INFLUENCE OF PROJECT MANAGEMENT PRACTICES ON PERFORMANCE OF CDF SCHOOL INFRASTRUCTURE DEVELOPMENT PROJECTS IN RUNYENJES CONSTITUENCY EMBU COUNTY, KENYA

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ABSTRACT

Project Management and the practice of the same have become indispensable to the modern-day project manager and they form the basis of much of what is achieved during the course of a project. The implementation of CDF projects has been marred by repeated accusation of abuse of funds, patronage due to excessive powers of the members of parliament, incomplete projects, and lack of technical capacity, poor planning and a litany of other weaknesses which threaten to undermine the very success of the projects. Lack of proper project management practice is a cause of many projects failing to achieve its set goals and objectives. The purpose of this study was to determine the influence of project management practices on performance of CDF school infrastructure development projects in Kenya. Specifically, the study sought to determine the influence of scope management, time management, stakeholder management, and risk management on the performance of CDF school infrastructure development projects in Runyenjes constituency Embu County. This study was guided by the following theories: stakeholder theory, Agency Theory and theory of project management. Descriptive survey research design was applied to undertake the study. The target population for this study was composed of the 97 constituency development fund projects in Runyenjes Constituency. The study's unit of analysis was the project management committees (PMCs). The sample size of 325 respondents was selected using stratified sampling method. Structured questionnaires were employed to get primary data. Data that was collected from the field was filtered, sorted and cleaned in line with research objectives. The data was then coded, and entered into and analyzed using statistics software (SPSS, Version 25.0). Quantitative data was analyzed using descriptive statistics. It involved calculation of percentages, frequencies, means and standard deviation. Multiple regression analysis helped analyze inferential data. The results were presented using tables.

Key words: Project Management Practices, Constituency Development Fund, School Infrastructure, Performance.

INTRODUCTION

Project management is the utilization of relevant methods, skills, experience and knowledge in order to realize the set objectives of a project within the agreed threshold. It is a collective effort of utilizing tools, skills and knowledge to meet the requirements of a project within a specified time. The achievement of the requirements of a project is propelled by the implementation of management techniques such as; monitoring and evaluation, planning, risk identification, closing phases of projects and execution (Das & Ngacho, 2017). Management process ensures that relevant techniques and applications are used to effectively deliver the desired outcome.

Globally, parliamentary involvement in grassroots projects and in community development has been growing in a diverse set of countries, including Kenya, Pakistan, India, Uganda, Bhutan, Jamaica and Papua New Guinea. One tool for this involvement is Constituency Development Funds (CDFs), which dedicate public money to benefit specific political subdivisions through allocations and/or spending decisions influenced by their representatives in the national parliament. Successful implementation of a project is usually difficult and complex and appears to be one of the most difficult aspects of a manager's job (Wamugu & Ogollah, 2017). It is a stage in project management that involves putting funds into real work. The implementation of CDF has been marred by repeated accusation of abuse of funds, patronage due to excessive powers of the members of parliament, incomplete projects, and lack of technical capacity, poor planning and a litany of other weaknesses which threaten to undermine the very success of the fund. Project managers need to systematically and quantitatively assess these critical variables, anticipating possible effects, and then choose appropriate methods of dealing with factors that affect project success (Biwott, Egesah & Ngeywo, 2017). The chances of a project succeeding according to Machoka (2017) can be increased if firms have an understanding of what the critical success factors are which may include scope management, time management, stakeholder's management, and risk management.

In the United States of America, according to Fono (2019) research findings; projects completion required the execution of planned activities by converting financial, human and physical resources into valuable product or service to involved students, schools and all stakeholders. Clear operational systems are essential otherwise completion will be hindered and the project's intended goals might fail to be achieved. Ways of tailoring a project has a significant impact on it being successful to completion or not. Multiple variables influencing completion rate include; participation of stakeholders, financial resources, system operation, culture of organization and leadership of organization making project completion to be complex.

In Russia, Malik (2019) reported that school developmental projects follow a cycle where they are designed, planned and implemented in order to enhance completion rate. Log frame matrix is used as specific planning tool to design, appraise, manage, monitor and evaluate the project life cycle from policy formulation to evaluation and finally completion. The log frame adopted presents project design objectives-related activities assumptions and pre-conditions at different hierarchical level matrix format often initiated in the context of unpredictable dynamic environment. Therefore, in Russia, many schools have been able to reduce challenges, risks constraints in the course of their execution through completion.

Multiple factors both external and internal influencing development projects which include poor project management, potential beneficiaries lacking opportunities to participate in project identification and design, poor linkages of project activities to project purpose and not paying attention to external environment during project design (Hussein, 2018). Socio-economic environment should be considered in order of schools' projects to succeed. In Zambia, CDF fund was introduced in 1995 to empower youths through youth development projects which are mooted and managed by the youth themselves. It has also been expanded to cover micro-

community development projects that are visibly beneficial and involve active participation of ordinary community members. According to Dupuy (2017), CDF emphases on achieving benefits at grassroots level, encouraging the involvement of local communities in both labour and supply of materials for projects.

In Tanzania, CDF was implemented to strengthen the functionality of the parliament in 2009. The fund was termed as the Constituencies Development Catalyst Fund (CDCF), and its role was to oversee the development of grass-root level projects. Since its introduction a total of 10 billion Tanzania shillings have been allocated to accelerate the functionality of the CDCF (Nyangarika & FSM, 2020). The funds are automatically allocated to MPs without approval form the executive.

The Kenyan Constituency Development Fund (CDF) was introduced in 2003. The fund was designed to support constituency-level grass-root development projects. It is aimed at achieving equitable distribution of development resources across regions and to control imbalances in regional development brought about by partisan politics. It targeted all constituency-level development projects, particularly those aiming to combat poverty at the grassroots (Khaemba & Sang, 2020). The CDF program has facilitated the putting up of new water, health and education facilities in all parts of the country, including remote areas that, until then, often received inadequate attention during funds allocation in national budgets (Rugiri & Njangiru, 2018).

According to the Somba (2017), partial target of project completion was achieved in the country. As such, the people were deprived of the expected benefits that they would have enjoyed had the project been completed according to schedule. According to Wairu and Gitonga (2018), delay in project completion is a critical problem in the construction industry and these delays have an adverse impact on project completion in terms of time, cost, quality and safety. Factors contributing to these delays have been identified as inadequate readiness for implementation causing delays in procurement of contractors, loan conditions affecting late release of funds, poor performance of contractors, low capacity of the implementing agencies, poor supervision of works and contract management in responding quickly in resolving contractual issues when they arise.

Statement of the Problem

Project Management and the practice of the same have become indispensable to the modern-day project manager and they form the basis of much of what is achieved during the course of a project. Lack of proper project management practice is a cause of many projects failing to achieve its set goals and objectives. According to KIPPRA (2016), the impact of CDF is felt most in the education sector with 38 % of the allocation, health sector with 11% of the allocation and water 8%. The bulk of the CDF funds have been used to expand classes, build new schools and dispensaries within constituencies (Arsovski, Markoski, Petrov, Stanisavljev & Zakin, 2018).

In Runyenjes Constituency, the review of the project implementation status report (2020) revealed that out of the 97 projects worth Kshs.69, 333,239 budgeted to be undertaken during the year under review, only fifty-one (51) projects worth Kshs. 19,250,000 were completed, twenty (20) projects worth Kshs.21, 215,592 had not started while twenty-seven (27) projects worth Kshs.28, 867,647 were on going. The residents of Runyenjes Constituency did not therefore get the expected services equivalent to Kshs.21, 215,592 being the budget for the unimplemented projects. Many CDF school infrastructure development projects in Runyenjes constituency have stalled and hence fail to serve the community at all in making their lives better (Kibebe & Mwirigi, 2014). Audit reports, project implementation status reports, as well as civil society groups' reports have continuously indicated a rise in the number of stalled school infrastructure development projects funded by the NG-CDF across the Subcounty. According to the Project Implementation Status (PIS) report, 42% of the CDF school infrastructure development projects in Runyenjes constituency earmarked in the 2016/2017, 2017/2018 and 2018/2019, financial years were not completed raising questions as to why the implementation was ineffective (The NG-CDF Board, 2019). The fund had been attributed to poor management of funds, incompetent constructors and poor project plans leading to untimely completion of CDF projects. Majority of CDF school infrastructure development projects had delayed in time, incurring cost overruns while not achieving their aspired objectives. Furthermore, this had brought allot of friction, unsatisfied key actors, on management and implementation of development projects. This indicates that performance rate of CDF school infrastructure development projects in Runyenjes Constituency is below average (Chepngetich, 2017).

Project management practices within CDF project have attracted little research. Musyoka (2020) focused on the influence of project management practices on completion of national government constituency development fund projects in Kenya. Similarly, Kithinji (2018) looked at the influence of project management practices on completion of constituency development fund projects in Kenya: a case of Kabete Constituency, Kiambu County; Nyingi (2017) analyzed the influence of project management practices on performance of constituency development fund projects in Kenya: a case of maternity hospitals in Kasarani Sub-county, Nairobi County; Ochola and Malenya (2020) established the influence of project management practices on timely completion of education projects funded by Bondo National Government Constituency Development Fund, Siaya County, Kenya. Despite the various studies related to the subject matter, they all do not focus on the performance of CDF school infrastructure development projects in Runyenjes constituency Embu County. This therefore leaves a gap that this study sought to fill. This study hence sought to determine the influence of project management practices on performance of CDF school infrastructure development projects in Kenya.

Objectives of the Study

This study sought to achieve the following objectives;

i. To determine the influence of scope management on performance of CDF school infrastructure development projects in Runyenjes constituency Embu County.

ii. To assess the influence of time management on performance of CDF school infrastructure development projects in Runyenjes constituency Embu County.
iii. To examine the influence of stakeholder management on performance of CDF school infrastructure development projects in Runyenjes constituency Embu County.
iv. To evaluate the influence of risk management on performance of CDF school infrastructure development projects in Runyenjes constituency Embu County.

Theoretical Review

The theoretical review is a framework based on an existing theory in a field of inquiry that is related and/or reflects the hypothesis of a study. This study was guided by the following theories: stakeholder theory, Agency Theory and theory of project management.

Stakeholders Theory

The stakeholder theory asserts that the importance of a firm focuses on various partner groups that were concerned with the daily operations of the organization. Hence, Stakeholder theory was proposed by Freeman (1994) and suggested that managers in an organization had an obligation of ensuring that there was cordial relationship between customers, business partners, suppliers and contractors. More so a stakeholder, who controlled them, could come up with value chain for customers, vendors, communities and financiers.

The illustration and representation of all the partner groups on projects was therefore paramount for effective and efficient performance of the organization. The stakeholders' model was very critical since it defined duties, rights and responsibilities of various stakeholders (Freeman, 2002). Stakeholder had larger share in the corporation and expected maximum returns. Stakeholder theory was therefore relevant to this study because when all key stakeholders are involved in Constituent Development Fund projects, there was good performance through ensuring proper management of the potential project management risks.

Agency Theory

Agency theory stems from an economic view of risk sharing (Eisenhardt, 1989), which occurs between two parties, principals and agents, yet each of the two parties may possess different approaches to solve the problem (Jensen & Meckling, 1976). The principal's appetite for risk sharing is of concern because the principal has bestowed certain responsibilities unto the agent to achieve likeminded goals. This cooperative behaviour is expected to yield the outcomes specified by the principal. Further, Agency theory addresses the relationship where in a contract 'one or more persons (the principal(s)) engage another person (the agent) to perform some service on their behalf which involves delegating some decision-making authority to the agent. This happens because of the separation of ownership and control, when the owner of the company or the board of directors (the 'principals') have to employ managers ('agents') to run the business and need to monitor their performance to ensure they act in the owner's interest (Lan & Heracleous, 2010). However, at the very heart of the agency problem lies the concern of self-interest behaviour that may encourage an overzealous agent to not act in the best interest of the principal, When the principal agent relationship is initiated, the agency costs are clear to the principal. However, when the agent takes action counter to the agreement, the principal

perceives that he or she has assumed more risks; hence, agency problem (shifts in risk sharing) emerges.

Agency theory is linked to this study on consideration that managers of CDF projects as agents of the public should foster citizens' interests by coming with up with viable project management practices such as; ensuring effective stakeholder involvement, project fund and risk management so as to guarantee good performance of CDF school infrastructure development projects.

The Theory of Project Management

This theory was proposed by Henry Gantt in the 1900s. The theory states that project management processes are divided into initiating, planning, execution, controlling, and closing processes. Let us concentrate on the core processes of planning, execution, and controlling. A central idea is that these processes form a closed loop: the planning processes provide a plan that is realized by the executing processes, and variances from the baseline or requests for change lead to corrections in execution or changes in further plans. There are two principles of project planning theory. That is the current state of the world, the desired goal state, and the allowable transformations of state that can be achieved by actions, a series of actions, and the plan can be deduced. The theory assumes that translating a plan into action is a simple process accomplished by following directions. It also assumes that the internal planning of a task is a matter of the person to whom the task has been assigned (Koskela & Howell, 2002).

Planning is done CDFC and implemented by PMC and project staff. The concept behind the execution theory is that, managerially, execution is about dispatching tasks to work stations. The principle behind this theory is that when, according to the plan, the time has arrived to begin task execution, it is authorized to start, in speech or writing. It assumes that, the inputs to the task and the resources to execute it are ready at the time of authorization and that the task is fully understood, started and completed according to plan once authorized (Koskela & Howell, 2002). The theory of project control concept that there is a process to be controlled, a unit for performance measurement, a standard of performance and controlling unit (Thermostat control).

Project cost, project quality, project scope and time have to be controlled. This theory assumes that the process is continuous flow type, the performance of which is measured at aggregate terms. It also assumes that the process can easily be corrected by the control available; (Koskela & Howell, 2002). This is applicable to the study because it would highlight an understanding to the application of management practices and principles in implementation of CDF projects and how they influence the outcome of CDF projects from initiation to execution stage. Hence the theory of project management is the best bet for this study and can best be used to explain project management practices.

Conceptual Framework

According to Kelley and Knowles (2016), a conceptual framework is a tool in research that entails the relationship between the dependent and independent variable. It forms part of the agenda for negotiation to be scrutinized, tested, reviewed and reformed as a result of

investigation and it explains the possible connections between the variables as shown in Figure1.

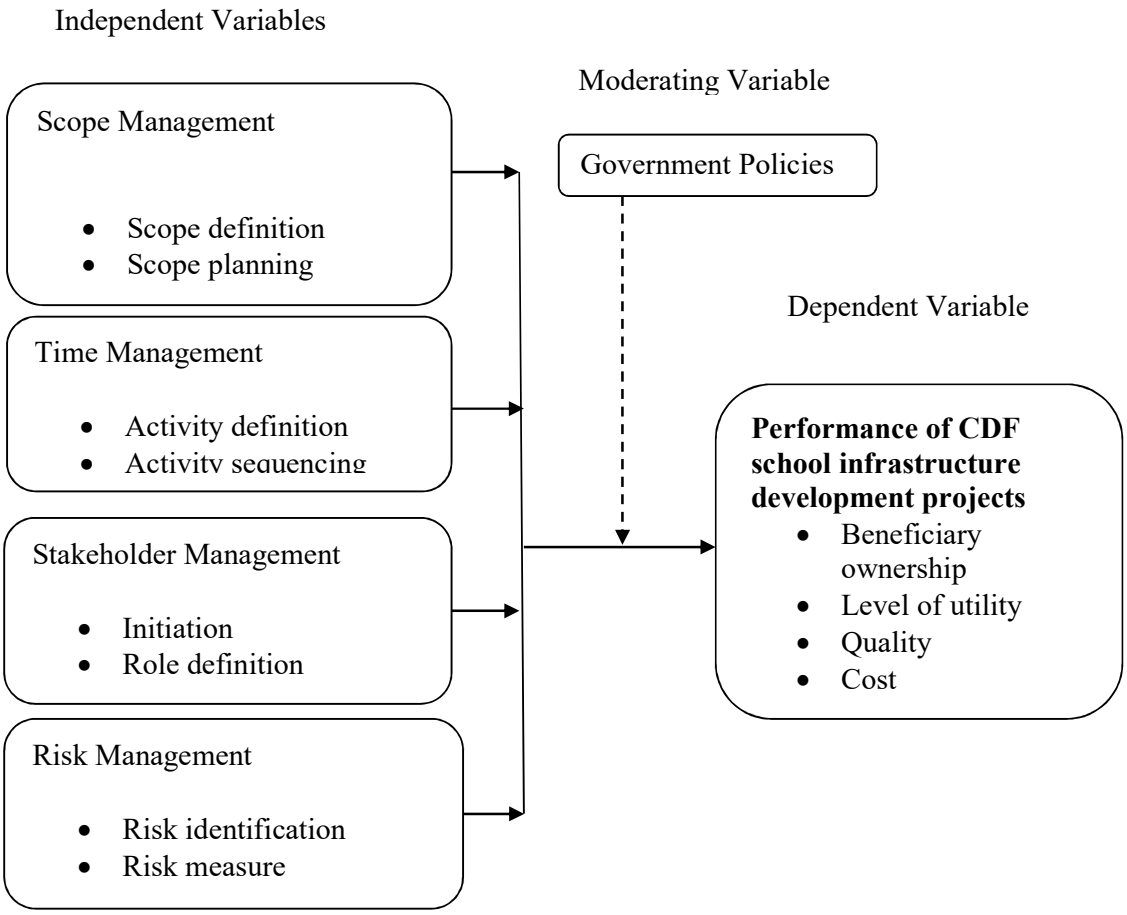

Figure 1: Conceptual Framework

Summary of Literature Review and Research Gaps

Project management has become an essential and key requirement for project performance. Project scope management planning knowledge area consists of scope planning, scope definition, and creating work breakdown structures (Wiltshire & Batley, 2018). The time schedule is one of the most important plans in a project. In order to develop realistic and achievable schedules, it is important that activities are sequenced accurately. The activity sequencing involves identifying logical relationships and dependencies between the project activities (Sukowati & Djatmikowati, 2020). Project time planning enables project manager to translate project requirement into Work Breakdown Structure (WBS), tasks list, Gantt charts, resource assignment and risk register.

Project stakeholders can be actively involved in the entire process of the project or just in one of the phases of the project lifecycle. Most common key stakeholders involved in a project can be classified as follows: project manager - the key person who is responsible for and dedicatedly managing the entire project, from the start to the end; customer/users - the most

important group of people who will be using the final services or products of the project, without this group of stakeholder, the project should not even exist.

Project risk can be classified into the following nine categories; customer associated, contract, project requirements, business practice expertise, work estimates, project constraints, complexity and scale deliverables, and contractors. Innovation for human development in project implementation requires risk-taking. However, many organizations consider risk as something negative or as the danger of something undesirable occurring and likely to affect the project implementation. Project implementers should know that risk is also positive-there is an upside and a downside. It is therefore important for an organisation to dare to succeed and dare to fail.

Project management practises within CDF project have attracted little research. Musyoka (2020) focused on the influence of project management practices on completion of national government constituency development fund projects in Kenya. Similarly, Kithinji (2018) looked at the influence of project management practices on completion of constituency development fund projects in Kenya: a case of Kabete Constituency, Kiambu County; Nyingi (2017) analyzed the influence of project management practices on performance of constituency development fund projects in Kenya: a case of maternity hospitals in Kasarani Sub-county, Nairobi County; Ochola and Malenya (2020) established the influence of project management practices on timely completion of education projects funded by Bondo National Government Constituency Development Fund, Siaya County, Kenya. Despite the various studies related to the subject matter, they all do not focus on the performance of CDF school infrastructure development projects in Runyenjes constituency Embu County. This therefore left a gap that this study sought to fill. This study hence sought to determine the influence of project management practices on performance of CDF school infrastructure development projects in Kenya.

Table 1: Summary of Empirical Literature Review and Research Gap

Author/Year	**Focus of study**	**Research Design**	**Findings**	**Research Gaps**	**Focus of current study**
Musyoka (2020)	Influence of project management practices on completion of national government constituency development fund projects in Kenya	Descriptive research design	The study concludes that there is significant positive relationship between scope management, stakeholder's participation, monitoring and evaluation and risk management and completion of NG-CDF projects.	The study did not have similar variables as the current study	This study determined the influence of project management practices on performance of CDF school infrastructure development projects in Runyenjes

					constituency Embu County
Kithinji (2018)	Influence of project management practices on completion of constituency development fund projects in Kenya: a case of Kabete Constituency, Kiambu County	Descriptive survey design was adopted with a mixture of both qualitative and quantitative methods of research approach.	The study found that risk management practice has low effects on CDF project completion. Thus, in general the study concluded that project management practises are moderately practised in CDF projects in Kenya. The	The study only used the Theory of Project Managem ent	This study determined the influence of project management practices on performance of CDF school infrastructure development projects in Runyenjes constituency Embu County
Nyingi (2017)	Influence of project management practices on performance of constituency development fund projects in Kenya: a case of maternity hospitals in Kasarani Sub-county, Nairobi County	Descriptive research design	The study concluded that; project management competency highly influences on the performance of CDF projects; project planning moderately influences on the performance of CDF projects; monitoring and evaluation highly influences performance of CDF projects and funds allocation and utilization moderately influences performance of CDF projects.	The study focused on performan ce of Constituen cy Developm ent fund projects in Kasarani	This study determined the influence of project management practices on performance of CDF school infrastructure development projects in Runyenjes constituency Embu County
Ochola and Malenya (2020)	Influence of project management practices on timely completion of education projects funded by Bondo	Descriptive research design	The study concluded that effective involvement of stakeholder in the local school community and school managers can significantly influence timely completion of projects	The study specificall y focused on education projects	This study determined the influence of project management practices on performance of CDF school infrastructure

	National Government Constituency Development Fund, Siaya County, Kenya		; effective project fund management in terms efficient utilization of project funds without fund misappropriation can enhance timely completion of projects funded by Bondo National Government Constituency Development Fund.		development projects in Runyenjes constituency Embu County

RESEARCH METHODOLOGY

Research Design

A research design is a plan showing how the problem under investigation was solved. The function of a research design is to ensure that the evidence obtained enables the study to answer the research question as unambiguously as possible (Saunders, 2011). Descriptive survey research design was applied to undertake the study. Given the objective of the research, the design is found to be suitable. According to Bryman and Bell (2015), descriptive research design is an organized, empirical inquiry where the researcher lacks a direct control of independent variable since their manifestation has already taken place or because they cannot be manipulated. Thus, a description of state of affairs as they currently exist without manipulation of variables under study is possible.

Target Population

According to Kumar (2019), a population is the total collection of elements about which we wish to make inferences. The target population for this study was composed of the 97 constituency development fund projects in Runyenjes Constituency. The study's unit of analysis was the project management committees (PMCs) as the main source of its primary data as shown in Table 2.

Table 2: Target Population

	164	39.4
	10	2.4
	54	13.0
	156	37.5
	32	7.7
	416	100.0

Sample Size and Sampling Procedure

Sampling is the choosing of a number of participants who provided the needed data which was used to draw conclusions about the study. The sample is a representation of a larger group. The sample makes up a subset of the target population that is used as a representation of the whole population (Kumar, 2019). The sample size was determined using Nassiuma's formula and the study sought to use a sample size of 107 respondents. According to Nassiuma's formula:

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

Where ***n***= size of the sample

N = population (**416**)

Cv= coefficient of variation (0.6)

e= tolerance of desired level of confidence (0.05 at 95% confidence level)

$$n = \frac{\mathbf{416}\ (0.6^2)}{0.6^2 + (\mathbf{416}-1)\ 0.05^2} = 107$$

To get the sample size per stratum, the following formula was used. Table 3.2 shows the sampling frame.

$$N_s = \frac{P_S \times S}{N}$$

Where: N=Study population

N_s=Sample from each stratum

S=Total sample size

P_s=Population in each stratum.

Table 3: Sampling Frame

Education PMCs	164	0.258	42
Electrification PMCs	10	0.258	3
Security PMCs	54	0.258	14
Water PMCs	156	0.258	40
Emergency PMCs	32	0.258	8
	416		107

Stratified sampling method was used for the selection of the study respondents. This is a sampling technique that is not biased and it involves grouping of heterogeneous group of the population into homogenous subsets and then choosing the sample from the individual allowing for representativeness. The technique sought to get a desired representation from the different sub-groups in the study population. Using this technique, the sampling is done such that the existing sub-groups are less or more represented in the chosen sample (Marshall & Rossman, 2015). For each of the strata, simple random sampling was used.

Research Instruments

Structured questionnaires were employed to get primary data. The questionnaires had close-ended questions. The closed ended are easier to analyze as they have questions with limited choices that the respondents selected. Saunders (2011) points out that, the close ended questions are easier to analyze. Questionnaires are preferred since they conserve resources and

time and they are also easier to analyze since they are in immediate usable means and also, they are the preferred instruments for collecting data in survey studies.

The questionnaire was divided into three sections to obtain information covering various aspects of the study. Part one covered demographic characteristics of the respondent while Part two covered the independent variables while part three covered the dependent variable.
The study used a questionnaire with different set of questions for the respondent to answer. A five anchor Likert scale questions was used. A Likert scale is an interval scale that specifically anchors of strongly disagree, disagree, neutral, agree and strongly agree. The study used Likert scale ranging from 5- Strongly agree; 4- Agree; 3- Neutral; 2- Disagree; 1- Strongly disagree and 5- Very great extent 4- Great extent; 3- Moderate extent; 2- Little extent; 1- No extent. These are normally good in measuring perception, attitude, values and behavior (Marshall & Rossman, 2015).

Pilot Testing

Pilot testing is testing of the research questions to a different population that has similar traits as the population under study (Gillham, 2011). The pilot study was done to ascertain the research tool reliability and validity. The pilot survey used 11 questionnaires which were a 10% representation of the sample size. After a day, the participants were asked to give responses to similar questions although this time there was no prior notification. This helped pinpoint any changes in the responses given using both times. The respondents were piloted by issuing to the project management committees from the education sector in Runyenjes Constituency and these were not included in the final study sample. This is very important in the research process because it assists in identification and correction of vague questions and unclear instructions. It is also a great opportunity to capture the important comments and suggestions from the participants. This helped to improve on the efficiency of the instrument. This process was repeated until the researcher is satisfied that the instrument does not have variations or vagueness.

Validity of Research Instruments

Validity is the degree to which evidence supports inferences based on the data collected using a particular instrument to check whether the information obtained was relevant to the study or not. The instrument was reviewed and agreed by the supervisor so that content validity is ensured. Further, an expert assessed the degree to which the instrument could measure and determine the content of a particular concept. Content validity assessment leads a logical conclusion regarding the instrument's ability to cover all that it is supposed to. Content validity aimed to ensure a homogenous understanding by respondents to all items in the questionnaire to eliminate misconception and misunderstanding (Bajpai, 2011).

Reliability of Research Instruments

Reliability is a measure of the consistence of results or scores obtained. A pilot test was done with the key informants before full administration of the questionnaires. Cronbach's Alpha Coefficient was used to estimate reliability of the selected research instrument. The Alpha (α) was used to measure internal consistency by helping arrive at a determination if single item

measures the same construct give uniform results. Cronbach's Alpha was established for every research objective in order to help evaluate the possibility that for the objectives under review, the same output was yielded if the research were to be conducted later on. The commonly accepted Cronbach Alpha value for reliability is 0.7 (Zikmund, Babin, Carr & Griffin, 2012). This study accepted a reliability coefficient level of 0.7 and above.

Data Collection Procedures

A letter of introduction from the researcher's university of study was presented to the respondents to gain permission to ask questions from the participants. Data was collected through administration of questionnaires cases for clarity. The questionnaires were administered to the respondents through the Google forms where possible and use research assistants for the drop and pick method while observing the Ministry of Health Guidelines and protocols so as to obtain well thorough answers from the respondents. An appointment was booked by the researcher with the respondents firms two days before dropping the questionnaires.

Data Analysis Techniques

Data that was collected from the field was filtered, sorted and cleaned in line with research objectives. The data was then coded, and entered into and analyzed using statistics software (SPSS, Version 25.0). Quantitative data was analyzed using descriptive statistics. It involved calculation of percentages, frequencies, means and standard deviation. The results were presented using tables.

Multiple regression analysis helped analyze inferential data. The relationship between the independent and dependent variable was obtained using multiple regression analysis model. The multiple regression model often took up the below equation;

$Y= \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \varepsilon$

Where: - Y= Performance of CDF school infrastructure development projects

β_0=constant

$\beta_1, \beta_2, \beta_3, \beta_4$ = regression coefficients

X_1= scope management

X_2= time management

X_3= stakeholder management

X_4= risk management

ε=Error Term

RESEARCH FINDINGS

Response Rate

The researcher administered 107 questionnaires. All the questionnaires returned were checked for accuracy and completeness where 93 respondents were found to be suitable for further analysis and reporting. The returned questionnaires formed a response rate of 86.7%. According to Sekaran and Bougie's (2016), a response rate of 50% or above is adequate, 60% or above is good, and 70% or above is excellent for analysis. Therefore, the response rate was considered excellent and was used for further analysis and reporting.

Reliability Test

To ensure the reliability of this study's findings, Cronbach's Alpha was used to assess the consistency of the survey questions. Cronbach's Alpha measures internal consistency, indicating how closely related a set of items are as a group. It is a widely accepted measure of scale reliability, used when multiple items measure the same underlying construct. The alpha value ranges from zero to one, with higher values indicating greater reliability. Typically, a coefficient of 0.7 is considered the threshold for acceptable reliability (Taherdoost, 2016). Additionally, the split-half method was employed to compare the results when calculating Cronbach's Alpha. This method assesses a test's internal consistency, such as in questionnaires and psychometric tests, by comparing the results of one half of the test with those of the other half (Snyder, 2019). This approach ensures that all parts of the test contribute equally to what is being measured.

Table 1: Reliability Test

Variable	Cronbach's alpha
Scope management	0.745
Time management	0.820
Stakeholder management	0.782
Risk management	0.848
Performance of CDF school infrastructure development projects	0.820

A coefficient of 0.7 is accepted as the rule of thumb indicating acceptable reliability (Taherdoost, 2016). From the findings in Table 1, all the variables were found to have Cronbach alpha values greater than 0.7. This was an indication that they were all reliable and no adjustment was required. This shows that this question met the reliability criteria ($\alpha>0.70$).

Regression Analysis

To determine the effects of corporate governance practices on performance of CDF school infrastructure development projects in Runyenjes constituency Embu County, Multiple regression analysis was used. The findings were presented in three tables discussed in sub-sections below.

Model Summary

The study used model summary to establish the amount of variation in performance of CDF school infrastructure development projects in Runyenjes constituency Embu County as a result of changes in scope management, time management, stakeholder management, and risk management.

Table 2: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.862[a]	.742	.731	.656

a. Predictors: (Constant), Risk management , Scope management, Stakeholder management, Time management

The model summary findings in Table 2 shows that the adjusted R-square was 0.731. This implied that 73.1% variation in performance of CDF school infrastructure development projects in Runyenjes constituency Embu County can be attributed to changes in scope management, time management, stakeholder management, and risk management. The remaining 26.9% suggest that there are other factors not included in the model that can be attributed to changes in performance of CDF school infrastructure development projects in Runyenjes constituency Embu County. The findings further showed that the study variables had strong positive relationship as shown by correlation coefficient (R) value of 0.862.

Analysis of Variance

The study used analysis of variance to determine whether the model developed was significant. The significance of the model was tested at 95% confidence interval.

Table3: Analysis of Variance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	112.892	4	28.223	63.384	4.10E-25[b]
	Residual	39.184	88	0.445		
	Total	152.076	92			

a. Dependent Variable: Performance of CDF school infrastructure development projects
b. Predictors: (Constant), Risk management , Scope management, Stakeholder management, Time management

From the analysis of variance (ANOVA) findings in Table 3, the study found out that the regression model was significant at 4.10E-25 which is less than the selected level of significance (0.05). Therefore, the data was ideal for making a conclusion on the population parameters. The F calculated value (from the Anova table) was greater than the F critical value from the f-distribution table (63.384>2.4753). This was an indication that scope management, time management, stakeholder management, and risk management are significant predictors of performance of CDF school infrastructure development projects in Runyenjes constituency Embu County.

Beta Coefficients

Table4: Beta Coefficients of Study Variables

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		

	(Constant)	.303	.079		3.835	.000
	Scope management	.140	.058	.113	2.414	.018
1	Time management	.277	.067	.275	4.134	.000
	Stakeholder management	.072	.032	.076	2.250	.027
	Risk management	.394	.061	.444	6.459	.000

a. Dependent Variable: Performance of CDF school infrastructure development projects

From the coefficients results in Table 4, the regression model was fitted as shown below;
$Y = 0.303 + 0.140\ X_1 + 0.277\ X_2 + 0.072\ X_3 + 0.394\ X_4$

Where: Y = Performance of CDF school infrastructure development projects; X_1 = Scope management; X_2 = Time management; X_3 = Stakeholder management; X_4= Risk management

The findings showed that if all factors (scope management, time management, stakeholder management, and risk management) were held constant at zero, performance of CDF school infrastructure development projects in Runyenjes constituency Embu County will be 0.303. The beta value for the scope management is 0.140 with a significant t-value of 2.414 and a p-value of 0.004, which is less than the 0.05 significance level. This implies that for every unit increase in the effectiveness of the board's composition, the performance of CDF school infrastructure development projects increases by 0.140 units. The beta value for time management is 0.277 with a significant t-value of 4.134 and a p-value of 0.000, which is less than the 0.05 significance level. This suggests that for every unit increase in time management, the performance of CDF school infrastructure development projects improves by 0.277 units. The beta value for stakeholder management is 0.072 with a significant t-value of 2.250 and a p-value of 0.026, which is less than the 0.05 significance level. This indicates that a unit increase in having a stakeholder management within mission hospitals results in a 0.072 unit increase in their performance. Lastly, the beta value for risk management is 0.394 with a significant t-value of 6.459 and a p-value of 0.000, which is less than the 0.05 significance level. This implies that for every unit increase in risk management, the performance of CDF school infrastructure development projects increase s by 0.394 units.

DISCUSSION

Scope Management

The study found that scope management has a significant positive impact on the performance of CDF school infrastructure development projects, with a beta value of 0.140. This suggests that improvements in scope management directly lead to better project performance, particularly in terms of meeting budgets and timelines. This finding aligns with the views of Malik (2019) and Oliveira et al. (2019), who argue that poor scope definition is a key contributor to project failure, especially in the areas of cost, schedule, and operational

outcomes. Furthermore, Wiltshire & Barbara (2019) emphasize that scope planning, clear work breakdown structures, and defined objectives are essential to ensure that projects stay on track. The study's results validate these assertions by demonstrating that projects with well-defined and managed scope are more likely to succeed, reinforcing the literature's emphasis on scope management.

Time Management

The analysis showed that time management has a positive influence on project performance, with a beta value of 0.277. This indicates that better time management practices are directly associated with improved project outcomes, including timely completion and adherence to deadlines. The finding is consistent with the research by Khaemba and Sang (2020) and Blair (2017), who highlight that effective scheduling and sequencing of project activities are critical for the successful execution of projects. These authors point out that utilizing tools such as Gantt charts, risk registers, and detailed WBS (Work Breakdown Structures) ensures that time management is optimized and that project milestones are met. The study's finding further supports the notion that time management plays a crucial role in the successful completion of projects, confirming the relevance of these time management practices discussed in the literature.

Stakeholder Management

Stakeholder management was also found to have a significant impact on the performance of CDF school infrastructure projects, with a beta value of 0.072. This indicates that when stakeholders are properly managed and engaged, project performance improves. This result aligns with Fragnelli and Kiryluk-Dryjska (2019), who stress the importance of stakeholder involvement in the entire project lifecycle to ensure that the project meets the needs of all parties involved. Similarly, Dixon and Monk (2017) emphasize that community and stakeholder participation in project design and implementation enhances project success, particularly in grassroots-level projects like CDF infrastructure projects. This finding supports the literature, demonstrating that effective stakeholder management leads to better project outcomes, even though its impact was not as pronounced as other factors like scope and time management.

Risk Management

The study found that risk management has the most significant positive influence on project performance, with a beta value of 0.394. This indicates that projects that incorporate thorough risk identification, assessment, and mitigation strategies experience better overall performance. This finding is in agreement with Malik (2019) and Hussein (2018), who argue that risk management is vital for ensuring the success of projects by minimizing potential threats and seizing opportunities. Furthermore, Zakat (2021) stresses that understanding and managing project risks is essential for maintaining stability and achieving desired outcomes. The study's results strongly support the literature, as they show that proactive risk management leads to a more successful project, underlining its critical importance in the execution of CDF school infrastructure projects.

CONCLUSION

Based on the findings, it is recommended that project management committees (PMCs) in Runyenjes constituency focus on strengthening scope management by ensuring clear project definitions and robust work breakdown structures. Additionally, improving time management through better scheduling and resource allocation, along with fostering active stakeholder engagement, can enhance the alignment of projects with community needs. Furthermore, it is crucial to develop a structured risk management approach to identify potential risks early and implement mitigation strategies. These practices will help in overcoming the common challenges of delayed, over-budget, or incomplete projects, ultimately improving the overall performance of CDF school infrastructure development projects.

RECOMMENDATIONS

Based on the findings, it is recommended that project management committees (PMCs) in Runyenjes constituency focus on strengthening scope management by ensuring clear project definitions and robust work breakdown structures. Additionally, improving time management through better scheduling and resource allocation, along with fostering active stakeholder engagement, can enhance the alignment of projects with community needs. Furthermore, it is crucial to develop a structured risk management approach to identify potential risks early and implement mitigation strategies. These practices will help in overcoming the common challenges of delayed, over-budget, or incomplete projects, ultimately improving the overall performance of CDF school infrastructure development projects.

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