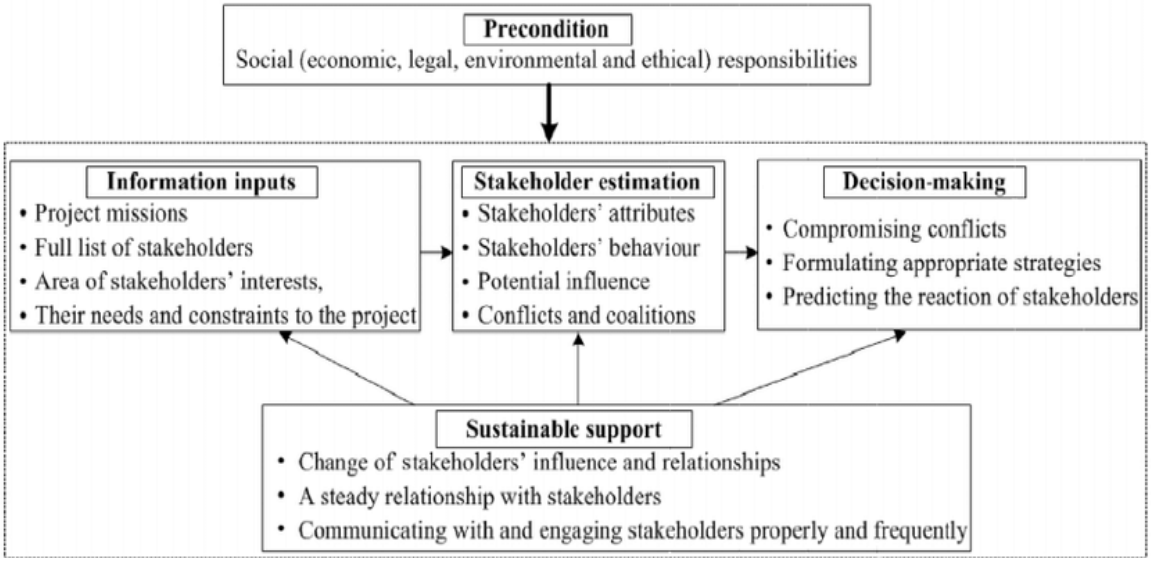

Figure 2.1. Framework for successful stakeholder management in construction

Table 3.1. Normality test

	Skewness			Kurtosis		
	Stat.	Std. Err.	z-score	Stat.	Std. Err.	z-score
Stakeholder management performance	-.035	.193	-1.81	-.135	.384	-0.35
Stakeholder identification	-.249	.193	-1.29	-.374	.384	-0.97
Planning stakeholder engagement	.299	.193	1.55	-.632	.384	-1.65
Managing stakeholder engagement	.198	.193	1.02	-.52	.384	-1.36
Monitoring stakeholder engagement	.275	.193	1.42	-.545	.384	-1.41

Source: (Researcher, 2024)

Reliability is a measure of the degree to which a research instrument yields consistent results or data on repeated trials [17]. To ensure internal reliability, expert reviews were conducted with the supervisors to ensure that all items were conceptually aligned and relevant to the construct of stakeholder management. The internal reliability of the instrument was tested using Cronbach's alpha. The reliability test revealed that all the variables had good Cronbach's alpha coefficients ranging from 0.796 to 0.922. This implied that all the variables in this research had a high internal consistency. Therefore, the data collected was reliable.

A total of 254 questionnaires were distributed to respondents. The respondents for this study included contractors, project consultants, ward development officers, end users, ward administrators, and village administrators. Out of the 254 questionnaires administered, 158 were filled out, collected, and returned. The overall response rate was 62.20%. According to [17], a response rate of 50% is adequate; 60% is a good response, while 70% is very good. Therefore, the response rate was acceptable and credible.

The collected quantitative data were cleaned, coded, and entered into Statistical Package for Social Scientists (SPSS) version 23. Descriptive statistics were used to analyse data, which were then presented in tables and graphs.

Inferential statistics included correlation and multiple regression analysis. Pearson's Correlation (r) was used to reveal the strength of the relationship. Multiple linear regression helped to determine the relationship between stakeholder management practices and stakeholder management performance of County Government-funded construction projects in Machakos County. The researcher chose to use multiple linear regression because the study included multiple independent variables used to determine the outcome of a single dependent variable.

Normality test for the variables was checked using Kurtosis and Skewness. For inferential analysis to be conducted the variables should have a normal distribution. Since the data was not normally distributed, it had to be transformed. The Z score values of all the variables were now between -1.96 and +1.96 as seen in Table 3.1. Therefore, the transformed data was normally distributed.

Multicollinearity occurs when two or more predictor variables in a regression model are highly correlated. The researcher conducted multicollinearity test using the Variance Inflation Factor (VIF) method. A VIF value below 5 is generally considered acceptable, while values above 10 are seen as problematic [18].

Table 3.2. Multicollinearity test

Model	Collinearity Statistics	
	Tolerance	VIF
Stakeholder identification	.252	3.967
Planning stakeholder engagement	.215	4.655
Managing stakeholder engagement	.228	4.380
Monitoring stakeholder engagement	.263	3.802
a. Dependent Variable: stakeholder management performance		

Source: (Researcher, 2024)

The results of the multicollinearity test conducted are as indicated in Table 3.2. The VIF values: stakeholder identification (3.967); planning stakeholder engagement (4.655); managing stakeholder engagement (4.380); and monitoring stakeholder engagement (3.802). Tolerance values; stakeholder identification (2.52); planning stakeholder engagement (2.15); managing stakeholder engagement (2.28); and monitoring stakeholder engagement (2.63). From the findings, there was no severe multicollinearity since the VIF values were less than 5, and tolerance values were greater than 0.2.

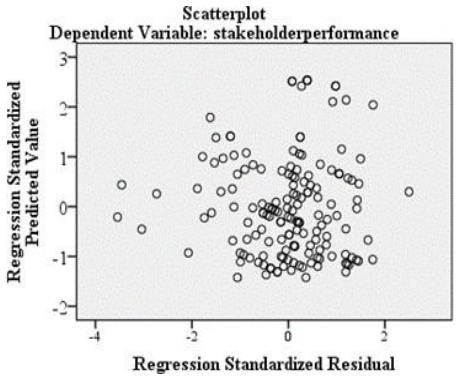

Figure 3.1. Homoscedasticity and Linearity Scatterplot

The researcher used a scatter plot to assess the homoscedasticity and linearity assumption. The scatter plot revealed that stakeholder management performance of CGFCPs is evenly impacted by stakeholder management practices. Figure 3.1 shows the scatter plot. The homoscedasticity assumption requires that the variance of the residuals remains constant across all levels of predicted values. This means that the spread of residuals should be similar throughout the range of the predicted values. Therefore, assumption of homoscedasticity is also met.

Table 3.3. Current State of Stakeholder Management Performance

Indicator	Statement	Mean	SD	Rank
Stakeholder diversity	The county has appropriately addressed the diverse needs and concerns of all relevant stakeholders	2.04	.77	7
	The county actively sought input from a diverse range of stakeholders.	2.28	.87	4
Stakeholder inclusivity	Stakeholders from different demographics, backgrounds, and perspectives were included in the stakeholder management process.	2.28	.86	5
	There was adequate representation of marginalized or underrepresented groups as stakeholders.	2.23	.87	6
	Efforts were made to remove barriers to participation for stakeholders, ensuring equal opportunity for input.	2.58	1.00	1
Stakeholder satisfaction	There were accommodations made to ensure that all stakeholders could participate meaningfully.	2.41	.93	3
	There were feedback mechanisms to gauge stakeholder satisfaction and make improvements accordingly.	1.99	.94	8
	Efforts were made to engage stakeholders in meaningful dialogue and collaboration.	2.49	1.01	2
	The County consistently met stakeholders' expectations for engagement and involvement.	1.92	.90	9
	Overall stakeholder management performance level	**2.25**	**0.98**	

Source: (Researcher, 2024)

To meet the linearity assumption, a linear relationship is expected between the independent variables and the dependent variable. In the scatterplot in Figure 3.1, the residuals are randomly scattered around zero, with no visible pattern. Additionally, the residuals display relatively uniform dispersion, with no visible widening or narrowing at different levels of predicted values. This indicates that the linearity assumption is met.

The development of the proposed framework followed three main steps: Literature review, Study of previous frameworks and multiple regression analysis. To develop the framework, the researcher had to be aware of the current state of stakeholder management performance and how the existing stakeholder management practices were being performed at the County.

The current state of stakeholder management performance in CGFCPs in Machakos County

The study's findings in Table 3.3 revealed systemic weaknesses in stakeholder diversity, stakeholder inclusivity, and stakeholder satisfaction in CGFCPs in Machakos County. Stakeholder inclusivity performed the best overall. It included the highest scoring indicator. On the other hand, stakeholder satisfaction had the lowest results. It included the two lowest-scoring indicators. These results suggested that although inclusivity efforts were somewhat effective, the county struggled to meet stakeholder expectations and provide meaningful feedback mechanisms. These findings are consistent with [19] observations which highlighted that failure to engage stakeholders effectively often stems from inadequate feedback processes and unmet expectations.

Table 3.3 indicates overall performance level for stakeholder management, with a mean score of 2.25. This showed a need for substantial improvement in all aspects of stakeholder management. The low rating is attributed to inadequate representation of diverse stakeholders, insufficient mechanisms for collecting and responding to feedback, and a failure to consistently meet stakeholder expectations. To enhance stakeholder management, the county should implement structured feedback mechanisms, improve representation of marginalized groups, and establish continuous engagement strategies to foster meaningful participation. Additionally, to adequately meet the expectation of stakeholders, the county should clearly define stakeholder roles and incorporate their input into decision-making processes. These improvements would not only enhance inclusivity and responsiveness but also build stakeholder trust and long-term collaboration.

The Existing Stakeholder Management Practices in CGCFPs in Machakos County

This independent variable had four indicators: stakeholder identification, planning stakeholder engagement, managing stakeholder engagement and monitoring stakeholder engagement.

Stakeholder Identification in CGCFPs in Machakos County

The findings in Table 3.4 show that respondents were in moderate disagreement with the current state of stakeholder identification as a stakeholder management practice.

The highest mean score of 2.58 for the statement "All relevant stakeholders were identified systematically" suggested some level of awareness of the structured approach to stakeholder identification, ranking first among the indicators. This finding aligns with the work of [20], who emphasized that systematic stakeholder identification is fundamental to effective stakeholder management to ensure that all relevant parties are considered early in the project lifecycle. The

second highest score of 2.47 for categorizing stakeholders based on their level of influence and interest ranked second, reflecting a moderate agreement with the effectiveness of this practice. This approach is supported by stakeholder theory, which posits that understanding stakeholders' power dynamics is crucial for prioritizing engagement efforts.

In contrast, the statement regarding the allocation of sufficient resources and expertise for thorough stakeholder identification received a significantly low score of 1.76, ranking it sixth. This finding highlighted a significant gap in the allocation of resources required for effective stakeholder engagement [21]. Insufficient resources lead to inadequate stakeholder mapping and engagement strategies. The clarity of stakeholder classification ranked third with a score of 2.42, indicating that there was some agreement on its effectiveness, but improvements are needed to enhance intuitiveness. The flexibility of classification ranked fifth with a low score of 2.35. This indicated that while there was some capacity to adapt classifications as projects evolved, this flexibility was not fully realized in practice.

The classification's ability to adequately represent stakeholders' interests and concerns ranked fourth with a score of 2.37. This finding suggested that while there was some acknowledgment of representation, there are still gaps that need to be addressed to ensure that all voices are heard and considered throughout the project lifecycle.

Planning Stakeholder Engagement in CGFCPs in Machakos County

The findings in Table 3.5 showed that respondents were in moderate disagreement with the current state of planning stakeholder engagement in construction projects funded by the County government.

The statement *"The engagement plan included identification and assessment of stakeholder requirements"*, with a mean score of 2.63, was the top ranked indicator. This suggested that the county made a good effort to understand and assess the needs and expectations of stakeholders at the planning stage, which is a critical component emphasized in Freeman's Stakeholder Theory.

Similarly, "*Stakeholders were actively involved at every stage of the project*", ranked second with a mean score of 2.58. This suggested that stakeholders were engaged in various stages of the project, but not to the level of complete satisfaction. Continuous and proactive involvement of stakeholders is essential for building trust and ensuring that projects meet stakeholder expectations, as noted by [19].

Table 3.4. Stakeholder Identification

Indicators of stakeholder identification	Mean	SD	Rank
All relevant stakeholders were identified systematically.	2.58	.966	1
All relevant stakeholders were categorized based on their level of influence and interest.	2.47	.850	2
The county allocated sufficient resources and expertise to conduct thorough stakeholder identification.	1.76	.870	6
Classification of stakeholders involved was clear and intuitive.	2.42	1.01	3
The current classification of stakeholders was flexible enough to accommodate changes or updates as the project progressed.	2.35	.821	5
The classification of stakeholders adequately represented their respective interests and concerns.	2.37	.833	4
Stakeholder identification	**2.35**	**.892**	

Source: (Researcher, 2024)

Table 3.5. Planning Stakeholder Engagement

Indicators of planning stakeholder engagement	Mean	Std. Deviation	Rank
The county provided a comprehensive stakeholder engagement plan.	2.49	.804	3
Regular monitoring and updates were carried out on the stakeholder engagement plan.	2.40	.773	4
Stakeholder engagement plan was effectively implemented.	2.36	.759	5
The engagement plan included identification and assessment of stakeholder requirements.	2.63	.794	1
Stakeholders were actively involved at every stage of the project.	2.58	.869	2
The county established competent stakeholder engagement strategies.	2.42	.742	7
Stakeholders were well informed about the stakeholder engagement plan.	2.44	.761	6
The county adhered to the planned stakeholder engagement strategy.	2.25	.842	8
Planning Stakeholder engagement	**2.44**	**.793**	

Source: (Researcher, 2024)

"The county provided a comprehensive stakeholder engagement plan" ranked third with a mean score of 2.49, indicating that the plan was somewhat comprehensive. This is supported by the work of [22] who stressed the importance of having a well-rounded and detailed engagement plan that addresses all relevant stakeholder concerns and expectations. Similarly, the effective implementation of the engagement plan received a low score (2.36, ranked fifth), suggesting that although a plan was in place, its execution did not fully meet stakeholders' expectations. [23] and [24] argued that even a strong plan can falter if not implemented effectively, which appears to be the case here.

"Regular monitoring and updates were carried out on the stakeholder engagement plan" ranked fourth with a score of 2.40. This indicated that some monitoring was carried out, but it was inconsistent. [25] Emphasized the importance of regular updates and monitoring to maintain a dynamic and responsive engagement process.

"Stakeholders were well informed about the stakeholder engagement plan" had a mean score of 2.44 (6^{th}). Although stakeholders were generally aware of the plan, this score indicated that the communication could have been more transparent and consistent. Effective communication is essential for building trust and managing expectations, as highlighted by [26].

Finally, adherence to the planned engagement strategy was ranked the lowest, with a mean score of 2.25. This finding suggested that the county struggled to stick to the initial engagement strategy. As [24] notes, deviation from a well-crafted engagement plan can erode stakeholder trust.

Managing Stakeholder Engagement in CGFCPs in Machakos County

Table 3.6 shows that respondents were in moderate disagreement with the current state of managing stakeholder engagement in CGFCPs.

Table 3.6. Managing Stakeholder Management

Indicator	Mean	SD	Rank
All relevant stakeholders of the projects met regularly.	2.23	.74	7
There were adequate channels for stakeholders to raise their concerns and feedback. regarding the project	2.28	.78	6
Stakeholders had access to the progress project reports.	2.54	.86	3
Stakeholder engagement activities were documented and tracked for accountability.	2.64	.88	1
There was a designated individual or team responsible for managing stakeholder relationships.	2.61	1.09	2
There was transparency in communications with stakeholders.	2.40	.84	4
Managing stakeholder engagement	**2.45**	**.865**	

Source: (Researcher, 2024)

Table 3.7. Monitoring stakeholder engagement

Indicators of monitoring stakeholder engagement	Mean	SD	Rank
The county had effective mechanisms for resolving conflicts among stakeholders when they arose.	1.99	.87	7
Stakeholders were provided with transparent and accessible information regarding the project.	2.39	.96	2
Stakeholders were adequately consulted and involved in decision-making processes related to the project.	2.27	.94	5
The county was transparent in interactions with stakeholders.	2.34	.90	4
Inputs of various stakeholders were incorporated into the project outcomes.	2.40	.92	1
There was collaboration among all stakeholders involved in the project.	2.39	.90	3
Stakeholder concerns and issues were addressed.	2.06	.87	6
Monitoring Stakeholder engagement	**2.26**	**.911**	

Source: (Researcher, 2024)

Table 3.8. Coefficients of the Influence of Stakeholder Management Practices on Stakeholder Management Performance

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-.059	.052		-1.14	.258
Stakeholder identification	.171	.077	.166	2.22	.028
Planning stakeholder engagement	.125	.106	.102	1.18	.238
Managing stakeholder engagement	.240	.107	.187	2.25	.026
Monitoring stakeholder engagement	.480	.080	.468	6.02	.000

a. Dependent Variable: stakeholder management performance

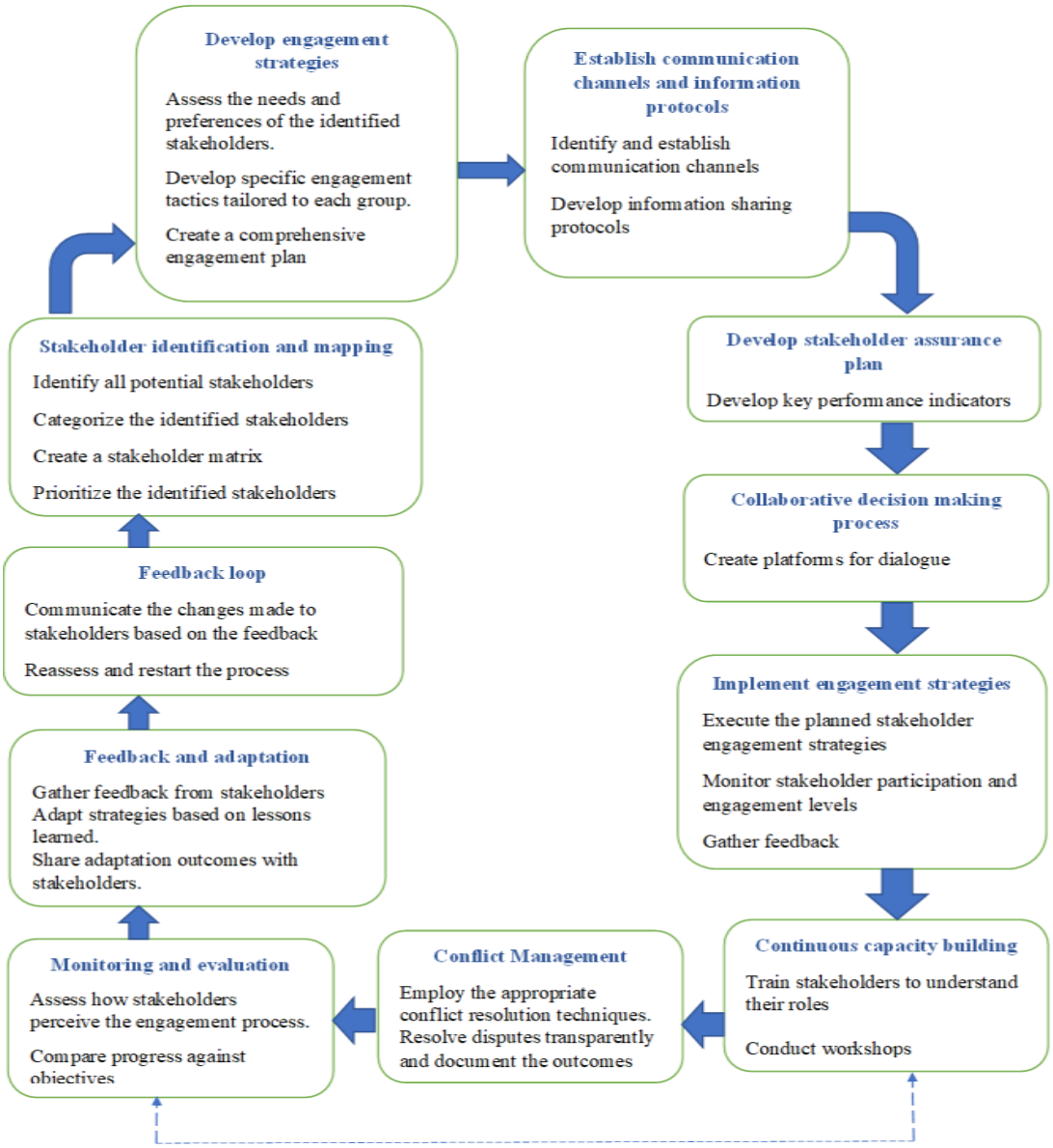

Figure 3.2. Proposed Stakeholder Management Framework

The lowest ranked indicator was the regularity of meetings among stakeholders with a mean score of 2.23. This suggested that collaborative decision-making was potentially impeded. Similarly, the availability of channels for stakeholders to voice their concerns or provide feedback scored poorly (mean: 2.28), highlighting a lack of effective mechanisms to capture and act on stakeholder input.

Stakeholders' access to progress reports achieved a higher mean of 2.54. While this indicates some level of communication, it also suggests that access to these reports was inconsistent. This finding is in agreement with a study of [14] who identified documentation and accountability as frequent areas of weakness in stakeholder management. The documentation and tracking of stakeholder engagement activities emerged as the top-ranked indicator with a mean of 2.64. This reflects an effort to maintain accountability, though the score still suggests room for improvement in systematic tracking.

The designation of individuals or teams responsible for managing stakeholder relationships had a mean of 2.61. Although this points to some level of role assignment, the high variability (standard deviation: 1.087) indicated inconsistency in implementation of this practice. This is echoed in a study by [27] who found that effective stakeholder management often hinges on having dedicated personnel responsible for engagement.

Transparency in communication scored moderately (mean: 2.40), suggesting that despite efforts to keep stakeholders informed, there were gaps in clarity and openness. This aligns with a study by [28] who highlighted that transparency and accountability as critical yet commonly underdeveloped aspects of stakeholder engagement.

Monitoring Stakeholder Engagement in CGFCPs in Machakos County

Table 3.7 shows that respondents were in moderate disagreement with the current state of monitoring stakeholder engagement in CGFCPs.

The findings on monitoring stakeholder engagement indicated substantial shortcomings in how stakeholders were involved, consulted, and engaged during project execution. The overall mean score of 2.26 (standard deviation: 0.911), indicated a lack of robust mechanisms to effectively address stakeholder dynamics and facilitate meaningful collaboration. The indicator with the lowest score (mean: 1.99, SD: 0.871) was the presence of mechanisms to resolve conflicts among stakeholders. This finding suggested a reactive rather than proactive approach to conflict management. Unresolved conflicts can derail projects by eroding trust and cooperation, as supported by [29], who emphasize the importance of conflict resolution for project alignment.

Stakeholders' access to transparent and accessible information received a mean score of 2.39 (SD: 0.969), indicating that efforts were made to achieve this, but their effectiveness varies. A lack of consistent communication can lead to disengagement, as documented by Savage et al. (1991), who noted that accessible information fosters stakeholder commitment. The mean score of 2.27 (SD: 0.949) for stakeholder consultation and involvement in decision making highlighted limited engagement opportunities. [31] Stress that participatory approaches in decision-making significantly enhance stakeholder satisfaction.

Transparency in interactions with stakeholders had a mean score of 2.34 (SD: 0.900). Although this indicates moderate efforts toward openness, it falls short of the ideal required for stakeholders to feel informed and involved. Collaboration among stakeholders received a mean score of 2.39 (SD: 0.901). A moderate level of collaboration reflects the absence of structured frameworks for fostering teamwork, which can result in fragmented efforts. [32] Noted that effective collaboration mechanisms are essential for harmonizing diverse stakeholder interests and achieving project coherence.

Another weakness was the ability to address stakeholder concerns, with a mean score of 2.06 (SD: 0.869). Failure to adequately address stakeholder concerns can lead to dissatisfaction and undermine the legitimacy of project processes. According to [33], addressing stakeholder concerns promptly is vital to maintaining positive relationships and minimizing resistance.

Multiple regression analysis was sought to determine how existing stakeholder management practices influenced the stakeholder management performance in construction projects funded by the County in Machakos County. There was a strong positive correlation between stakeholder management practices and stakeholder management performance, which was indicated by an R value of 0.849. The independent variables explained 71.4% of the changes in the level of stakeholder management performance of construction projects funded by the county. This research established that stakeholder management practices are statistically significant in explaining the stakeholder management performance in construction projects funded by the County in Machakos County.

Table 3.8 presents the regression coefficients for stakeholder management performance of construction projects funded by the County Government of Machakos County. The findings indicate that stakeholder management practices are statistically significant in explaining the stakeholder management performance in these projects. A one-unit increase in stakeholder identification leads to a 0.171 unit increase in stakeholder management performance. A one-unit increase in planning stakeholder engagement variable results in a 0.125 unit increase in stakeholder management performance.

Additionally, a one-unit increase in managing stakeholder engagement would cause a 0.240 unit increase in stakeholder management performance. A one-unit increase in monitoring stakeholder engagement would cause a 0.480 unit increase in stakeholder management performance.

Among the variables, monitoring stakeholder engagement has the highest Beta value of 0.468. This indicates that it has the strongest effect on stakeholder management performance. Planning stakeholder engagement variable has the lowest Beta value of 0.102. This indicates that it has the least strong effect on stakeholder management performance. Managing stakeholder engagement and stakeholder identification variables have Beta values of 0.187 and 0.166 respectively. This indicates that they have a moderate effect on stakeholder management performance.

Stakeholder identification is statistically significant with a p-value of 0.028. This suggests it positively influences stakeholder management performance. Planning stakeholder engagement is not statistically significant with a p-value of 0.238. This shows that it has unreliable influence on stakeholder performance. Managing stakeholder engagement is statistically significant with a p-value of 0.026. This indicates it has a positive effect on stakeholder management performance. Finally, monitoring stakeholder engagement is highly significant with a p-value of 0.000. This variable exhibits the strongest positive effect on stakeholder management performance.

A regression analysis was done to test the hypothesis. From the findings, stakeholder management practices had a statistically significant positive influence on stakeholder management performance. The p-values obtained were less than 0.05, we reject the null hypothesis, concluding that stakeholder management practices do significantly influence stakeholder management performance.

Formulating a framework for effective stakeholder management for CGCFCPs in Kenya

The framework was developed based on findings from the literature review, previous frameworks and key findings from the analysis of the collected data. From the literature review, it is evident that there was no standard framework for effective stakeholder management in CGFCPs. The previous framework by [16] was not exhaustive enough. It did not address the need to classify the stakeholders in the factors that formed the basis for the framework. It overlooked concerns related to stakeholder management during the inception and design stages, as it did not gather sufficient information from design professionals. The latter phases of a project may be negatively affected if stakeholders are not adequately involved during its early stages. Findings from the data collected revealed that the existing stakeholder

management practices did not meet the expectations of involved parties. Multiple regression analysis established that stakeholder management practices are statistically significant in explaining the stakeholder management performance in CGFCPs in Machakos County. The stages outlined in the proposed framework provide a clearer and detailed process of ensuring effective stakeholder management in CGFCPs.

The proposed framework enhances the existing stakeholder management framework by [16] by introducing a more structured and iterative approach. While the existing framework provides a wide conceptual structure that addresses stakeholder estimation, decision-making, and sustainable support, it lacks a clear procedural flow. The proposed framework establishes a systematic, step-by-step process that ensures continuous stakeholder engagement and improvement.

While the existing framework recognizes the necessity of stakeholder identification and understanding their influence, it lacks explicit guidelines for maintaining effective communication. The proposed framework addresses this gap by incorporating the development of communication channels and information-sharing protocols. The implementation of this approach will build stakeholder trust while reducing the likelihood of conflicts.

Furthermore, conflict management is included in the proposed framework as a step not specifically addressed in the existing framework. While the latter mentions conflicts and coalitions, it does not offer a structured approach to resolving disputes. The proposed framework, on the other hand, includes transparent conflict resolution mechanisms, ensuring that disagreements are handled constructively. This proactive approach will reduce the risk of stakeholder disengagement.

The addition of continuous capacity building is another major enhancement. The proposed framework acknowledges that stakeholder engagement is not a one-time event but an ongoing process. By incorporating training sessions and workshops, stakeholders gain a deeper understanding of their roles and responsibilities, ultimately improving collaboration and decision-making. This element is absent in the existing framework, making the proposed approach more effective in fostering long-term engagement.

4. Conclusions and Recommendations

This study concluded that:

- Stakeholder management performance can be evaluated in terms of stakeholder diversity, stakeholder inclusivity and stakeholder satisfaction.
- The level of stakeholder management performance is low in Machakos County.
- The current stakeholder management practices in construction projects funded by Machakos County do not adequately meet the needs and expectations of stakeholders.
- There is a need for a more comprehensive approach to stakeholder management in order to address the diverse interests and concerns of all relevant parties involved in construction projects funded by the County.
- Enhancing stakeholder management practices can significantly improve overall stakeholder management performance.

Practical Recommendations

This research strongly recommends that counties adopt the developed stakeholder management framework to standardise stakeholder management practices across all their construction projects. The framework offers a structured approach for identifying, engaging, and monitoring stakeholders. This framework should be integrated into county policies, making it a mandatory requirement for all construction projects funded by the county. To ensure proper adoption, training workshops should be conducted for county officials and project managers to equip them with the necessary knowledge and tools. A pilot phase should be implemented in selected projects to test the framework's effectiveness before rolling it out county-wide. Moreover, counties are urged to give stakeholder management training through well-organized awareness campaigns. Counties should first identify key stakeholder groups and develop tailored training materials. These materials should be disseminated through brochures, videos, community meetings, and social media platforms to be as widely distributed as possible. The counties should also set up communication channels, such as help desks and feedback mechanisms to encourage continuous stakeholder engagement. To measure the effectiveness of these campaigns, counties should conduct periodic surveys and make improvements based on feedback received. These efforts will cultivate a sense of ownership and shared accountability among stakeholders.

Finally, this study recommended that counties should set up mechanisms to conduct periodic performance assessment to continuously improve stakeholder management. Baseline performance assessments should be performed on ongoing and recently completed projects periodically to identify specific gaps and challenges. Counties should develop clear key performance indicators (KPIs) to evaluate the effectiveness of stakeholder management. Data should be collected through surveys and stakeholder interviews to analyse strengths and weaknesses in the management process. Findings should be reported in regular reports and necessary adjustments should be made to enhance approaches to stakeholder management. Institutionalizing these evaluations as a mandatory component of all county projects will promote continuous improvement.

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