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PROJECT MONITORING AND EVALUATION PRACTICES ON PERFORMANCE OF NATIONAL GOVERNMENT WATER AND SANITATION PROJECTS IN MACHAKOS COUNTY, KENYA

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ABSTRACT

The general objective of this study is to establish the influence of Project Monitoring and Evaluation practices on the performance of National Government water and sanitation projects in Machakos County, Kenya. Specifically, this study sought to assess the influence of Project Monitoring and Evaluation planning on the performance of National Government water and sanitation projects in Machakos County, Kenya, to assess the influence of Project Monitoring and Evaluation stakeholder involvement on the performance of National Government water and sanitation projects in Machakos County, Kenya. The target population comprised of 270 respondents comprising of 167 project employees, 64 national government representatives and 39 local authorities from Machakos County. The study's sample size was reached at using Krejcie and Morgan sample size determination table. The 159 respondents were chosen with the help of stratified random sampling technique. Primary data was used in this study. The study's primary data was obtained using semi-structured questionnaires. Quantitative and qualitative data was generated from the close-ended and open-ended questions, respectively. Qualitative data was analyzed on thematic basis and the findings provided in a narrative form. Inferential and descriptive statistics were employed for analysis of quantitative data with the assistance of Statistical Package for Social Sciences (SPSS version 28). The study results were presented through use of tables and figures. The study concludes that project monitoring and evaluation planning has a positive and significant influence on the performance of National Government water and sanitation projects in Machakos County, Kenya. In addition, the study concludes that stakeholder involvement has a positive and significant influence on the performance of National Government water and sanitation projects in Machakos County, Kenya. Based on the results, this study recommends proper planning practices and defining the roles and responsibilities of the project teams so as to enhance project performance.

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INTRODUCTION

Monitoring and evaluation of projects is not only important to projects but it is part and parcel of project design (PMBOK, 2016). Resources are scarce and they need to be properly and efficiently utilized. Monitoring and evaluation has been used globally over the last several years as an integral part of the project cycle and of good management practice (Olive, 2018). Olive observes that monitoring and evaluation is fundamental if the project goals, objectives and success are to be realized. Monitoring and evaluation provides answers to questions regarding the output, effects and impact of the project or program in the life of the target population. It establishes the necessary linkage among a set of activities undertaken in project planning and management: identification of problems, feasibility study, and design of the project/program, approval process, organization, implementation and supervision processes, completion, evaluation and follow-up. Information secured through monitoring and evaluation must be relevant, that is, geared to specific needs of program and project administrators; timely, that is, available and accessible at the time decisions are taken; and accurate, that is, reliable and empirically verifiable (Ndegwa, 2019).

According to Javier and Alonso (2017), more than 884 million people worldwide lack access to safe drinking water and an estimated 2.5 billion lack access to basic sanitation services. They further state that the World Health Organization estimates that 6.3% of all deaths worldwide are caused by limited access to safe drinking water and limited access to improved sanitation facilities and hygiene practices. Therefore, achieving universal access to the two still remains a crucial goal of the global development agenda. Hutton *et al.* (2017) states that water and sanitation interventions have demonstrated economic benefits ranging from $5 to $46 per $1 invested

Afroze and Khan (2018) noted that projects frequently fail to achieve the desired objectives as a result of a problems that could be categorized as managerial, precisely poor stakeholders' management organizational imperfect project design, interruptions in project identification as well as start-up, postponements in the course of project implementation, budget overruns and organization failure. As amongst leading countries, Australia uses monitoring systems (UNDP, 2015). Canadian government records attainment of project sustainability due to implementation of monitoring practices that makes it possible to monitor and track project progress towards goals. In the USA, implementation guidelines for infrastructural development projects underscore tracking and appraisal activities that allow for successful correction of project details and promote consistency in project progress assessment. The United States of America became particularly engaged in results-based analysis and assessment of project success management of policy and implementation programmes (Suskie, 2018).

According to United Nations (2014), 42% of people lack a basic water supply in Sub-Saharan Africa, and 72% lack basic sanitation. In addition, Africa is urbanizing rapidly and its urban population is expected to increase from 345 million in 2014 to 1.3 billion people by 2050. Urbanization in Africa is not accompanied by a sufficient rate of economic growth and therefore there is a large and growing infrastructure and financing gap. "Investments will have to be increased by a multiple of existing amounts to meet the Sustainable Development Goals for poverty reduction and water and sanitation in Sub-Saharan Africa" (OECD, 2018). According to Minyiri and Muchelule (2018), the amount of money dedicated to international development and aid is growing each year but it is unclear how much of a lasting positive impact it has on developing economies and societies. According to the UNDP, official development assistance spending is not enough to address the existing water and sanitation needs or to meet the Millennium Development Goals (Ruwa, & Chinyavu, 2016).

According to the Kenya National Water Services Strategy (2018 - 2022), sustainable water access levels in Kenya were estimated to be at 60%, while sanitation was estimated at 68%. According to Minyiri and Muchelule (2018), a closer look at Kenya's water projects leaves no doubt that performance is a challenge. This is evident in most of the water projects that have been undertaken over time with little impact despite the resources used. People lack proper services because systems fail, often because not enough resources are invested to appropriately build and maintain them, and also because of the stress that the fast growing population places on the existing infrastructure.

Statement of the Problem

The performance of water and sanitation projects funded by the National Government in Kenya has been a major concern, especially because of the huge benefits to be accrued by the beneficiaries and as well because of the huge investments made on these projects. Project managers always target project success. This involves finishing the project on time, within budget, meeting end product specifications, meeting customer needs and meeting management objectives (Minyiri, & Muchelule, 2018). According to the Kenya National Water Services Strategy (2018 - 2022), sustainable water access levels in Kenya were estimated to be at 60%, while sanitation was estimated at 68%. However, many water and sanitation projects in Kenya experience project time overrun, budget overrun and as well do not meet product specifications,

customer needs and management objectives (Ndegwa, 2019).

When projects are unsuccessful or delayed, this implies that targeted project benefits are only realized in part or never at all (Mutoro *et.al*., 2017). Delayed project completion has both high costs to society and incapacitating effects on the contracting parties (Ondari & Gekara, 2016). In particular, delayed completion of water and sanitation projects makes it difficult to achieve the required access to affordable, safe and adequate water supply services. Investments in water and sanitation projects in Kenya are colossal. For instance, the total development expenditure on water supplies (includes sewerage and waste management) and related services increased from KShs 20.5 billion in 2012/13 to KShs 65.2 billion in 2020/21 financial year (KNBS, 2022).

Project Monitoring and Evaluation is one of the key aspects of Project management. It is an extremely important management tool used to track progress and performance of a project and facilitate decision making (Sera & Beaudry, 2017). While some empirical studies have been undertaken in relation to the performance of water and sanitation projects in Kenya, none has specifically looked at the influence of Project Monitoring and Evaluation practices on the performance of National Government water and sanitation projects and in particular those in Machakos County. From my empirical review, I also hadn't found any study that linked/ combined the four independent variables under this study (planning, stakeholder involvement, funding and use of skilled human resources) with the performance of National Government water and sanitation projects. There is therefore inadequate empirical insight to inform interventions so as to enhance the performance of such projects. To fill the highlighted gaps, the current study sought to establish the influence of Project Monitoring and Evaluation practices on the performance of National Government water and sanitation projects in Machakos County, Kenya.

Objectives of the Study

The specific objectives that this study sought to achieve are: -

1. To assess the influence of Project Monitoring and Evaluation planning on the performance of National Government water and sanitation projects in Machakos County, Kenya.
2. To assess the influence of Project Monitoring and Evaluation stakeholder involvement on the performance of National Government water and sanitation projects in Machakos County, Kenya.

LITERATURE REVIEW

Theoretical Review

Theory of Constraints

The Theory of Constraints (TOC) developed by Goldratt (1990) is a "process aimed at identifying and removing constraints in organizational processes that are standing in the way of organizational goals". TOC judgment outlines major segments of the organizations' philosophy of continuous improvement. "It is applied to identify what factors limit an organization from achieving its goals, developing a solution to the problem and getting individuals in the process to invent the requisite changes". According to Blackstone (2010), TOC has been applied to "production planning, production control and project management practices" and it helps to identify the most critical bottlenecks in the process and systems, so that performance can be improved.

The underlying premise of the theory of constraints is that organizations can be measured and controlled by variations on three measures: throughput, operational expense, and inventory. Inventory is all the money that the system has invested in purchasing things which it intends to sell. Operational expense is all the money the system spends in order to turn inventory into throughput. Throughput is the rate at which the system generates money through sales. Before the goal itself can be reached, necessary conditions must first be met. These typically include safety, quality, legal obligations, etc. For most businesses, the goal itself is to make profit. However, for many organizations and non-profit businesses, making money is a necessary condition for pursuing the goal. Whether it is the goal or a necessary condition, understanding how to make sound financial decisions based on throughput, inventory, and operating expense is a critical requirement.

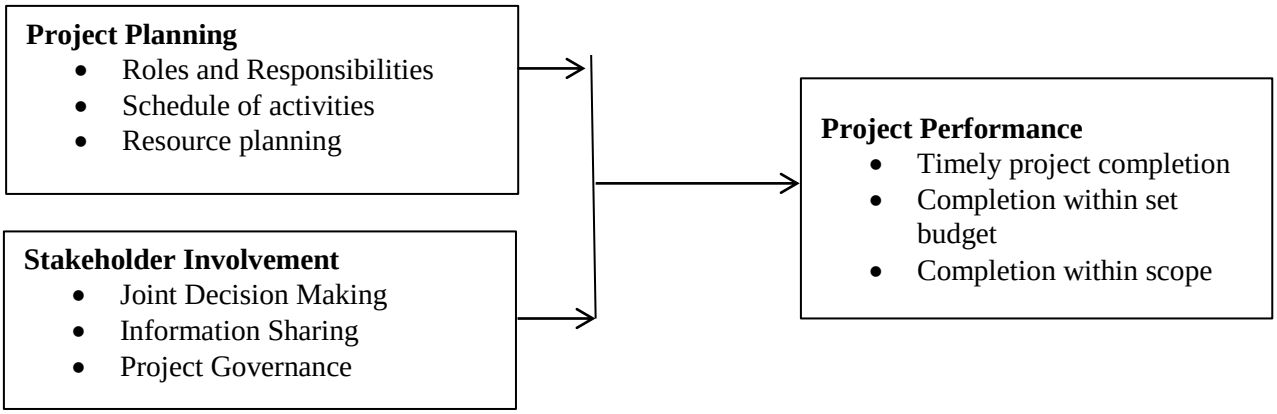
Typically, all projects are administered by highlighting on the tasks delivery that structure the project and apparently sensible beliefs that if these activities are completed in expected timelines, the projects would be delivered on set timeline too. But often, project management practices become a hectic exercise, ensuing in excessive pressures to meet tasks due dates and frequent re-planning of the projects. This theory provides insights on project performance; how it is influenced by various project management practices. This study will therefore use The Theory of Constraints to assess the influence of Project Monitoring and Evaluation planning on the performance of National Government water and sanitation projects in Machakos County, Kenya.

Stakeholders Theory

Stakeholder Theory was proposed by Freeman (1994). This theory underpins issues regarding the management of an organization and the ethical considerations that should be put in place to ensure that an organization achieves its objectives. Organizations ought to put into consideration the ideas and opinions of various individuals and groups as that might greatly influence the decision making and consequently the achievement of organizational goals (Gibson, 2019). Stakeholder theory puts across how organizations and its stakeholders interact and relate with each other to achieve organizational objectives (Filippone, 2016). According to (Bourne, 2018), stakeholders can come from within or outside the organization.

Stakeholder theory describes the composition of organizations as a collection of various individual groups with different interests. These interests, taken together, represent the will of the organization. As much as possible, business decisions should consider the interests of this collective group and advance overall cooperation (Yakubu, Ogunsanmi & Yakubu, 2019). This study will use stakeholders' theory to establish the influence of Project Monitoring and Evaluation stakeholder involvement on the performance of National Government water and sanitation projects in Machakos County, Kenya.

Conceptual Framework



Project Planning

Project planning is the process in which schedules, workforce, milestones, equipment, as well as budget estimates are specified otherwise estimating the time, cost, effort and employees' resources required in the execution of the project (Slevin & Pinto, 2016). It is the project resources systematic arrangement in the best way to attain objective of the project (Hore *et al*., 2017). It can also be described as one of the essential tools that stakeholders utilize to make sure that projects are successful (Naoum *et al.* 2016). Project planning entails role and responsibilities, schedules and resource planning. Novo, Landis and Haley (2017) indicates that one of the factors that contributes to the success of any project is to have well defined roles of each member or group of the project team, in order to clearly set expectations and understand responsibilities.

A project schedule is a timetable that shows the start and end date of all project tasks, how the tasks relate to each other and usually which team members or other resources are responsible for delivery. It is a dynamic document that is created during initial the planning stage. Buba and Tanko (2017) indicate that resource planning is a process of allocating tasks to team members based on their capacity, skill sets and the best fit for the job. Resource planning also involves the optimal allocation of financial resources to a project. It maximizes efficiency by helping teams to optimally manage their utilization rates, track capacity and monitor progress, to keep projects on budget and work on track.

Stakeholder Involvement

Stakeholders bring a wide range of skills, knowledge, and experiences to the project and if they are well managed they can help to make the project more successful (Bourne, 2016). The success or failure of many conventional development projects and programmes has been attributed to stakeholders' inclusion or lack of involvement in the project cycle management. Adan (2017) investigated the influence of stakeholders' role on performance of constituency development fund projects; a case of Isiolo North Constituency, Kenya. This study found that the role of project implementation by project managers and government officials led to better performance of projects. Maina (2016) observed that stakeholders' involvement is paramount in development projects. Even though minor decisions and emergency situations are generally not appropriate for stakeholder participation, a complex situation with far-reaching impacts warrants stakeholder involvement and when done proactively, rather than in response to a problem, helps to avoid problems in the future.

Organizations must put in mind individual matters and groups that may influence their activities when making

decisions and attaining the goals of the organization (Gibson, 2017). This can only be achieved through proper stakeholder mapping that shows all the relevant stakeholders, the role(s) they play, their interests and power/ influence. Stakeholders' interests are identified, analyzed and should be fulfilled. Stakeholders are either from within or outside the organization. For example, in a given project, clients, staff, suppliers, contractors, NGOs, government and the local community among many others comprise the stakeholders.

Project Performance

Torp *et al* (2017) carried out a study on effective implementation factors for project performance of large public projects in Norway. The objective was to ensure quality-at-entry of major government funded projects before funding is appropriated. The study involved 14 public projects. They identified project organization factors (suitability and adequacy of its structure such that authority and responsibility matches, how clear its relationship with its parent organization is, continuity and capacity in the organization and efficient decision making), number of projects (number and size of projects), project planning and control as critical success factors in such projects. Iyer *et al* (2016) carried out an empirical study on critical factors affecting schedule performance in projects where over 40% of the projects are facing time overrun. He identified seven factors with significant influence on the schedule outcome. Three factors: commitment of the project participants; owner's competence; and conflict among project participants were found to possess capability to enhance performance level while the remaining four factors; coordination among project participants; project managers' ignorance and lack of knowledge; hostile socioeconomic environment; and indecisiveness of project participants tend to retain the schedule performance at its existing level.

Chua *et al* (2019) carried out a survey on critical success factors for different project objectives. They found out that project characteristics and contractual arrangements cannot be left out of the success equation. In other words, project success is not determined exclusively by the project manager, monitoring, and control efforts. Chen et al (2007) studied critical success factors for projects in Taiwan and concluded that project owners, team-members, vendors and other related stakeholders who are directly or indirectly involved in the work all significantly influence the success of the projects. Nguyen (2015) did a study on project success factors in large projects in Vietnam and identified five critical success factors which were mostly human related: competent project manager, adequate funding, multidisciplinary/competent project team and commitment. Mansfield et al (2006) studied the causes of delay and cost overruns in projects in Nigeria. They concluded that poor contract management, financing and payment arrangements, resource shortages, inaccurate estimates and overall price escalation as the major factors. Karani (2017) carried a study focusing on factors impacting delivery reliability of projects. He identified the critical factors as cash flow problems, delayed payment to vendors, under estimation of project duration, unqualified staff on the project team, inadequate supervision of work and increase in scope of works. He concluded that these inputs and transformational process factors are attributable to the core stakeholders in any project.

Empirical Review

A study by Novo, Landis and Haley (2017) investigated on project planning and its role in the success of project management. The study was carried out to discover project managers' skills together with competency in leadership and how they can lead to project success. The study results revealed that planning process are directly related with the project manager's competency. Similarly, the project manager's leadership skills and project success are strongly correlated. A study by Buba and Tanko (2017) examined the influence of project planning on quality performance of construction projects. A total of 43 questionnaires were distributed to 3 key groups of respondents who included quantity surveyors, builders and architects who were project managers in Nigeria. It was established that the ability of a project manager in giving direction is the best leadership style and contributes to the best artistic quality of the project and also leads to better inter-functional relationships.

Yang, Huang and Wu (2016) carried out a study on the association between project planning and project success. The study used questionnaires to measure the leadership style of the project manager, the success of the project in regard to scope, budget, quality and client satisfaction. The study findings showed that better project management leadership leads to better project planning and team members' relationships, which influence project performance. The study also revealed that teamwork spirit has a statistical significance influence on project performance.

Stakeholder Involvement and Project Performance

Njogu (2016) carried out a study on the influence of stakeholders' involvement on project performance in Nema Automobile Emmission Control Project in Nairobi County, Kenya. This study adopted descriptive survey research design. The study population was 181 respondents who were managers, project managers, operation managers, supervisor and quality control officers. Stratified sampling was used adopted. The questionnaire was used to collect primary data. The study revealed that stakeholder involvement in project monitoring has a positive and significant influence in Automobile Emission Control project's

performance.Adan (2019) investigated the influence of stakeholders' role on performance of constituency development fund projects a case of Isiolo North Constituency, Kenya. Descriptive research design was utilized. The study targeted those who represented 155 CDF projects in Isiolo North Constituency. Semi structured questionnaire and interview schedules were used to collect data. Descriptive and inferential analysis was applied. This study found that the role of project implementation by project managers and government officials' role led to better performance of projects.

Nyandika and Ngugi (2017) examined the influence of stakeholders' participation on performance of road projects at Kenya National Highways Authority (KeNHA). The study used questionnaire and interview schedules to collect both quantitative and qualitative data. The study population was 251 respondents obtained from Prequalified Contractors, KeNHA. Top management and prequalified consultants were selected using a stratified random sampling method. The study established that the performance of roads projects is determined by project communication, feasibility study, holding seminars and conferences (stakeholders' engagement). Eyiah-Botwe, (2015) undertook 'An Evaluation of Stakeholder Management Role in GETFund Polytechnics Projects Delivery in Ghana'. The study focused on construction projects and stated that they are undertaken to achieve specific goals and their success is measured by the realization of the set goals including stakeholder satisfaction. The study opined that several stakeholders are involved in construction projects and depending on the nature, complexity, procurement methods adopted; stakeholders are involved at different stages of the project and undertake different roles and responsibilities.

RESEARCH METHODOLOGY

This study made use of a descriptive research design. There are a total of 167 employees involved in the projects 64 government representatives and 39 local authorities as at October 2021 (Ministry of Water and Sanitation, 2021). The unit of observation comprised of these 270 respondents from the 18 water and sanitation projects. They include the water and sanitation project employees, government representatives from the national government and local authorities from the Machakos county government and local water works development agencies. The study's sample size was reached at using Krejcie and Morgan sample size determination table (Krejcie and Morgan, 1970). Using this table, a representative sample of 159 respondents was obtained. The 159 respondents were chosen with the help of stratified random sampling technique. The study's primary data was obtained using semi-structured questionnaires. Quantitative and qualitative data was generated from the closed-ended and open-ended questions, respectively. Inferential and descriptive statistics were employed for analysis of quantitative data with the assistance of Statistical Package for Social Sciences (SPSS version 28). Descriptive statistics such as frequency distribution, mean (measure of dispersion), standard deviation, and percentages were used. Inferential data analysis was conducted by use of Pearson correlation coefficient and multiple regression analysis.

PRESENTATION, ANALYSIS AND INTERPRETATION OF DATA

Descriptive Statistics Analysis

Project Planning and the Performance of Water and Sanitation Projects

The first specific objective of the study was to assess the influence of project monitoring and evaluation planning on the performance of National Government water and sanitation projects in Machakos County, Kenya. The respondents were requested to indicate their level of agreement on various statements relating to Project Monitoring and Evaluation planning and the performance of National Government water and sanitation projects in Machakos County, Kenya. A 5 point Likert scale was used where 1 symbolized strongly disagree, 2 symbolized disagree, 3 symbolized neutral, 4 symbolized agree and 5 symbolized strongly agree. The results were as presented in Table 1.

Table 1: Project Planning and the Performance of Water and Sanitation Projects

	Mean	Std. Dev.
Formulating work plan puts into consideration all available alternatives and therefore facilitates timely completion of the project	3.99	0.786
Effective work plans are critical in ensuring that projects are completed within the set project budget	3.92	0.840
Assigning roles and responsibilities play a critical role in the timely completion of projects	3.83	0.904
Project schedule facilitates achievement of the project within scope	3.76	0.897
Resource planning plays a significant role in achievement of a project within budget	3.69	0.937
Project planning facilitates project performance and achievement of project deliverables	3.68	0.876
Aggregate	**3.73**	**0.873**

From the results, the respondents agreed that formulating work plan puts into consideration all available alternatives and therefore facilitates timely

completion of the project. This is supported by a mean of 3.99 (std. dv = 0.786). In addition, as shown by a mean of 3.92 (std. dv = 0.840), the respondents agreed that effective work plans are critical in ensuring that projects are completed within the set project budget. Further, the respondents agreed that assigning roles and responsibilities play a critical role in the timely completion of projects. This is shown by a mean of 3.83 (std. dv = 0.904). The respondents also agreed that project schedule facilitates achievement of the project within scope. This is shown by a mean of 3.76 (std. dv = 0.897). From the results, the respondents agreed that resource planning plays a significant role in achievement of a project within budget. This is supported by a mean of 3.69 (std. dv = 0.937). In addition, as shown by a mean of 3.68 (std. dv = 0.876), the respondents agreed that project planning facilitates project performance and achievement of project deliverables. The aggregate mean implies that majority of the respondents agree with the statements on project planning.

Stakeholder Involvement and the Performance of Water and Sanitation Projects

The second specific objective of the study was to assess the influence of Project Monitoring and Evaluation stakeholder involvement on the performance of National Government water and sanitation projects in Machakos County, Kenya. The respondents were requested to indicate their level of agreement on various statements relating to Project Monitoring and Evaluation stakeholder involvement and the performance of National Government water and sanitation projects in Machakos County, Kenya. A 5 point Likert scale was used where 1 symbolized strongly disagree, 2 symbolized disagree, 3 symbolized neutral, 4 symbolized agree and 5 symbolized strongly agree. The results were as presented in Table 2.

Table 2: Stakeholder Involvement and the Performance of Water and Sanitation Projects

	Mean	Std. Dev.
Stakeholder involvement facilitates the performance of National Government water and sanitation projects	3.99	0.865
joint decision making facilitates completion of projects within set timelines	3.81	0.945
Regular and timely information sharing facilitates achievement of the project deliverables	3.80	0.611
Timely allocation of funds plays a significant role on completion of projects within the set budget	3.76	0.908
Project governance facilitates achievement of project deliverables	3.76	0.776
Aggregate	**3.78**	**0.841**

From the results, the respondents agreed that stakeholder involvement facilitates the performance of National Government water and sanitation projects. This is supported by a mean of 3.99 (std. dv = 0.865). In addition, as shown by a mean of 3.81 (std. dv = 0.945), the respondents agreed that joint decision making facilitates completion of projects within set timelines. Further, the respondents agreed that regular and timely information sharing facilitates achievement of the project deliverables. This is shown by a mean of 3.80 (std. dv = 0.611). The respondents also agreed that timely allocation of funds plays a significant role on completion of projects within the set budget. This is shown by a mean of 3.76 (std. dv = 0.908). The respondents further agreed that project governance facilitates achievement of project deliverables. This is supported by a mean of 3.76 (std. dv = 0.776). The aggregate mean implies that majority of the respondents agree with the statements on stakeholder involvement.

Performance of National Government Water and Sanitation Projects

The respondents were requested to indicate their level of agreement on various statements relating to the performance of National Government water and sanitation projects in Machakos County, Kenya. A 5 point Likert scale was used where 1 symbolized strongly disagree, 2 symbolized disagree, 3 symbolized neutral, 4 symbolized agree and 5 symbolized strongly agree. The results were as presented in Table 3.

Table 3: Performance of National Government Water and Sanitation Projects

	Mean	Std. Dev.
The National Government water and sanitation projects are completed within the specified budget	2.39	1.404
Most of the National Government water and sanitation projects are associated with cost overrun	3.97	0.789
Am satisfied with the cost incurred in implementing National Government water and sanitation projects	1.97	1.267
There is always a surplus budget for projects costing more than estimated	3.88	0.563
The National Government water and sanitation projects are completed within the specified time	2.14	1.411
Some of the National Government water and sanitation projects take more time than estimated	3.81	0.882
The National Government water and sanitation projects are always implemented within the agreed scope	2.49	1.567
The National Government water and sanitation projects always achieve the expected deliverables	3.76	0.897
Aggregate	**3.84**	**0.818**

From the results, the respondents disagreed that the National Government water and sanitation projects are completed within the specified budget. This is supported by a mean of 2.39 (std. dv = 1.404). In addition, as shown by a mean of 3.97 (std. dv = 0.789), the respondents agreed that most of the National Government water and sanitation projects are associated with cost overrun. Further, the respondents disagreed that they are satisfied with the cost incurred in implementing National Government water and sanitation projects. This is shown by a mean of 1.97 (std. dv = 1.267). The respondents also agreed that there is always a surplus budget for projects costing more than estimated. This is shown by a mean of 3.88 (std. dv = 0.563). From the results, the respondents disagreed that the National Government water and sanitation projects are completed within the specified time. This is supported by a mean of 2.14 (std. dv = 1.411). In addition, as shown by a mean of 3.81 (std. dv = 0.882), the respondents agreed that some of the National Government water and sanitation projects take more time than estimated. The respondents also disagreed that the National Government water and sanitation projects are always implemented within the agreed scope. This is supported by a mean of 2.49 (std. dv = 1.567). In addition, as shown by a mean of 3.76 (std. dv = 0.897), the respondents agreed that National Government water and sanitation projects always achieve the expected deliverables.

Inferential Statistics

Correlation Analysis

Table 4: Correlation Coefficients

		Project Performance	Project Planning	Stakeholder Involvement
Project Performance	Pearson Correlation	1		
	Sig. (2-tailed)			
	N	146		
Project Planning	Pearson Correlation	.808**	1	
	Sig. (2-tailed)	.002		
	N	146	146	
Stakeholder Involvement	Pearson Correlation	.824**	.289	1
	Sig. (2-tailed)	.001	.061	
	N	146	146	146

From the results, there was a very strong correlation between project monitoring and evaluation planning and the performance of National Government water and sanitation projects in Machakos County, Kenya (r = 0.808, p value =0.002). It was significant since the p value 0.002 was less than 0.05 (significant level). The findings are in line with the findings of Buba and Tanko (2017) who indicated that there is a very strong relationship between project planning and project performance. Moreover, the results revealed that there is a very strong correlation between Project Monitoring and Evaluation stakeholder involvement and the performance of National Government water and sanitation projects in Machakos County, Kenya (r = 0.824, p value =0.001). It was significant since the p value 0.001 was less than 0.05 (significant level). The findings conform to the findings of Njogu (2016) that there is a very strong relationship between stakeholder involvement and project performance.

Regression Analysis

Multivariate regression analysis was used to assess the relationship between independent variables (Project Monitoring and Evaluation planning, Project Monitoring and Evaluation stakeholder involvement, Project Monitoring and Evaluation funding, skilled human resources in Project Monitoring and Evaluation) and the dependent variable (the performance of National Government water and sanitation projects in Machakos County, Kenya)

Table 5: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.935	.874	.875	.10582

The model summary was used to explain the variation in the dependent variable that could be explained by the independent variables. The r-squared for the relationship between the independent variables and the dependent variable was 0.874. This implied that 87.4% of the variation in the dependent variable (the performance of National Government water and sanitation projects in Machakos County, Kenya) could be explained by independent variables (Project Monitoring and Evaluation planning, Project Monitoring and Evaluation stakeholder involvement, Project Monitoring and Evaluation funding, skilled human resources in Project Monitoring and Evaluation).

Table 6: Analysis of Variance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	172.027	4	43.007	296.6	.002[b]
	Residual	20.568	142	.145		
	Total	198.595	146			

The ANOVA was used to determine whether the model was a good fit for the data. F calculated was 296.6 while the F critical was 2.451. The p value was 0.002. Since the F-calculated was greater than the F-critical and the p value 0.002 was less than 0.05, the model was considered as a good fit for the data. Therefore, the model can be used to predict the influence of Project Monitoring and Evaluation

planning, Project Monitoring and Evaluation stakeholder involvement, Project Monitoring and Evaluation funding, skilled human resources in Project Monitoring and Evaluation on the performance of National Government water and sanitation projects in Machakos County, Kenya.

Table 7: Regression Coefficients

Model	Unstandardized Coefficients		Standardized	t	Sig.
	B	Std. Error	Beta		
(Constant)	0.152	0.039		3.897	0.001
Project Planning	0.387	0.112	0.384	3.545	0.003
Stakeholder Involvement	0.486	0.107	0.482	4.121	0.001

a Dependent Variable: Project Performance

The regression model was as follows:

$Y = 0.152 + 0.387X_1 + 0.486X_2 + \varepsilon$

From the results, project monitoring and evaluation planning has a significant effect on the performance of National Government water and sanitation projects in Machakos County, Kenya $\beta_1=0.387$, p value= (0.003). The relationship was considered significant since the p value 0.003 was less than the significant level of 0.05. The findings are in line with the findings of Buba and Tanko (2017) who indicated that there is a very strong relationship between project planning and project performance.

The results also revealed that project monitoring and evaluation stakeholder involvement has significant effect on the performance of National Government water and sanitation projects in Machakos County, Kenya, $\beta1=0.486$, p value= 0.001). The relationship was considered significant since the p value 0.001 was less than the significant level of 0.05. The findings conform to the findings of Njogu (2016) that there is a very strong relationship between stakeholder involvement and project performance.

Conclusions

Planning of national Government water and sanitation projects in Machakos County, Kenya enables scheduling of monitoring and evaluation activities as well as allocation of human and financial resources required for effective monitoring and evaluation. During planning, the project leader designs the motoring and evaluation process as well the tools used for monitoring and evaluation. Planning defines the roles of the project team hence reducing role duplication and role conflict. The plan guides the project stakeholders and what to do during the various stages of a project.

Stakeholders are involved in monitoring and evaluation of National Government water and sanitation projects in Machakos County, Kenya. Stakeholder involvement in monitoring and evaluation activities shapes their opinion towards taking part in the baseline and evaluation surveys as well as other project related activities. If involved in the M&E process, the stakeholders may suggest some changes to the project scope that may enhance project success and sustainability. Stakeholder involvement promotes collaborative decision making, and information sharing which enhances project performance. Efficient management of stakeholders reduces chances of uncertainties posed by stakeholders on delivery and quality of projects

Recommendations

The project managers should plan adequately for the monitoring and evaluation activities and resources. They should also define the role of every project member to ensure that there is no role duplication which would lead to time wastage and poor project delivery. Management should take an active role in the design of M&E systems and provide timely support and direction to ensure that M&E operations are carried out correctly. A flexible design allows easier project changes aimed at meeting the desired quality. The monitoring and evaluations plans should be constantly evaluated, reviewed and adapted to the changing project context and environment.

The study recommends stakeholder involvement in decision making processes and proper information sharing to all stakeholders to enhance performance of National Government water and sanitation projects. There should be well coordinated communication between the project team and the stakeholders. The stakeholders should be notified early on any upcoming project activities so as to improve their participation in project activities.

Suggestions for Further Studies

This study focused on the influence of Project Monitoring and Evaluation practices on the performance of National Government water and sanitation projects in Machakos County, Kenya. Having been limited to National Government water and sanitation projects in Machakos County, Kenya, the findings of this study cannot be generalized to other projects in Machakos County. The study therefore suggests further studies on the influence of Project Monitoring and Evaluation practices on the performance of other projects in Machakos County, Kenya. A similar study should also be conducted in other counties in Kenya to assess if the findings differ or are similar with the current study, in relation to the performance of National Government water and sanitation projects.

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