INFLUENCE OF PROJECT PLANNING DRIVERS AND PERFORMANCE OF HEALTH PROJECTS IN KISUMU COUNTY, KENYA

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ABSTRACT

The main objective of the study is to determine the relationship between project planning drivers and performance of health projects in Kisumu County, Kenya. Specifically, the study sought to determine the influence of design driver on performance of health projects in Kisumu County, Kenya, to evaluate how scoping driver influence performance of health projects in Kisumu County, Kenya. The study target population was the active health sector projects implemented for at least five years in Kisumu county government. The study made use of the most used method that is the Krejcie and Morgan (1967) sampling method to select appropriate sample. This leads to sample size of 8 health projects. This study utilized questionnaires to collect primary data. SPSS version 25 was used to analyze the data. Quantitative data collected was analyzed using descriptive statistics techniques. Qualitative data was analyzed using content analysis which was performed in SPSS. Before the data is analyzed, it was first coded, cleaned, and grouped as per the variables. Pearson R correlation was used to measure strength and the direction of linear relationship between variables. Multiple regression models were fitted to the data in order to determine how the independent variables affect the dependent variable. To determine any causal relationship, multiple linear regression analysis was conducted. The study results were presented through use of tables and figures. The study concludes that design driver has a positive and significant effect on performance of health projects in Kisumu County, Kenya. In addition, the study concludes that scoping driver has a positive and significant effect on performance of health projects in Kisumu County, Kenya.

1

INTRODUCTION

Decentralization in health care systems has become extremely popular since early 1990s (Green, 2015; Abramovitz, 2017) where many states, including African states, were decentralizing the management of their health care systems (Okelloh, 2019; Mohmand & Loureiro, 2017). In Canada, majority of the services of health care financed by the public and they offer universal and comprehensive insurance to the citizens of Canada (Ridic, Gleason, & Ridic, 2012; Loh, 2015).

Project planning drivers as suggested by Kululanga and Kuotcha (2020) are essential in determining performance and success of a project being implemented. The ultimate importance of project performance is achieved by avoiding the project's failure to keep within budgeting cost, failure to keep within stipulated time for approvals, design, occupancy and failure to meet the technical standards required for quality, functionality, fitness for purpose, safety and environment protection (Rumane, 2017; Pheng, 2018).

The phase planning is a crucial component of project success. Having a better plan, makes the execution process much easier. The phase of planning begins after the project gets confirmation to launch (Young, 2019). During planning for project implementation, it is necessary to consider the following: project plan, budget and financial plan, resource plan, risk plan, quality plan, communication plan, acceptance plan and procurement plan (Andjela, 2019; Pheng, 2018).

Documentation of the action plan is necessary in the planning process. In that case, a plan has to be determined with clarity for it to be acted upon. Planning for project implementation involves discovery, vision, action and decision-making. It is a reasonable way of focusing at the future with the intention of shaping it (Andjela, 2019; Young, 2019). Since, the departments of health at the county level(s) are responsible for managing and coordinating health services delivery under different projects, it is necessary to consider appropriate project planning practices that can enhance effective implementation of the same projects.

Project planning is the skill of coordinating and directing material resources and human throughout the life of a project by using predetermined techniques of planning to achieve pre-set objectives of scope, time, quality, cost, and participant satisfaction (Young, 2019; Pheng, 2018). With regard to this perspective, Ansoff, Kipley, Lewis, Helm-Stevens, & Ansoff, (2018) allude that project planning; controlling, monitoring and motivation have vital implications on a project's fate, success or failure.

For instance, before implementation starts, it is essential to assess issues such as how well the project fits the setting, if staff hold realistic expectations about what can be achieved, whether there is authentic buy-in or acceptance for the new project, and how to train staff effectively for their new roles. Ofori (2018) observed outstanding challenges where projects are deemed to generally fail as a result planning poorly, constant reviews in the scope and consequently budget and deadline, as well as the lack of control and monitoring.

Statement of the Problem

Over the years there has been a crucial progress in boosting health outcomes through utilization of health services in Kenya (Okech, 2017). The overall health expenditure has been rising since the advent of devolution (National Health Accounts, 2015). Despite having a progressive budget with respective policies, guidelines and community strategies, Kenya Demographic and Household Survey (KDHS) report show that key health indicators have deteriorated over time with some counties recording worse outcomes (Kenya National Bureau of Statistics, 2019). Wazir (2018) and Okech (2017) asserts that projects through which the national governments are unlikely to achieve any of their goals if not well implemented.

Projects that are implemented ineffectively with lack of appraisals, monitoring or moderate level of quality run the risk of failing to achieve their goals hence yielding worse outcomes (Young, 2019; Fixsen, et al., 2019; Kerzner & Kerzner, 2017). The resulting adverse health outcomes erodes employee engagement, damaged relationships, puts strains on project managers, litigation risks and unclear reward systems.

A survey conducted by World Bank revealed that maternal and perinatal conditions, which happens to be among heavily funded projects and ranked top of the government agenda, have continued to be the frontline causes of death in Kenya

(Ministry of Health, 2018; World Bank, 2015). Also, evidence is emerging of an increase in Non-Communicable Diseases (NCDs) and injuries (Ministry of Health, 2015). Available data suggests that NCDs account for 50 to 70% of the admissions in hospital and are responsible for up to 50 per cent of the mortality rates on inpatient given current ongoing projects. Despite launch of various corresponding projects and initiatives, it is estimated that by 2027, NCDs will be the core disease challenge for the nation (Ministry of Health, 2019; Shannon, Haghparast-Bidgoli, Chelagat, Kibachio & Skordis-Worrall, 2019).

Several studies conducted mostly focus challenges in health promotion (Nyamwaya, 2017; Crowley & Mayers, 2015; Mwagomba, Ameh, Bongomin, Juma, MacKenzie, Kyobutungi & Gómez-Olivé, 2018; Schneider, Besada, Daviaud, Sanders, & Rohde, 2018), whereas others explore obstacles and chances of sustainable e-Health programmes sector implementation (Kiberu, Mars, and Scott, 2017; Folker, Lauridsen, Stenderup, Dozeman & Folker, 2018).

In Kenya, available studies have mainly focused on challenges affecting the implementation of specific health sector programmes and projects such as health and safety projects, strategic reproductive health sector projects or free maternal healthcare programme (Wazir, 2018; Mutuli, 2019; Wamalwa, 2015; Munyua, Njenga, Osoro, Onyango, Bitek, Mwatondo & Ade, 2019). This study will be undertaken to bridge these empirical gaps by analysing the core project planning drivers and how they influence performance of health projects in Kisumu County, Kenya. By doing so, the study contributes to government policy on universal health coverage.

Objective of the Study

   i.   To determine the influence of design driver on performance of health projects in Kisumu County, Kenya.

   ii.   To evaluate how scoping driver influence performance of health projects in Kisumu County, Kenya.

LITERATURE REVIEW

Theoretical Framework

Systems Theory by Bertalanffy

The concepts of the systems theory originate from the general thinking of Bertalanffy (1969) with

regard to system functionality. One of the most important concepts in systems theory according to this proponent is the notion of interdependence between systems or sub-systems. It is argued that systems rarely exist in isolation (Stichweh, 2000). According to Stichweh (2000) social systems are in a relationship with either the external non-social environments or the internal environment of other social systems (psychic, biological, cultural environments). They also differ in terms of reference to time: either they are oriented towards future realizations or to present satisfactions.

According to Parsons (1977) there are four chances for systems formation: first, there are systems which are adaptive (combining external reference and future orientation, for instance the economy), secondly systems which are goal-attainment specialize (internal orientation), thirdly systems focused on system elements integration (internal orientation, present time, e.g. the society conceived as a community), fourthly systems which are responsible for long-term patterns maintenance (external reference, present time, e.g. cultural institutions in society).

The use of this theory could be applicable in describing groups, families, or welfare service unit/organizations. The theory has further been interrogated by Friedman and Allen (2011) and most recently applied in the works of Segev, Levinger and Hochman (2018); Cárdenas-Robledo, and Peña-Ayala (2019), and Struthers and Strachan (2019). In its application, it mostly focused at understanding dynamics of relationships in families; establishing a self-regulated learning model and examining gender roles in business.

Since the main principle of systems theory is that individuals/objects are influenced by systems in their immediate social setting for adequate life, success of any health sector projects depends on such systems. Policy makers however can fail to attain their anticipated goals of better health outcomes due to problematic interactions and poor implementation of proposed projects. This theory will help to achieve the first, second and third objectives of design and scoping with regard to performance of the projects.
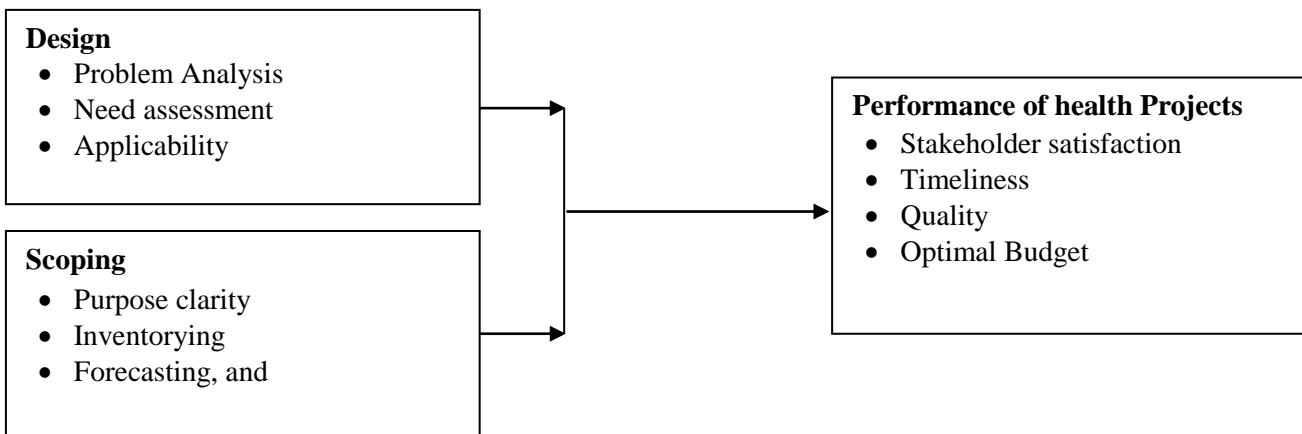
Social Interaction Theory by Becker

This theory was first proposed by Becker (1974) where simple economic theory tools were used to

analyse interactions among the behaviour of some individuals and various attributes of other individuals. This theory gained prominence in economics in formulating the theory of consumer demand. Before the consumer demand theory began to be formalized, economists always discussed what they took to be the basic wants determinants (Becker & Stigler, 1974). Each family or individual generally is assumed to have a function of utility that directly depends on the goods and services it consumes (Stark, 2004).

Also, the sociologists have for a long period of time stressed on the interactions' central role and their significance in the basic structure of personality or wants (Becker, 1974). Interactions were also emphasized by not only Becker (1968) but as well as in modern debates of "social exchange" and the "theory of action" (Becker &

Stigler, 1974; Levine, 2000). On reflection, it is convincing that the earlier economists' emphasis and considerations of sociologists qualified to be taken much more seriously due to the fact that the social interactions had merit far transcending the special cases discussed by Becker and Stigler (1974), and Ferrarotti (1977).

Further interrogation of the theory reveal a close association between choice of health services use and dynamics in individual(s) behaviour (Bertrand, 1993). These links are hard to reunite with ordinary individual. In this trait, social connections are likely to function through social learning. This theory will thus aid in predicting the relationship proposed in the first objective where project design was predicted to have direct influence on performance of the projects.

Conceptual Framework

Design
- Problem Analysis
- Need assessment
- Applicability

Scoping
- Purpose clarity
- Inventorying
- Forecasting, and

Performance of health Projects
- Stakeholder satisfaction
- Timeliness
- Quality
- Optimal Budget

Project Design Practice

Design is the project development process that an organization uses (Martinsuo & Hoverfält, 2018).The design should be developed with clear awareness of the political aspects of the situation. According to Halpern (2009) the design of a project is expected to produce the successful outputs of the objectives of the project by connecting the most appropriate services for clients based on their unique requirements and attributes. A good design of a project should incorporate the knowledge of sound research and best practices to determine the best fit of elements needed for a project to be effective (Morrison, Ross, Morrison & Kalman, 2019). McGuire (2019) suggested five key reasons for conducting project design. They include determining whether; there is really a need for the project (problem analysis); and the design being considered actually meets the needs of the intended beneficiaries (need assessment).

Proper assessment of needs should inform the designer of the project on the following; the capacity of unmet need, the need level for services of the public, the pattern of supply and effectiveness of current services, how to work towards meeting a need and also how to use resources in the most efficient and effective way (Morrison, Ross, Morrison, & Kalman, 2019). Evidence Based Projects (EBPs) are based on rigorous effects study or specific outcomes of interventions or model projects (Brownson, Baker, Deshpande & Gillespie, 2017). They show consistently and reliable positive changes in significant functional and health-related measures.

Project Scoping Driver

Scoping of the project is the process of establishing and documenting a list of specific project goals, deliverables, features, functions, tasks, deadlines, and ultimately costs (Belete, 2019). According to Belete (2019) in

scope management, purpose clarity is important such that the objectives of the project are clearly highlighted in a form that allows particular goals to be defined if there is a way out.

Health project problems, needs and opportunities provide a framework for plan scope management as well aids in establishing planning objectives for implementation. Inventorying, forecasting and analysing existing and likely future conditions in the implementation area is significant. Mostly, in such projects, inventory of projects as well as equipment is an essential part of an effective Health-Care Programme and Technology Management (HPTM) system (Bendre & Thool, 2019; World Health Organization, 2017).

A forecast on the other hand is an estimate of a future event achieved by systematically combining and casting forward in predetermined way data about the past (Gor & Mohan, 2019). Forecasts are possible only when a history of data exists. Both qualitative and quantitative techniques can be employed in forecasting. On consideration of alternatives, it is argued that a project team has to consider determining alternative plans, evaluating effects of alternative plans or comparing alternative plans in terms of timeliness and costs (Bruch, 2015). Alternative plans should address, at a minimum, all of the identified planning objectives. Measures to address identified opportunities should be either directly or indirectly related to the planning objectives.

Empirical Literature Review

A study by Milner, Salazar, Bhopal, Brentani, Britto, Dua & Kirkwood (2019) explored the contextual choices of design and partnerships for modelling early projects development of children in Bangladesh. This was a desktop review of the literature and mixed-method participatory of projects evaluation. About 39 projects were evaluated where 63% were achieved through health and 84% focused on Early Learning (RCEL) and Responsive Caregiving. Multilevel leadership, partnerships and targeted analysis that is situational were critical to adaptation and design.

In Canada, Simmavong, Hillier, & Petrella (2019) undertook an evaluation process for assessment of Health-Steps feasibility implementation in community-based and primary care settings across the country. Obstacles were related to the

challenges of administration such as booking personnel changeovers, space, and participants scheduling. Results out of this analysis brought out insights on delivery of the project, design, and site champions significance. The main lessons learned focused on two areas: project implementation and infrastructure support.

According to the study by Bernard (2012) devolution of healthcare system in Ghana faced performance challenges. It was established that there was no overarching strategy. Many stakeholders had minimal understanding of the plans of the government and process goals in terms of decentralization, deconcentrating (central organization transfers some of its responsibilities to lower-level units within its jurisdiction) and responsibilities' devolution to sub-national levels.

In Ethiopia, Chisholm (2019) explored multi-sectoral collaboration for improved nutrition. Specifically, the study was interrogated the prospects and problems of implementation. It was revealed that implementing initiatives of nutrition through collaboration based on multi-sectoral is challenging. The health sector was perceived to have primary responsibility to address nutrition. The Affairs office of Women had a lesser role than expected. It could be concluded that programs can identify and have many stakeholders at scoping stage with many various points of view, depending on whether they are funders, participants, staff or other community providers of service.

In establishing challenges facing project implementation in Kenyan Parastatals in the Ministry of Forestry and Wildlife, Mathenge (2018) undertook a study where a descriptive survey whose population of target comprised of all the employees in the four parastatals in the Ministry of Forestry and Wildlife was employed. Primary data was collected from participants through the use of a structured questionnaire, which was further analysed using descriptive statistics. Both parametric and non-parametric statistical methods such as correlation analysis coefficient and simple linear regression analysis were used. It was revealed that project implementation in these parastatals is not well coordinated and lapses exist that are bound to cause overruns that need streamlining to enhance satisfaction. It is clear that these parastatals face challenges related to resource planning, client

involvement, donor conditionalities and corporate management support but to varying extents.

METHODOLOGY

The study adopted a descriptive research designs. The study target population was the active health sector projects implemented for at least five years in Kisumu county government as established under the new constitution of 2020. From the available statistics as indicated in the respective county work plans (2018-2015), there are a total of 48 projects implemented at least for five years by the county health departments. The study made use of the most used method that is the Krejcie and Morgan (2016) sampling method to select appropriate sample. This study utilized questionnaires to collect primary data. SPSS version 25 was used to analyze the data. Quantitative data collected was analyzed using descriptive statistics techniques. Qualitative data was analyzed using content analysis which was performed in SPSS. Pearson R correlation was used to measure strength and the direction of linear relationship between variables. Multiple regression models were fitted to the data in order to determine how the independent variables affect the dependent variable.

DATA ANALYSIS

Descriptive Statistics Analysis

Performance of Health Projects

The respondents were requested to indicate the extent to which they agree with various statements relating to performance of health projects in Kisumu County, Kenya. The results were as presented in Table 1.The respondents agreed that performance of health projects has improved over the years. This is shown by a mean of 3.985 (std. dv = 0.867). In addition, the participants agreed that health projects in the county are completed within the set time frame. This statement is supported by a mean of 3.938 (std. dv = 0.978). As shown by a mean of 3.894 (std. dv = 0.989), the respondents agreed that health projects in the county are completed within the set budget. The respondents agreed that the completed health projects achieve the set objectives. This is supported by a mean of 3.861 (std. dv = 0.816). In addition, the participants agreed that they are satisfied with the performance level of health projects. This statement is supported by a mean of 3.857 (std. dv = 0.775).

Table1: Performance of Health Projects

	Mean	Std. Dev.
Performance of health projects has improved over the years	3.985	0.867
Health projects in the county are completed within the set time frame	3.938	0.978
Health projects in the county are completed within the set budget	3.894	0.989
The completed health projects achieve the set objectives	3.861	0.816
Am satisfied with the performance level of health projects	3.857	0.775
Aggregate	**3.906**	**0.871**

Design Driver and Performance of Health Projects in Kisumu County

The first specific objective of the study was to determine the influence of design driver on performance of health projects in Kisumu County, Kenya. The results were as presented in Table 2. From the findings, the respondents agreed that design driver influences performance of health projects. This is shown by a mean of 3.981 (std. dv = 0.958). In addition, the participants agreed that problem analysis help in enhancing performance of health projects. This statement is supported by a mean of 3.949 (std. dv = 0.870). As shown by a mean of 3.881 (std. dv = 0.762), the respondents agreed that need assessment influences performance of health projects. The respondents agreed that applicability is a key indication of project design. This is supported by a mean of 3.845 (std. dv = 0.859). In addition, the participants agreed that they are satisfied with the project design adopted. This statement is supported by a mean of 3.795 (std. dv = 0.953).

Table 2: Design Driver and Performance of Health Projects in Kisumu County

	Mean	Std. Dev.
design driver influences performance of health projects	3.981	0.958
Problem analysis help in enhancing performance of health projects	3.949	0.870
Need assessment influences performance of health projects	3.881	0.762
Applicability is a key indication of project design	3.845	0.859
Am satisfied with the project design adopted	3.795	0.953
Aggregate	**3.851**	**0.888**

Scoping Driver and Performance of Health Projects in Kisumu County

The second specific objective of the study was to evaluate how scoping driver influence performance of health projects in Kisumu County, Kenya. The results were as presented in Table 2. The respondents agreed that project scoping drivers influence performance of health projects. This is shown by a mean of 3.968 (std. dv = 0.805). In addition, the participants agreed that purpose clarity is a key component of scoping driver that influences project performance. This statement is supported by a mean of 3.959 (std. dv = 0.985). As shown by a mean of 3.800 (std. dv = 0.985), the respondents agreed that inventorying is a key aspect in defining the project scope. The respondents agreed that they are satisfied with the

projects scope established during implementation of health projects. This is supported by a mean of 3.785 (std. dv = 0.961).

Table 2: Scoping Driver and Performance of Health Projects in Kisumu County

	Mean	Std. Dev.
Project scoping drivers influence performance of health projects	3.968	0.805
Purpose clarity is a key component of scoping driver that influences project performance	3.959	0.985
Inventorying is a key aspect in defining the project scope	3.800	0.985
Am satisfied with the projects scope established during implementation of health projects	3.785	0.961
Aggregate	**3.866**	**0.885**

Inferential Statistics

Correlation Analysis
Table 3: Correlation Coefficients

		Project Performance	Design Driver	Scoping Driver
Project Performance	Pearson Correlation	1		
	Sig. (2-tailed)			
	N	97		
Design Driver	Pearson Correlation	.879**	1	
	Sig. (2-tailed)	.001		
	N	97	97	
Scoping Driver	Pearson Correlation	.807**	.297	1
	Sig. (2-tailed)	.002	.060	
	N	97	97	97

From the results, there was a very strong relationship between design driver and performance of health projects in Kisumu County, Kenya (r = 0.879, p value =0.001). The relationship was significant since the p value 0.001 was less than 0.05 (significant level). The findings are in line with the findings of Martinsuo and Hoverfält, (2018) who revealed that there is a very strong relationship between design driver and project performance.

In addition, the results revealed that there was a very strong relationship between scoping driver and performance of health projects in Kisumu County, Kenya (r = 0.807, p value =0.002). The relationship was significant since the p value 0.002 was less than 0.05 (significant level). The findings are in line with the findings of Gor and Mohan, (2019) who revealed that there is a very strong relationship between scoping driver and project performance.

Regression Analysis

Table 4: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.911a	.830	.833	.09756

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 0.830. This implied that 83.0% of the variation in the dependent variable (performance of health projects in Kisumu County, Kenya) could be explained by independent variables (design driver, scoping driver).

Table 5: Analysis of Variance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	101.145	4	25.286	451.54	.001[b]
	Residual	5.141	92	.056		
	Total	133.283	96			

The ANOVA was used to determine whether the model was a good fit for the data. F calculated was 451.54 while the F critical was 2.470. The p value was 0.001. Since the F-calculated was greater than the F-critical and the p value 0.001 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 design driver, scoping driver, appraisal driver and Team Composition driver on the performance of health projects in Kisumu County, Kenya.

Table 6: Regression Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	0.439	0.083		5.289	0.009
design driver	0.305	0.071	0.306	4.296	0.001
scoping driver	0.294	0.081	0.295	3.630	0.002

a. Dependent Variable: Performance of health projects

The regression model was as follows:

$$Y = 0.439 + 0.305X_1 + 0.294X_2 + \varepsilon$$

From the results, findings revealed that design driver has a significant effect on performance of health projects in Kisumu County, Kenya $\beta1=0.364$, p value= 0.000). The relationship was considered significant since the p value 0.000 was less than the significant level of 0.05. The findings are in line with the findings of Martinsuo and Hoverfält, (2018) who revealed that there is a very strong relationship between design driver and project performance.

Findings revealed that scoping driver has a significant effect on performance of health projects in Kisumu County, Kenya, $\beta_1=0.305$, p value= 0.001). 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 Gor and Mohan, (2019) who revealed that there is a very strong relationship between scoping driver and project performance.

Conclusions

The study concludes that design driver has a positive and significant effect on performance of health projects in Kisumu County, Kenya. The study found that problem Analysis, need assessment and applicability affect performance of health projects in Kisumu County, Kenya

In addition, the study concludes that scoping driver has a positive and significant effect on performance of health projects in Kisumu County, Kenya. The study found that purpose clarity, inventorying and forecasting affect performance of health projects in Kisumu County, Kenya

Recommendations

The study found that design driver has a positive and significant effect on performance of health projects in Kisumu County, Kenya. This study therefore recommends that the management of Kisumu County should ensure various aspects concerning the designing of the project are put into consideration to enhance project performance.

In addition, the study found that scoping driver has a positive and significant effect on performance of health projects in Kisumu County, Kenya. This study therefore recommends that the management of Kisumu County should ensure purpose clarity, inventorying and forecasting to enhance project performance.

Suggestions for Further Studies

This study focused on the relationship between project planning drivers and performance of health projects in Kisumu County, Kenya. Having been limited to health projects in Kisumu County, Kenya, the findings of this study cannot be generalized to other projects. The study therefore suggests further studies on t relationship between project planning drivers and performance of other projects in Kenya.

Further, the study found that the independent variables (design driver, scoping driver, appraisal driver and Team Composition driver) could only explain 83.0% of the performance of health projects in Kisumu County, Kenya. This study

therefore suggests research on other factors affecting performance of health projects in Kisumu County, Kenya.

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