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Title: Critical Success Factors Affecting Performance Of Housing Projects In KACYIRU.

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Abstract

The success of construction projects is not only crucial to stakeholders but also for the country's economic and social development. Critical success factors (CSFs) are considered as key to project performance practices which lead to construction project success. This research study was guided by theory of constraints. Project planning and scheduling, financial difficulties of the contractors and project scope were found to be the constraints limiting housing construction projects from being completed on time. Questionnaires were distributed among 69 respondents in the categories of clients, consultants and contractors, out of which only 65 were returned. Quantitative research methods employing descriptive statistics while a purposive sampling technique was used to sample data. The findings indicated that there is a significant relationship at the 0.01 level between project planning and project performance (r=0.511, p=0.000), it also indicates that there is positive correlation between project planning and project performance. The findings also reveal that there is a significant relationship at the 0.01 level between contractor financial capacity and project performance (r=0.555, p=0.000) and the relationship is positive correlate. Finally, the findings reveal that there is also a significant at the 0.01 level between Scope project and project performance (r=0.479, p=0.000), the relationship has a positive correlation. The simple correlation was 0.887 in the ANOVA model, indicating a degree of association. Project performance approaches explained 77.6 percent of the variation in project success (R Square=0.786). The study's findings also demonstrated that the ANOVA model accurately predicted project performance ($p=0.000^{b}$). This suggested that the regression model was statistically significant in predicting project performance, and that the regression model was statistically significant in predicting project performance overall, it was a good fit for the data. Therefore, ***Regression equation: Project performance = 0.278 + 0.287*Planning + 0.216*Financial capacity +0.240*Scope***. This equation indicates that planning contributes 28.7% on the project performance, Contractor financial capacity contribute 21.6% on project performance and finally Scope of the project contribute 24% on project performance. The

relationship between independent variables (project planning, Contractor financial capacity and Scope of the project) and dependent variables (project performance) is statistically significant with p=0.000. The study therefore concluded that ineffective project planning and scheduling, financial difficulties of contractors and lack of clear understanding of project scope contributes to the delay of housing construction projects. The research further concludes that proper planning and scheduling, contractor financial status and the scope of the projects contribute significantly to the performance of housing construction projects in KACYIRU. The research recommends a review of the tendering process to ascertain whether this process does not encourage delay of housing construction projects.

INTRODUCTION

Project is a set of multifaceted activities, which are constrained by cost, time and set requirements to satisfy clients' needs (Bakar, 2011). According to Pinto and Slevin (2012) the success in project is achieving the requisite prospect of the stakeholders and accomplishing its projected motive where various organizations have used project management techniques as a means of bridging the gap between failure and success in the implementation of projects. Pinto and Slevin (2012) further indicated that project success requires creating a proper planned project schedule as well as acknowledging factors, which are keys to project success.

According to Brain (2016) project management has been practiced for as long as humanity inhabited earth and there are many examples in history of challenging projects that were successfully completed, despite all the complexities and uncertainties that could have rendered the project a failure. It's not until the 1950s that organizations have started to apply systematic tools and techniques to complex projects. Walkeret al.,(2004) showed project management has evolved over the past couple decades as researchers and practitioners have attempted to identify the causes of project failure and the various factors that lead to project success. Traditional project management skills were developed from the requirements of construction and defense industries to plan, control and manage large and complex 'tangible' projects from these arose the so-called "hard" concepts of project success criteria in the form of controlling and managing schedule, cost and scope. Project Management can also be seen as being about managing change (Bourne &Walker, 2004) and project managers should consider themselves as change agents adding to the project Management role an additional focus on so-called'soft' aspects of relationship management (Bourne and Walker, 2004).

According to Asian Development Bank (2014), in Turkey, expectations of corporations from their information technology departments are increasing every day. Information Technology departments and companies that give technology service to sectors like banking, telecommunications, retail, logistics, etc. are in a fierce competition. Companies try to present new products in the shortest available time with the best quality in order to compete in their markets. As a result, the importance given to management of product development projects is rapidly increasing. Most of the information technology companies or departments have project management office (PMOs) and the number of Project Management Institute certified professionals in Turkey are continuously increasing. On the other hand, although project management literature is quite limited, the global problems of project management mentioned previously have also been witnessed in Turkey.

Despite existence of programs such as Program for Infrastructure Development in Africa (PIDA) especially in construction sector which are aimed at boosting intra -African trade through the improved infrastructure, and supporting financial from financial institutions such as the African Union and African Development Bank (AFDB), as well as being underpinned by strategies. However, in spite of these challenges, the potential offered by Africa to overcome its challenges by continuing with its infrastructure development projects is evidenced by funding measures announced on a yearly basis. For example, as recent as 2015, African Nations have renewed their efforts to accelerate their priority projects under the Programme for Infrastructure Development, which began in 2012, need $68 billion by 2020 and an additional $300 billion for those planned to 2040 (Davison, 2015). There is also support from international funding bodies such as the World Bank for continued investment in Africa.

Given the housing definition of infrastructure, this paper focus more on the sector of construction to illustrate the factors of challenges and what lessons can be learned can be tailored in mitigating some of the challenges in implementing construction practices. The rationale for selecting 'risk management' as a concept to illustrate the synergies with infrastructure project performance is supported by a number of studies (Mehta, 2015, Chileshe & Kikwasi, 2014a). For example, Mehta (2015) identified two factors such as political instability and other economic factors like weak infrastructure in some African countries among the questions that prey on people's mind when thinking of investing in Africa. Similarly, Chileshe & Kikwasi (2014a) study albeit focused on Tanzania reviewed a number of studies in selected African and developing countries such as Zwikael (2009); Ghana (Agyakwa and Chileshe, 2010); South Africa (Nkado, 2010); India (Tabish and Jha, 2011) as well as developed economies such as Australia (Zou et al., 2010) which provided

evidence to the close alignment between implementation of risk management and assessment practices with improved overall project performance.

According to the Rwanda National Budget Report (2011), Rwanda as developing country within the rest to catch-up with the market trends of other was developing economies such as Malaysia, Singapore and the neighboring Kenya Chileshe & Kikwasi (2014). The country's GDPstandsatUS$13.46 billion, the real GDP growth rate is at about7.6%. Construction takes 20.2 % of the GDP, an indication of a growing economy (Mehta, 2015).

The Rwanda construction industry accounts for reasonable percentage, other than agriculture sector of the labor population. The budget allocation of housing construction sector by government in 2011/2012 was estimated at Rwf 210.81 Billion. Like all other developing countries, this is an indication that Rwanda is increasing its capital spending, the efficiency of which will be determined by the Government's ability to manage infrastructure spending effectively. The ability, therefore, to resolve contract disputes quickly and effectively may be the difference between a project that is uncompleted on time and failed to identify critical success factors (Maddock, 2009; Roza, 2013). In 2012, Rwandan government projected to work on 430km of housing repair, which when no serious attention to all stages of the project preparation and execution, disputes may rise, leading to failing the projects or causing big losses on citizen's taxes. Therefore, much should be done to combat the arising disputes on any construction projects to be cost effective and reduce losses that may arise from that negligence. The existing method in Rwanda used to handle commercial disputes is by litigation method that involves courts of law; this method is expensive, time wasting and enemy creator. To improve that, more other efficient dispute resolution mechanism was in place to iron out arising disputes in housing construction projects and whose implementation would require identifying critical success factors affecting performance of housing projects.

Statement of the problem

Housing construction projects is an essential component for the development of Rwanda, it is a key driver of economic growth, it is very important that contractors accomplish housing projects on time, within cost and quality that meet client expectations, achieving success in the implementation of construction project largely depends on the contractor's performance (Chileshe et al. 2009). However, it has become a global trend that contractors are not performing to the expectations of the clients that they serve and indeed many housing contractors have failed in performance. Mahamid (2013) attest to this, when saying that the history of construction industry worldwide is full of projects that were completed with delay and cost overruns. Rwanda is also facing contractor performance related issues. MININFRA (2013), RTDA (2018) and OAG (2017) argue that persistent delays are the challenge facing the infrastructural development projects in Rwanda. Indeed, OAG (2017) highlights that a total of 109 contracts worth FRW 206,817,279,066 had been delayed or abandoned. These abandonment and delays of housing construction projects frustrate the process of economic development and has an immeasurable cost implication to the society. According to Duncan (2020) a number of construction projects register poor performance related to the project management practices, some of the literature shows significant research on the delay factors of housing projects in Rwanda with different scope of analysis (Umuhoza and An (2020) and Ingabire (2021) and other research the on factors affecting time and cost performance of construction projects like in Tuyishimwe, 2020. Despite the fact that previous studies focused on documenting the factors affecting delays, cost overruns and performance of housing construction projects in Rwanda, poor performance persisted in housing construction sector. Indeed, these studies have not stack on critical success factors affecting performance of housing project in KACYIRU precisely. Therefore, there was a need of this research to examine the effect of project planning and scheduling, contractors' financial difficulties and understanding of the project scope on time performance of housing construction projects in KACYIRU.

Objectives of the study

1. To examine effect of Project Schedule planning on Performance of Housing Projects in KACYIRU
2. To evaluate the effect of Contractors' Financial Difficulties on Performance of Housing Projects in KACYIRU
3. To access effect of Project Scope on Performance of Housing Projects in KACYIRU

Research questions

1. Does Project Schedule planning affect Performance of Housing Projects in KACYIRU?
2. What is the effect of Contractors' Financial Difficulties on Performance of Housing Projects in KACYIRU?
3. What is the effect of Project Scope on Performance of Housing Projects in KACYIRU?

LITERATURE REVIEW

Project Schedule planning on Performance of Housing Projects

The literature on construction, software, and general project management is evaluated in Serrador's (2012) study to assess the criticality of the project-planning phase on project success in the project life cycle. The findings of the review emphasize the importance of project planning and the favorable association between project successes in the various sectors studied. As a result, the study indicated that total project efficiency and success were positively connected with project planning, and that, based on the literature evaluated, there has been persistent pressure to dramatically reduce the time given to the planning phase. Furthermore, the degree of planning completion was a strong predictor of building project success.

Risk management's mediating role and culture's moderating effect was examined in Naeem et al's (2018) study to investigate the role of project planning on project success. It was discovered that there is a link between project success and project planning, with efficient project planning at the early phases of the project life cycle having a considerable impact on project success. The study particularly underscores the need to plan in the early stages of a project and the need for project managers to ensure that the planning phase is not overlooked and allocated sufficient time and resources, which centers the role of risk management during the planning phase effectively.

Simiyu (2018) found that different project management techniques influenced the success of agricultural projects in a study that looked into the role of project management practices on the

success of agricultural projects. The findings highlighted the importance of project monitoring and evaluation, planning, implementation, and communication in project success. Most notably, the project implementation team's planning actions in the early stages of the project life cycle resulted in much fewer issues as the project continued. Project planning, according to the participants, improved the success of the initiatives by ensuring that there were fewer bottlenecks along the route.

Contractors' Financial Difficulties on Performance of Housing Projects

According to (Prince A., 2017) a construction project to be completed successfully, it must be funded on a regular basis. The following are the most typical sources of finance for construction projects: To begin with, a contractor can obtain trade credit from a supplier of products in the ordinary course of business. In practice, the contractor is not required to pay for material purchases in cash right once.
Second, accumulated expenses are a natural source of short-term financing since it allows the contractor to acquire services without having to pay for them. This is a non-interested, spontaneous source of funding. Thirdly, delayed revenue occurs when a contractor is paid in advance for services he has pledged to provide in the future. The contactors' cash liquidity is increased as a result of these receipts. The main item of deferred income is the advance payment provided by clients. Finally, construction enterprises borrow money from banks, which is the most common institutional source of working capital credit. Overdrafts, cash credit, invoice discounting, letters of credit, and working capital loans are all ways that contractors might get money. Bank credit, after trade credit, is the most important source of operating capital for contractors. According to the American Institute of Architects, financial issues are the leading cause of commercial real estate construction delays. Many construction project contracts were canceled due to a lack of funding at the start of the economic recession in 2008. The Immigrant Investment Program (EB-5) was established in 1990 to aid in the stabilization of the United States' economy through the development of jobs and capital investment by foreign investors. Construction investors gained since they now had a source of finance to help them succeed or stay on the sidelines. Sewalk et al. go on to say that, while the EB-5 program has its advantages, industrial ventures, particularly high-tech projects with few employees, have proven to be difficult. According to Deloitte, the government should look into mechanisms to stimulate market interest and make infrastructure assets more appealing, so that a relatively small government investment (for example, through co-funding or a guarantee) can leverage into a much larger increase in total financing, because private sector financing in the United States is increased by a multiple of government investment (UK).

Project Scope on Performance of Housing Projects

Scoping work is a critical and highly technical process that necessitates knowledge, discipline, and focus. The following steps are usually included in project scoping: Identifying the project's goals; Identification or development of performance outcomes/criteria and functionality requirements in order to meet those goals; Identification of the project's delivery context, as well as important restrictions and assumptions; and translation of project needs into contractual scope papers (construction drawings and specifications, for example). Poor scoping can have serious implications, including cost overruns, delays in completion, and disagreements, many of which can stretch on for months or even years. A project's scope is the contractual statement of a client's requirements4, and inadequate specifications can result in rework and delays during construction. Scope document deficiencies appear more frequently during project delivery than during any other phase. This becomes a problem since by that time, most parties will have engaged into contracts. Parties may rely on their contracts rather than negotiate and compromise in order to adjust if there isn't a lot of goodwill. Changes at this point are almost certain to have an impact on the project's cost, quality, or timeliness of delivery, or a combination of all three. If scope flaws aren't discovered until after work has started, the customer will almost certainly be obliged to pay the contractor for changes, implying that neither the budget nor the initial contract price reflects the true cost, and the job may not be completed by the intended deadline. When the client does not want to take on all of the design risk and/or wants to stimulate innovation, a procurement technique such as a design and build (D&C) contract is a viable option. This should not, however, be seen as a strategy to avoid the necessity for project scoping efforts. The Client's Project Performance Requirements will be reflected in the project's outcomes, so it's vital that these are well defined at the time of tendering and properly detailed in the Project Brief to guarantee high-quality outcomes are achieved.

The idea clarifies the project manager's contribution deliverables in terms of client satisfaction. Though the principle of the triple limitations has been acknowledged as a measure of project performance, managing three aspects that are sometimes at odds is tough. Each of the three criteria has constraints and impacts on project execution (Hamid et al, 2012). Government-funded projects frequently experience cost overruns and delays, which are costly to the government and the general public, as well as contracting partners (Ondari & Gekara, 2013).

METHODOLOGY

Research Design

This study adopted descriptive survey design.

Target Population

The population comprised by 69 respondents of KACYIRU Housing Project.

Sample size

In this research, it was necessary to calculate sample size and the formula of Yamané was used to determine the sample size, which is $\boldsymbol{n} = \frac{N}{1+N*(e)^2}$ Where n= Sample size, N= Total population of the study, and e= Probability of error (0.05). By using Yamané formula, sample size will be 69 participants

Data Collection Methods

Data collection was a systematic approach to gathering information from a variety of sources to get a complete and accurate picture of an area of interest (Karen, 2013). The two sources included the secondary and primary data sources.

Data analysis and presentation

The data collected was analyzed using quantitative methods of data analysis.

RESEARCH FINDINGS AND DISCUSSIONS

Questionnaires' Return Rate

The study sampled 69 respondents in collecting data on critical success factors affecting performance of housing project in Rwanda. The questionnaire return rate results are shown in the below:

Table: Questionnaires' Return Rate.

	Questionnaires Issued	Questionnaire Returned Back	Response Rate
Total	69	65	94.2%

Source : Field Data (2021)

Effect of project planning on Performance of Housing Projects

Effective project planning and scheduling is a critical factor that contribute the good performance of housing projects. Therefore, this section of the research presents the findings on the effect of initiating the project properly, test the understanding of project goals and objectives, application of realistic schedule and budget estimates, establishment of basis for project monitoring and control, and management of project resources are main themes guiding this section.

Table: Project planning on Performance of Housing Projects

		Count	Column %	N	Mean	Std. Deviation
Clearly setting deadlines for the project in the project's initial plan is critical to the performance of the projects.	Strongly disagree	0	0.00%			
	Disagree	5	7.70%			
	Neutral	10	15.40%		4.05	0.909
	Agree	27	41.50%			
	Strongly agree	23	35.40%			
Clearly setting deliverables in the project's initial plan affects the overall delivery of the project	Strongly disagree	0	0.00%			
	Disagree	0	0.00%			
	Neutral	12	18.50%		4.18	0.727
	Agree	29	44.60%			
	Strongly agree	24	36.90%			
Clearly setting roles and responsibilities for the project team improves the performance of the project	Strongly disagree	1	1.50%			
	Disagree	1	1.50%			
	Neutral	10	15.40%		4.09	0.824
	Agree	32	49.20%			
	Strongly agree	21	32.30%			
Clear stakeholder needs assessment and analysis contributes to the success of the	Strongly disagree	0	0.00%		4.37	0.720

		Count	Column %	N	Mean	Std. Deviation
project	Disagree	0	0.00%			
	Neutral	9	13.80%			
	Agree	23	35.40%			
	Strongly agree	33	50.80%			
	Strongly disagree	0	0.00%			
Having SMART project objectives assist in the successful delivery of the project	Disagree	0	0.00%			
	Neutral	8	12.30%		4.37	0.698
	Agree	25	38.50%			
	Strongly agree	32	49.20%			

Source: *Researcher, 2021*

The result in table 4-7 reveal that more than 70% of the respondent agree the argument that clearly setting deadlines, deliverables for the project in the project's initial plan is critical to the performance of the projects. Which emphasize their crucial contribution in the project monitoring and evaluation towards the good performance of the project. Only 3% of the respondent disagree that clearly setting roles and responsibilities for the project team improves the performance of projects, this means that the majority of the respondent support the contribution of elaborating team with their deliverables is very needed and contribute to the positive performance of the project. Table 4-7 also reveal that having SMART objectives (Specific, Measurable, Achievable, Relevant and Time-bound) assist in the successful delivery of the project, the research also shows that understanding stakeholder needs also contribute the success delivery of the project. The findings of this table also confirm the high level of agreement that can be explained by means of each indicator that is 4 and above and a low standard deviation.

Effect of contractors' Financial Difficulties on Performance of Housing Projects

Contractor Financial Capacity

Contractor financial difficulties is a critical factor that contribute the good performance of housing projects and that can also lead to the failure of the project if the contractor has no sufficient resources to manage the project. Hence, this section of the research presents the findings on the contractor financial capacity.

Table: Contractor Financial Capacity on Performance of Housing Projects

		Count	Column N %	Mean	Std. Deviation
Contractor, have access to capital sources and loans hence effective project cost management	Strongly disagree	0	0.00%	4.03	0.809
	Disagree	0	0.00%		
	Neutral	20	30.80%		
	Agree	23	35.40%		
	Strongly agree	22	33.80%		
Contractor, have capacity to access funding for housing projects which enhances timely completion of housing projects.	Strongly disagree	3	4.60%	3.60	1.028
	Disagree	3	4.60%		
	Neutral	25	38.50%		
	Agree	20	30.80%		
	Strongly agree	14	21.50%		
Construction company has adequate and relevant assets which enhances delivery of quality housing projects, strong profit and loss statements of construction company indicates financial capacity which guarantees timely completion of projects.	Strongly disagree	5	7.70%	3.55	1.090
	Disagree	3	4.60%		
	Neutral	20	30.80%		
	Agree	25	38.50%		
	Strongly agree	12	18.50%		
Contractors only bid for projects for which they have the financial capacity to undertake	Strongly disagree	5	7.70%	3.65	1.192
	Disagree	4	6.20%		
	Neutral	19	29.20%		

	Agree	18	27.70%
	Strongly agree	19	29.20%

Source: *Researcher, 2021*

Respondent in table 4-8 affirm that contractors have access to capital sources and loans that can be used for the effective project cost management, around 50% affirm also that contractor have capacity to access funding for housing projects which enhances timely completion of housing projects. The findings continue showing that construction company has adequate and relevant assets which enhances delivery of quality housing projects, strong profit and loss statements of construction company indicates financial capacity which guarantees timely completion of projects and finally their only bid for projects for which they have the financial capacity to undertake. Despite of that the mean of all indicator except indicator one in table 4-8 are closer to neutral (3).

Contractor Management of Project Resources

Evaluating contractor financial difficulties is not straightforward, in the following table we evaluate the cause that can lead to financial difficulties as in table 4-8 we find that the contract before being engaged in a construction project he has more resources and bid for a project for which they have financial capacity to undertake and we have also seen in table 4-5 and 4-6 that our respondents are experienced and have a good level of education. All of these factors show that our respondents are knowledgeable about the construction area. But as we are analyzing the effect of contractor financial difficulties on performance of housing project table 4-9 is going to give us light on our objectives.

Table: Management of Project Resources

		Count	Column N %	Mean	Std. Deviation
Implementing multiple housing project at the same time affect the performance of housing project	Strongly disagree	12	18.50%	3.05	1.430
	Disagree	14	21.50%		
	Neutral	12	18.50%		
	Agree	13	20.00%		
	Strongly agree	14	21.50%		
Using the same resources across different housing projects affect the performance of housing projects	Strongly disagree	3	4.60%	4.08	1.108
	Disagree	3	4.60%		

		Count	Column N %	Mean	Std. Deviation
Owners of projects are usually late in making payments which affect the performance of housing projects	Neutral	10	15.40%	3.88	1.023
	Agree	19	29.20%		
	Strongly agree	30	46.20%		
	Strongly disagree	2	3.10%		
	Disagree	4	6.20%		
	Neutral	14	21.50%		
	Agree	25	38.50%		
	Strongly agree	20	30.80%		
Clear budgetary allocation for all project activities helps in the overall management of project costs	Strongly disagree	3	4.60%	4.02	1.097
	Disagree	3	4.60%		
	Neutral	11	16.90%		
	Agree	21	32.30%		
	Strongly agree	27	41.50%		
Sufficient budgets for the project activities, teams, or departments improve project cost management	Strongly disagree	3	4.60%	3.91	1.114
	Disagree	4	6.20%		
	Neutral	13	20.00%		
	Agree	21	32.30%		
	Strongly agree	24	36.90%		
Proper allocation of project equipment facilitates smooth operations and successful project completion	Strongly disagree	4	6.20%	3.78	1.231
	Disagree	7	10.80%		
	Neutral	12	18.50%		
	Agree	18	27.70%		
	Strongly agree	24	36.90%		

Source: Researcher, 2021

Housing construction projects professionals are multi- tasking. The findings of this research 41% of the respondent indicate that implementing multiple housing project at the same time affect the performance of housing project but also around 38% disagree with the statement. Moreover, 75% of respondents use the same resources across different housing projects, which lead to the late payment as 68% of our respondent confirm that owners of construction of housing project

are usually late in payment and this argument can be proved by the multiple projects in the company portfolio.

Project Scope on Performance of Housing Projects in KACYIRU

Scope management is critical to the success of housing projects. Poor scoping can result in major cost overruns, delays in completion, and disagreements, many of which can last months or longer. A project's scope is the contractual statement of a client's needs, and bad specifications can result in rework and delays throughout development. Hence, table 4-10 of this research presents the findings on the effect of project scope on performance of housing projects in KACYIRU.

Table: Project Scope on Performance of Housing Project

		Count	Column N %	Mean	Std. Deviation
A clear scope definition it avoids scope creep for the project performance.	Strongly disagree	2	3.10%	3.71	0.980
	Disagree	4	6.20%		
	Neutral	19	29.20%		
	Agree	26	40.00%		
	Strongly agree	14	21.50%		
A clear scope plan shared with the project team before the project is implemented contributes to the success of the project.	Strongly disagree	2	3.10%	3.68	1.017
	Disagree	5	7.70%		
	Neutral	20	30.80%		
	Agree	23	35.40%		
	Strongly agree	15	23.10%		
Project scope verification during it implementation contribute to the performance of the project.	Strongly disagree	3	4.60%	3.65	1.096
	Disagree	5	7.70%		
	Neutral	21	32.30%		
	Agree	19	29.20%		
	Strongly	17	26.20%		

	agree				
Clearly understand the expectation of client and stakeholder contributes to the success of the project.	Strongly disagree	1	1.50%		
	Disagree	1	1.50%		
	Neutral	18	27.70%	3.94	0.882
	Agree	26	40.00%		
	Strongly agree	19	29.20%		
Realistic deadline contributes to the performance of the project.	Strongly disagree	5	7.70%		
	Disagree	1	1.50%		
	Neutral	22	33.80%	3.71	1.155
	Agree	17	26.20%		
	Strongly agree	20	30.80%		

Source: Researcher, 2021

The findings reveal that 61.5% agree that clear scope definition helps to avoids scope creep for the good performance of the project, a big proportion more than 50% of respondent agree that clear scope plan communicated to the project team, project scope verification in the lifetime of the project, clearly understand the expectation of client and stakeholder and realistic deadline are key contributors to the scope management for the performance of the project. The findings of this result that indicates the high level of agreement of all mentioned statement from the questionnaire assure us the effect of scope on housing project. As it is agreed by respondent who are subject matter with high level of education and experience in the construction industry as it was shown in table 4-5 and table 4-6.

Correlation Analysis

Table: Relationship between study variables (correlation)

		Project Performance	**Project Planning**	**Financial Capacity**	**Scope**
Project Performance	Pearson Correlation	1	.511**	.555**	.479**
	Sig. (2-tailed)		.000	.000	.000
	N	65	65	65	65
Project Planning	Pearson Correlation	.511**	1	.085	-.060
	Sig. (2-tailed)	.000		.501	.638

	N	65	65	65	65
Financial	Pearson Correlation	.555**	.085	1	-.008
Capacity	Sig. (2-tailed)	.000	.501		.951
	N	65	65	65	65
Scope	Pearson Correlation	.479**	-.060	-.008	1
	Sig. (2-tailed)	.000	.638	.951	
	N	65	65	65	65

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

Source: *Researcher, 2021*

Findings in table 4.11 indicate that there is a significant relationship at the 0.01 level between project planning and project performance (r=0.511, p=0.000), it also indicates that there is positive correlation between project planning and project performance. The findings also reveal that there is a significant relationship at the 0.01 level between contractor financial capacity and project performance (r=0.555, p=0.000) and the relationship is positive correlate. Finally, the findings reveal that there is also a significant at the 0.01 level between Scope project and project performance (r=0.479, p=0.000), the relationship has a positive correlation.

Regression Analysis

Table: Model Summary[b]

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.887[a]	.786	.776	.10611

a. Predictors: (Constant), Scope, Financial Capacity, Planning

Source: Researcher, 2021

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.527	3	.842	76.500	.000[b]
	Residual	.687	61	.011		
	Total	3.214	64			

a. Dependent Variable : Project Performance

b. Predictors: (Constant), Scope, Financial Capacity, Planning

Source: *Researcher, 2021*

The simple correlation was 0.887 in the ANOVA model, indicating a degree of association. Project performance approaches explained 77.6 percent of the variation in project success (R Square=0.786). The study's findings also demonstrated that the ANOVA model accurately predicted project performance (p=0.000b). This suggested that the regression model was statistically significant in predicting project performance, and that the regression model was statistically significant in predicting project performance overall, it was a good fit for the data.

Table: Regression Analysis between Project performances on the study objectives

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.278	.200		1.390	.169
	Planning	.287	.034	.497	8.355	.000
	Financial Capacity	.216	.025	.517	8.706	.000
	Scope	.240	.028	.512	8.636	.000

a. Dependent Variable : Project Performance

Source: Researcher, 2021

Regression equation :

Project performance = 0.278 + 0.287*Planning + 0.216*Financial capacity +0.240*Scope

This equation indicates that planning contributes 28.7% on the project performance, Contractor financial capacity contribute 21.6% on project performance and finally Scope of the project contribute 24% on project performance. The relationship between independent variables (project planning, Contractor financial capacity and Scope of the project) and dependent variables (project performance) is statistically significant with p=0.000.

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Effect of Project Schedule planning on Performance of Housing Projects in KACYIRU

This research has collected and analyzes schedule-planning indicators that contribute to the performance of the housing projects; there is no success in the performance of the housing project

if they are not taken into consideration. The indicator analyzed and collected for the schedule planning of performance of housing projects are: Setting deadline in the initial phase of the project, setting deliverables in the initial phase of the project, setting role and responsibility for the project team, Stakeholder need assessment and analysis and lastly SMART objectives. The findings of this research indicate that more than 70% of the respondents were of the opinion supporting the indicator used in this research to measure the effect of the performance of housing project in KACYIRU. The same findings were observed in (Kimutai, 2020). The high level of agreement in the mean where it is 4 and a less standard deviation across all indicators for objective one also supports these findings.

Effect of Contractors' Financial Difficulties on Performance of Housing Projects in KACYIRU

This research revealed also those contractors' financial difficulties has an effect on the performance of the housing projects in KACYIRU. In this research we evaluate the contribution of financial difficulties on the performance of housing project. The indicator used for the evaluation was, contractor access to capital sources and loans, contractor capacity to access fund for housing project for the timely completion of the project, contractor only bid for projects which they have the financial capacity to undertake, implementation of multiple housing project has a negative impact on the performance of the project, etc. The findings of this research on the level of agreement were moderate high where the mean is around 3.7.

Effect of Project Scope on Performance of Housing Projects in KACYIRU

Lastly this research evaluates the contribution of project scope on the performance of housing projects in KACYIRU, scope definition, scope plan, scope verification, clearly understand the expectation of client are the indicators used to evaluate the effect of the project scope on the performance of housing project in KACYIRU. As discussed above the high level of agreement can also be observed in the mean of the response where on average opinion of respondent strongly supported the indicators of the project scope on performance of housing project in KACYIRU.

Conclusions

The findings of the study conclude that clearly set deadlines, deliverables in the project's initial plan, set roles and responsibilities, stakeholder needs assessment and analysis and SMART project objectives assist in the initial project planning has an effect on the performance of the project. Access to capital sources, loans and fund, bid for projects for which contractor has the financial capacity to undertake. Access to capital sources, loans and fund, bid for projects for which they have the financial capacity to undertake, implement housing project at the same time,

use of resources across different housing projects, clear budget allocation, sufficient budgets, proper allocation of project equipment facilitates has an effect on the performance of the projects. Finally, the research finds that clear scope definition, scope plan shared with the project team, scope verification, understand the expectation of client and stakeholder and Realistic deadline contributes to the performance of the project.

Recommendations

Based on the findings of this research we would recommend the following on the project managers:

Project manager should clearly set goals based on a clear understanding of stakeholder understanding to avoid cost overruns, construction reworks, delays of projects and scope creep. Project manager has to have hands on skills in project management for the good performance of the project. The findings also point out the role of contractors in bidding on projects that they have enough resources to undertake, avoid using the same resources across multiple project.

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