

# INFLUENCE OF PROJECT COST MANAGEMENT ON PERFORMANCE OF DONOR FUNDED HEALTH PROJECTS IN KAJIADO COUNTY

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DOI: <https://doi.org/10.5281/zenodo.7263378>

Published Date: 29-October-2022

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**Abstract:** Global entities such as the United Nations, the World Bank and the World Trade Organization have progressively recognized the need for more effective project cost management and control. This offers a promising global setting for the project cost management to advance cognizance amongst these major project donors on the significance and value of engaging expert cost managers rather than have the role carried out by other experts as a subset of their general roles. Cost management in the public health project is critical to the country's long term Socioeconomic and environmental growth, beneficiary ownership, and project continuity. In Africa project performance of public health projects is not guaranteed with most of the projects failed to achieve their long-term goals with numerous costs overrun and schedule delays. This study identified four variables that influence cost management on the performance of donor health projects in Kajiado county Kenya. Specifically, this study looked at Project Cost control, Project Resource planning, Project cost budgeting, and project M&E. The target population was 125 donor funded health projects where a sample of 95 was drawn. Key respondent in this study were senior managers, project managers, project teams and stakeholders where 95 questionnaires were administered to them. The response rate for the study was 92.6%. The study conducted both descriptive and inferential analysis. The study found that Project Cost control, Project Resource planning, Project cost budgeting, and project M&E significantly influenced performance of donor funded projects in Kajiado county. The variables explained 88.8% of change in performance of donor funded project in Kajiado County. The study recommended implementation of project cost management practices in donor funded projects

**Keywords:** Cost Management, Project Cost Control, Project Resource Planning, Project Cost Budgeting, Donor Funded Health Projects, Kajiado County.

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## I. INTRODUCTION

Public health projects are implemented to avert diseases and inspire healthy behaviours across the community by preventing outbreaks and spread of infectious diseases, ensuring better nutrition, better water and sanitation, increase family planning contraceptives intake, decrease HIV prevalence and new infections, prevention of Malaria, improving Maternal, Neonatal and Child health. Although Public health is key to a nation's wellbeing, the national government only contributes about 30% while donor funding contributes to about 17% of the total share of public health financing. This donor funding is either given as a grant, donation or in-kind [1]. Most donor funded projects are implemented by Non-governmental organizations

(NGOs) which aim at particular social interests through critical focus and advocacy on social, political as well as economic goals which include health, education, environmental protection and even human rights [2]. Since the end of the 20th century, the call for NGOs to demonstrate their effectiveness on how they implement their strategies to achieve their desired goals [3]. There are various factors that determine the success of a project where the variation is based on the objectives of the project. Success is an on-going review of the efficiency and importance of a given project. Performance management can be used to assess the performance of a worker or teams in a given project hence, a project may be affected negatively due to unequal workloads, poor communication, or lack of co-operation among team members [4]. Project cost management can be defined as application of tools, techniques and knowledge in planning, estimating and controlling project costs as well as analysing the possible of risks that may potentially lead to cost overruns [5]. The [6] identifies project cost management as the inclusion of processes that are involved in planning, estimating, budgeting, financing, funding and controlling costs for the project to be completed within the budget that has been approved. Project costs management entails other processes which include: plan cost management, estimate costs, determine budget, and control costs. Depending on the nature and size of the project, cost estimating and cost budgeting are often viewed as a single process especially in smaller scope projects [6].

Project managers must describe the project scope well, estimate project time and costs in a most realistic way. For effective project cost management, project managers must undertake cost management planning, cost estimation, budgeting and cost control. Kenyan government's public health objective is achievement of universal health care for key services such as, malaria, HIV Nutrition, water and sanitation, maternal neonatal and child health. Public health projects have been described to be pro-poor, more so across rural areas. Both International and local development partners provide needed support through funding of projects or donating to funding pools backing several projects. Most of these funds are normally directed through NGOs, FBOs and CBOs, this makes it hard to measure the exact amount of money targeted towards public health projects [7]. County Nutrition Action Plan (CNAP) for Kajiado was launched in October 2020 where the County allocated Kshs 51 million to help improve the nutrition of the population in the county. The purpose of the CNAP is to provide a practical guidance for implementation of cost effective and high impact nutrition interventions. In every four children one is malnourished while 44% of girls and women in Kajiado County are overweight. CNAP will cost Kshs 1.8 billion for it to be implemented with other partner donors including: World Vision, Nutrition International and others [8].

#### ***A. Statement of the Problem***

Kenya has an estimated population of 45 million, with a total 75% of the population in rural areas. Nearly 46% of the Kenya's population live below the poverty. Although with high rate of poverty index, the country has made extraordinary progress in improving public health sector over recent years. Although Public health is key to nation wellbeing, the national government only contributes about 30%, while donor funding contributes to about 17% of the total share of public health financing. This donor funding is either given as a grant, donation or in-kind in financial resources allocations have been seen whereby the resource allocation to public health projects are unreliable. This has led to delays in the completion of such projects, additionally creating inefficiencies. These inconsistencies in resource allocation have greatly interrupted the project performance. Delay in the resource allocation leads to schedule slippage which further, leads to cost overruns. Cost overruns have understandable effected key stakeholder's requirement. Cost overrun suggests addition costs over and above those originally budgeted for, resulting in non-performance. To the implementing partners, cost overruns mean incapability for the project team to deliver value for project money and could well stain their reputations and result in loss of stakeholder's confidence in them. While to the donors, cost overruns could lead to project abandonment, bad reputation, and failure to secure future project finance or securing it at higher costs due to added risks. Therefore, implementing project cost management practices will have a positive significant impact on project performances. It can be noted that the project schedule delays can result in huge cost overrun. Most of projects' failure to meet the stakeholder expectation are directly associated with the degree of cost management. Thus, project cost management should be integrated as part of the public health implementation throughout the project life cycle [9].

#### ***B. Objectives of the Study***

The general objective of the study was to establish the influence of Project Cost Management on Performance of donor funded health projects in Kajiado County Kenya.

The specific objectives for the study were:

- i). To determine how Project Cost Control Influences Performance of Donor funded Health projects in Kajiado County.

ii).To examine the influence of Project Resource Planning on Performance of Donor funded Health projects in Kajiado County.

iii).To establish the influence of Project Cost Budgeting on Performance of Donor funded Health projects in Kajiado County.

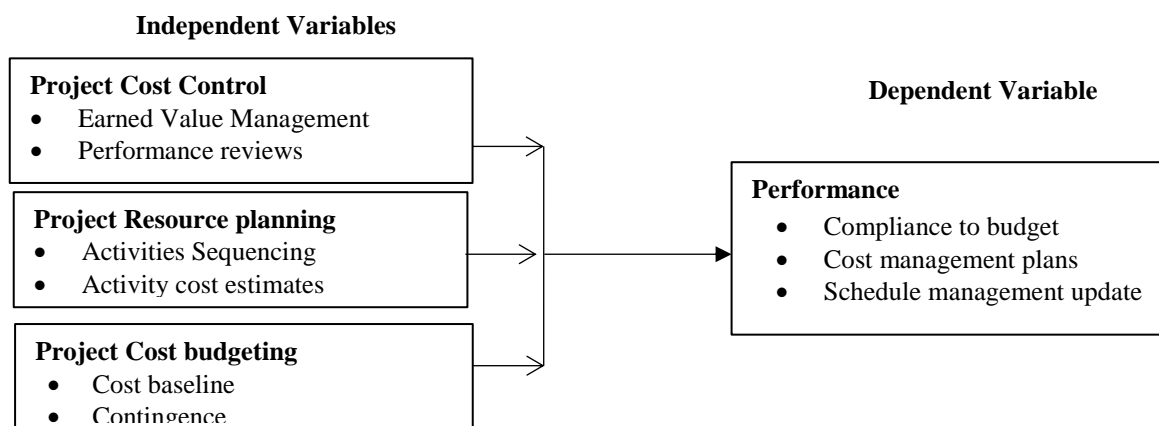
## II. THEORETICAL FRAMEWORK

Tentatively, the theories that are linked with Project Cost Management are as follows: Theory of Constraints and theory of Scheduling. Theory of Constraints was developed by Eliyahu M. Goldratt an Israeli business management expert [10] in 1997. He again explained this concept in connection with project management in another book “Critical Chain”. This theory has three key assumption in that an organization resources can be managed throughout ,this is the rate at which the system or organization generates “goal units” or resources through its implementation ,operational expenses such as cost resource ,Labour resource and time resources . Constraints are major determinants of the output to a system whether acknowledged or not. ToC describes the cause of the system constraints and the best way deal with the constraints [11]. The main importance of this theory is that it is simple and easy to understand, this makes it more practical for the project managers in resource allocation. The concept promoted by the theory provides an easy pattern to follow which enables the project team to focus on an area that needs resource consideration. It is also said to be very operative in dynamic project environments as by removing or minimizing resource waste, quick and better resource results can be realized. This theory also increases the results in an instant improvement in the resource efficiency of the relevant project process [10].

Theory of scheduling originated from Putnam-Norden-Rayleigh Model which was developed by Putnam in 1978 (Moore, 1999) [12]. Putnam proposed an analytical formula for scheduling labor cost rates over time for software development projects. Project scheduling theory encompasses the scheduling of project tasks and activities based on the preference or resource limitations [13]. This theory is based on three concepts: planning, the dispatching model and the thermostat model. The dispatching model adopts that planned tasks and activities can be implemented by a notification of the start of the task to the project leader. [10] stated that project scheduling procedures are not important since in each case the impact on the lead time of the projects is very small. [13] identify and lighten general misconceptions about project scheduling in a constraint project environment. They claimed that the above type of perceptive invites the project team to become trapped in the critical delusion that looking for the best scheduling procedure does not pay off in practice and has an insignificant impact on the overall project duration. This theory is therefore important to the study since it demonstrates a strong causal relationship between scheduling and the project deliverables [14].

## III. CONCEPTUAL FRAMEWORK

The conceptual framework is illustrated in figure 1 below.



### A. Review of Variables

#### i). Project Cost Control

The PMBOK guide [6] identifies the control cost as one of the processes of Project Cost Management. Control cost is that process of monitoring the project status to manage the changes to the cost baseline and update the project costs. Control

costs processes include: monitoring of project cost performance to identify the variances; recording of changes; prevention of unauthorized and incorrect changes; communicating authorized changes to stakeholders; and analysis of variances and their effects to the control processes. The project management plan, organizational process assets, and work performance indicators are some of the inputs to control costs process. [15]. The output to the process includes but not limited to budget forecasts, change requests, and updates to project management plan, project documents, and organizational process assets [6], [15]. Project cost control process answers these questions: what is the planned costs? What is the actual cost? Is there a variance? What can be done about the variance? Donors demands strong internal controls and have imposed regulations on how the funds can be utilized. This has since led to increased demand for cost performance data, to generate these data, project team are required to undertake Earned value Management [5]. Earned Value Management (EVM) is part of the project management that evaluates, controls and reports the project performance during its implementation phase by monitoring the integrated management of project costs, schedule and scope. It compares project baseline performance with actual project performance in respect of schedule and costs .This technique examines the project cost and schedule performance trends by focusing on available historical performance data such as Cost Variance (CV) , Cost Performance Index (CPI), Schedule Variance (SV), and Schedule Performance Index (SPI) [6].

### *ii). Project Resource Planning*

Resource planning is the process where tasks are allocated to project team members based on their skill sets, capacity, and best fit for the job. Resource planning helps project teams monitor progress, track capacity, and keeping projects on budget. Resource planning is used in determining and identification of an approach that will ensure resources are available for effective successful project completion. Effective resource planning should put into consideration and plan for the availability of scarce resources [6]. Successful Project cost management is highly dependent on planning processes such as resource allocation and scope management that should be effectively done [16]. Resource planning is a common process which is critical to the success of Information Technology (IT) projects. Tools, processes, and well-developed methods are part of the support to resource planning. However, there has been continuous failure in IT projects due to poor planning efforts during project initiation [17]. Without the right resources the project management plan just becomes a mere document with no value and thus unable to deliver products. Project resource management is that process of utilizing resources in achieving project objectives and goals. A project manager must develop a good human resource plan to help in guiding the process of managing the human resources in identification of roles, responsibilities, skills, and reporting relationships [6].The use of planning tool resources by project manager helps in minimizing time and over utilization of resources which may lead to costly and negative impacts to project success. The work Breakdown Structure (WBS) is one of the recognized planning tools used for estimating resource requirements, total project budget, and work schedule [17]. However, failure to capture what is in and out of scope results in unnecessary work which results to cost overrun and schedule. Effective use of WBS as a planning tool is helpful to project managers in identifying the tasks and resources that are required to complete the projects within budget. In a multi-project work, it can be extremely stressful for the project team and the project manager in planning the projects. Problems arise when allocating the human resources to projects that affect project leaders, resource owners, and the project team members [17].

### *iii). Project Cost budgeting*

A project can be considered successful it is completed within the budget. Therefore, project budget management involves the processes followed for the project to be completed within the predetermined budget limits. Project Managers need perform adequately in proper cost estimation, budget determination and cost controlling. Budget management involves both direct costs and the costs that keep cropping up in the course of project implementation [6]. Effective implementations of financial management practices lead to improvement in Project performance due to improved ability to track project events from the record system. According to [16] for successful completion of project an accurate cost estimate a realistic risk assessment is key. Cost budgeting is tool for estimating the costs or the necessary efforts for projects, activities, or work packages in project management. It includes cost estimation, setting a fixed budget, and management and control of actual cost as compared to the estimates. The costs are then allocated to work packages in a project. For a precise cost budgeting, it is essential to carefully implement a resource plan and schedule. The [6] explains that in some projects especially those with smaller scope, project cost estimating and cost budgeting are often viewed as a single process to be performed by a single person within a short time period. Determine Budget is that process of aggregating the cost estimates of work packages to determine the cost baseline. The process is important in coming up with the cost baseline of the project from which project performance is monitored and controlled. The process performed at predefined points in the project or sometimes once [6].The cost baseline is important as it: acts as a time-phased budget that is used by the project managers

in measuring and monitoring cost performance; provides the basis for estimating costs of major project activities and provides the foundation for project cost control; and provides crucial information for project funding requirements [15]. The project management plan, cost estimates, project schedule, risk register, scope baseline, resources calendars, and basis of estimates are examples of the inputs for the process of determining the budget. Budgeting forms the basis for project cost control [6],[15].

**B. Empirical Review**

[18] carried out a study on factors leading to cost overrun occurrence in construction projects. From the study, cost overrun was found to be an indicator of project failure. Situation where projects surpasses the estimate is known to be a common universal phenomenon and a good indication of project poor performance. Poor estimation, unskilled human resource, poor design, poor planning, and environmental factors are major of cost overruns. [19] in their study of project cost management and successful implementation of Machakos county government funded water projects in Kenya focused on cost control, cost contingencies, cost reporting, and methods of cost estimation. The study targeted 51 county government funded water projects in Machakos County. The study recommended that project cost management practices to embrace methods of cost estimation, cost contingencies and cost reporting to realise implementation success. An improvement of cost estimation methods improves on the implementation of projects. Further, provision of accurate and detailed construction cost estimates during the planning and designing phase creates a roadmap for successful project implementation. The methods of cost estimation help improve plans; cuts cost and help to make better bid estimation.

**IV. RESEARCH METHODOLOGY**

**A. Research Design**

This study adopted a descriptive research design as this enabled researcher to describe the situation under research study, the study provided insights into the causal relationship between the variables [22].

**B. Target Population**

The target population in this study was 125 donor funded public health projects completed in the past five years within Kajiado County as captured in the Ministry of Health database of 2020.

**C. Sample Size**

Yamane (1967) method was used to determine the study sample size. The study will apply the sampling error formula of 95% confidence with Z\*- value of 1.96 [23] as follows;

$$n = N / (1 + N (e)^2)$$

Thus, a sample of 95 projects was obtained.

**D. Data Analysis and Presentation**

Linear regression analysis was used to establish the influence of Project Cost Management on Performance of Donor funded health projects in Kajiado County in Kenya. The results was presented using tables, Pie charts, and graphs. The following linear regression model will be used;

$$Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \epsilon \dots\dots\dots(i)$$

Where;

Y= the value of dependent variable (Performance of Donor funded Projects)

{  $\beta_i$ ;  $i = 1,2,3,4$  } = The coefficient of values representing the independent variables.

$\beta_0$  = The Y intercepts which is a constant coefficient

$\epsilon$  = the error term

X1 = Project Cost Control

X2 = Project Cost Budgeting

X3 = Project Resource Planning

{  $X_i$ ;  $i = 1.2.3.$  } = Values of the various independent (covariates) variables.

V. RESEARCH FINDINGS AND DISCUSSIONS

A. Descriptive Statistics of Study Variables

The study computed the descriptive statistics in order to ascertain the whether the objectives are met. Measure of central tendency was used to compute the statistics. The study questionnaire was presented in 5 point Likert scale where 5 (SA) = Strongly Agree, 4(A) = Agree, 3(N) = Neutral, 2 (D) = Disagree, and 1(SD) = Strongly Disagree. Both mean and standard deviation were used to interpret the significance of the statistics.

i). Project Cost Control

The first variable was Project Cost Control which attempted to determine the influence of Project Cost Control on the performance of donor funded Health Projects in Kajiado County. Table I below shows the statistics.

TABLE I: PROJECT COST CONTROL

Project Cost Control statements	Mean	Stdev
Cost management plan describes how project cost will be managed and control	3.22	1.410
Adequate cost control techniques reduce project performance rate	3.43	1.445
Accurate cost estimation techniques reduce cost overrun	3.56	1.445
Daily cost monitoring reduced to cost overrun	3.24	1.373
There are proper change control systems	3.26	1.360
Project documents are updated regularly to capture any change that may occur during the implementation	3.20	1.487
<b>Average Project Cost Control</b>	<b>3.32</b>	<b>1.420</b>

Respondents slightly agreed that Cost management plan described how project cost was managed and controlled (Mean = 3.22). The respondents also lightly agreed that adequate cost control techniques reduced project performance rate (Mean = 3.43). Further, there was some slight agreement on accurate cost estimation techniques reducing cost overruns (Mean = 3.56) and also daily monitoring reducing cost overruns as well (Mean = 3.24). Performance reviews are conducted to compare cost performance over time, schedule activities or work packages that are under running or over running the budget as well as the estimated funds that are needed to complete work that is in progress. Performance reviews are useful in determining the areas where costs are under running or over running though it still uses EVM to compare the actual results against the cost baseline and thus has the ability to control project costs through indexes and forecast trends [16]. The study also found slight agreement from respondents to suggest that there were proper change control systems (Mean = 3.26) and updating of project documents to reflect the changes that occurred during implementation (Mean = 3.20). Project cost control is always a continuous process and is part of monitoring and control process group [16] The Composite Mean of 3.32 indicated some significant statistical evidence to suggest Project Cost Control influences performance of donor funded project in Kajiado County. The PMBOK guide [6]) identifies the control cost as one of the processes of Project Cost Management. Control cost is that process of monitoring the project status to manage the changes to the cost baseline and update the project costs.

ii). Project Resource Planning

The second objective of the study which was to examine the influence of Project Resource Planning on the performance of donor funded health Projects in Kajiado County. The statistics are shown in Table II below.

TABLE II: PROJECT RESOURCE PLANNING

Project Resource Planning statements	Mean	Stdev
All the routines and methods for performing tasks in the projects feels necessary and are easy to follow and understand	3.53	1.389
The result of the work in the projects are rarely characterized by lack of time	3.69	1.376
Project work breakdown structure, deliverables and acceptance criteria documented in the scope baseline are considered when monitoring and controlling the schedule baseline	3.63	1.465
Work package are clearly identified and decomposed into schedule activity.	3.51	1.381
Estimating activity duration depends on the material availability and financial capabilities of the contractor	3.23	1.319
The cost plan is clear and detailed on drawing of specifications	3.22	1.291
<b>Average Project Resource Planning</b>	<b>3.47</b>	<b>1.370</b>

Respondents slightly agreed that all the routines and methods for performing tasks in the projects are necessary and easy to follow as well as understand (Mean =3.53). [6] views project scheduling as the art of planning and designing all project activities to enable project to achieve its anticipated goals and priorities within the constraint of time and cost.

There was agreement by the respondents the result of the work in the projects are rarely characterized by lack of time (Mean = 3.69). Schedule planning can also be used to outline the time durations within which the project shall be completed, project costs with respect to resource and labour requirements along with the sequence of completion of project tasks and activities. The respondents agreed that the project work breakdown structure, deliverables and acceptance criteria documented in the scope baseline are considered when monitoring and controlling the schedule baseline (Mean =3.63). The use of planning tool resources by project manager helps in minimising time and over utilization of resources which may lead to costly and negative impacts to project success. The work Breakdown Structure (WBS) is one of the recognised planning tools used for estimating resource requirements, total project budget, and work schedule [17]. There was some slight agreement from the respondents that work package are clearly identified and decomposed into schedule activity (Mean = 3.51). Effective use of WBS as a planning tool is helpful to project managers in identifying the tasks and resources that are required to complete the projects within budget [17].

The respondents also slightly agreed that estimating activity duration depends on the material availability and financial capabilities of the contractor (Mean = 3.23). Project resource management is that process of utilising resources in achieving project objectives and goals. A project manager must develop a good human resource plan to help in guiding the process of managing the human resources in identification of roles, responsibilities, skills, and reporting relationships [6]. Finally, there some slight agreement that the cost plan was clear and detailed on drawing of specifications (Mean = 3.22). Average Project Resource Planning of 3.47 provided some significant statistical evidence to suggest that Project Resource Planning as a component of project cost influences performance of donor funded project in Kajiado County. Resource planning is the process where tasks are allocated to project team members based on their skill sets, capacity, and best fit for the job. Resource planning helps project teams monitor progress, track capacity, and keeping projects on budget [20]. Resource planning is used in determining and identification of an approach that will ensure resources are available for effective successful project completion. Effective resource planning should put into consideration and plan for the availability of scarce resources [6]. Successful Project cost management is highly dependent on planning processes such as resource allocation and scope management that should be effectively done [16].

**iii). Project Cost Budgeting**

The third objective was to establish the influence of Project Cost Budgeting on the performance of donor funded health projects in Kajiado County. The reliability analysis for the variable is shown on Table III below.

**TABLE III: PROJECT COST BUDGETING**

<b>Project Cost Budgeting</b>	<b>Mean</b>	<b>Stdev</b>
There is a well- defined project cost baseline	3.17	1.472
The cost aggregate of the project is determined from combined activities from activity level to work package.	3.30	1.233
There is a clear budget for the project	3.28	1.538
The project cost estimates are realistic	3.17	1.147
Funding limit reconciliation is done to ensure minimal variations in the expenditure of the project funds.	3.14	1.440
<b>Average Project Cost Budgeting</b>	<b>3.21</b>	<b>1.366</b>

The study found some slight agreement that there was a well- defined project cost baseline (Mean = 3.17). The cost baseline is important as it: acts as a time-phased budget that is used by the project managers in measuring and monitoring cost performance; provides the basis for estimating costs of major project activities and provides the foundation for project cost control; and provides crucial information for project funding requirements [15].The respondents also slightly agreed that the cost aggregate of the project is determined from combined activities from activity level to work package (Mean = 3.30). According to [6] Cost budgeting is tool for estimating the costs or the necessary efforts for projects, activities, or work packages in project management. It includes cost estimation, setting a fixed budget, and management and control of actual cost as compared to the estimates. The costs are then allocated to work packages in a project .The respondents also slightly agreed the availability of clear budget for the project (Mean = 3.28). Effective implementations of financial management practices lead to improvement in Project performance due to improved ability to track project events from the record system. The respondents also slightly agreed on the project cost estimates being realistic (Mean =3.17). Project Managers need to conduct cost estimation which the estimates of the resources identified is established. Cost estimation could be top down where the manager uses actual costs of a previous project to estimate the costs of the project to be undertaken an efficient

criterion where limited information about the project is not available at hand. Project cost estimation is based on the various activities and works [15]. Finally, the respondents also slightly agreed that funding limit reconciliation was done to ensure minimal variations in the expenditure of the project funds (Mean =3.14). Budget management involves both direct costs and the costs that keep cropping up in the course of project implementation. Average Project Cost Budgeting of 3.21 provided slight agreement to suggest Project Cost Budgeting influence performance of donor funded project in Kajiado County. A project can be considered successful it is completed within the budget. Therefore, project budget management involves the processes followed for the project to be completed within the predetermined budget limits. Project Managers need perform adequately in proper cost estimation, budget determination and cost controlling [21].

**iv). Project Performance**

The main objective of the study was to establish the influence of Project Cost Management on performance of donor funded health projects in Kajiado County. Table IV below shows the status of performance of donor funded projects in Kajiado County.

**TABLE IV: PROJECT PERFORMANCE**

<b>Project Performance</b>	<b>Mean</b>	<b>Stdev</b>
Project requirements are well captured in requirement management plan	3.50	1.430
The project was completed within its budget	3.23	1.345
Work performance data are capture at every implementation stage	3.24	1.339
There is no indication of cost overrun in project due to effective project cost management.	3.32	1.419
There is a well-documented and updated project schedule.	3.43	1.380
Project documents are updated regularly	3.32	1.319
<b>Average Project Performance</b>	<b>3.34</b>	<b>1.372</b>

The respondents slightly agreed that project requirements are well captured in requirement management plan (Mean = 3.50). The respondents also slightly agreed project was completed within its budget (Mean =3.23). Project performance in terms of cost fully depends on effective and efficient project scheduling, its application and control throughout the project life cycle [6]. Further, the respondents slightly agreed that work performance data are capture at every implementation stage (Mean = 3.24). The respondents slightly agreed that there was cost overrun in project due to effective project cost management.(Mean = 3.32). Lack of ability to prevent cost overruns due to poor cost management skills is a major hindrance to project success. The respondents slightly agreed on the availability of a well-documented and updated project schedule. (Mean = 3.43). The respondents lightly agreed that the project documents are updated regularly (Mean =3.32). Average Project Performance of 3.34 provided some light significance evidence to suggest Project cost Management influence performance of donor funded projects in Kajiado County. Performance dimensions may have one or more indicators, and could be influenced by various project characteristics. Project time and cost performances get influenced by project characteristics, procurement system, project team performance, client representation's characteristics, contractor characteristics, design team characteristics, and external conditions. Project cost management can be defined as application of tools, techniques and knowledge in planning, estimating and controlling project costs as well as analysing the possible of risks that may potentially lead to cost overruns [5].

**C. Inferential Statistics**

**i). Correlation Analysis**

Pearson R correlation was used to measure strength and the direction of linear relationship between variables (PMIS Capacity, PMIS Stakeholder Management, and PMIS Cost Management) and the dependent variable (Project Performance).

**TABLE V: CORRELATION MATRIX**

	Project Performance	Project Control	CostProject Planning	ResourceProject Cost Budgeting
Pearson Correlation	1	.819**	.243*	.851**
Sig. (2-tailed)		.000	.023	.000
Project Performance	N	88	88	88
Sig. (2-tailed)		.000	.170	
N		88	88	88

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\*. Correlation is significant at the 0.05 level (2-tailed).



Table V above shows Project Cost Control has a strong positive and significant correlation with Project performance (r = 0.819, P-value = 0.000). The positive correlation depicts a direct relationship where an increase in Project Cost Control will lead to an increase in Project Performance. The study also found Project Resource Planning to have a weak positive significant relationship with Project Performance. (r = 0.243, P-value = 0.023). The variable has a direct relationship with Project performance meaning an increment in Project Resource Planning will lead to an increment in Project Performance though a small increment. The study also found Project Cost Budgeting to have a strong positive significant correlation with Performance of Project (r=0.851, P-value = 0.000). The variable also has a direct relationship with Project Performance meaning an increase in Project Cost Budgeting will lead to an increase in Project Performance.

**ii). Regression Analysis**

Regression analysis was done to identify the value of the dependent variable when the independent variables change. The Beta coefficients are significant if the p-value is less than the threshold of 0.05. Table VII below shows that all the p values are less than the accepted threshold of 0.05 thus the beta coefficients can be used for the model as follows:

$$Y = \beta_0 + \beta_1 \chi_1 + \beta_2 \chi_2 + \beta_3 \chi_3 + \epsilon \dots\dots\dots (ii)$$

Where: Y = Project Performance (PP)

$\chi_1$  = Project Cost Control (PCC)

$\chi_2$  = Project Resource Planning (PRP)

$\chi_3$  = Project Cost Budgeting (PCB)

$\beta_0$  = the constant

$\beta_1-n$  = the regression coefficient or change included in Y by each  $\chi$ ,

$\epsilon$  = error term

**TABLE VI: COEFFICIENTS FOR REGRESSION ANALYSIS**

Model	Unstandardized Coefficients		Standardized Coefficients <sup>t</sup>	Sig.
	B	Std. Error	Beta	
(Constant)	.665	0.402	1.653	0.001
1 Project Cost Control	0.797	0.11	0.683	6.599
Project Resource Planning	0.779	0.227	0.564	3.431
Project Cost Budgeting	0.253	0.124	0.233	2.047

a. Dependent Variable: Project Performance

Project Cost Control (B = 0.797, Beta = 0.683, P-value = 0.007<0.05). Project Cost Control has a significant influence on project performance (P-value = 0.007<0.05). In this study, it has the second highest influence on project performance (Beta = 0.683). It has a 0.683 influence on performance or rather 68.3%. In our study model it has coefficient of 0.797. Project Resource Planning (B = 0.779, Beta = 0.564, P-value = 0.000<0.05). Project Resource Planning has a significant influence on project performance (P-value = 0.000<0.05). In this study, it has the third highest influence on project performance (Beta = 0.564). It has a 0.564 influence on performance or rather 56.4%. In our study model it has coefficient of 0.779. Project Cost Budgeting (B = 0.253, Beta = 0.233, P-value = 0.005<0.05). Project Cost Budgeting has a significant influence on project performance (P-value = 0.005<0.05). In this study, it has the least influence on project performance (Beta = 0.233) and a 0.233 influence on performance or rather 25.3%. In our study model it has coefficient of 0.253. The constant for the model is 0.665. The model can be fitted as below:

$$PP = 0.665 + 0.797PCC + 0.779PRP + 0.253PCB + \epsilon \dots\dots\dots (iii)$$

**D. Model Summary**

From the findings in Table VII below, the value of R square was 0.888 which suggests that 88.8% variation in Project Performance can be explained by Project Cost Management changes: Project Cost Control, Project Cost Budgeting, Project Resource Planning, Project M&E. The remaining 11.2% suggests that other Project Cost Management factors can be attributed to variation in the Project Performance that was not discussed in this study. The correlation coefficient (R) shows the relationship strength between the study variables.

**TABLE VII: MODEL SUMMARY**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.942 <sup>a</sup>	.888	.870	.46868

a. Predictors: (Constant) Project Cost Control, Project Cost Budgeting, Project Resource Planning, Project M&E

## VI. CONCLUSION

The study concluded that project cost management significantly influence performance of donor funded project in Kajiado County. Project cost management entails processes that are involved in planning, estimating, budgeting, financing, funding and controlling costs for the project to be completed within the budget that has been approved. For effective project cost management, project managers must undertake cost management planning, cost estimation, budgeting and cost control. Project Cost Control significantly influences performance of donor funded projects in Kajiado County. Control cost as one of the processes of Project Cost Management. Control cost is that process of monitoring the project status to manage the changes to the cost baseline and update the project costs. Control costs processes include: monitoring of project cost performance to identify the variances; recording of changes; prevention of unauthorized and incorrect changes; communicating authorized changes to stakeholders; and analysis of variances and their effects to the control processes. Project Resource Planning significantly influences performance of donor funded projects in Kajiado County. Resource planning is the process where tasks are allocated to project team members based on their skill sets, capacity, and best fit for the job. Resource planning helps project teams monitor progress, track capacity, and keeping projects on budget. Schedule planning can also be used to outline the time durations within which the project shall be completed, project costs with respect to resource and labour requirements along with the sequence of completion of project tasks and activities. Project Cost Budgeting significantly influences performance of donor funded projects in Kajiado County. Effective implementations of financial management practices lead to improvement in Project performance due to improved ability to track project events from the record system. For a precise cost budgeting, it is essential to carefully implement a resource plan and schedule.

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