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PROJECT TEAM SELECTION AND PERFORMANCE OF GOVERNMENT CONSTRUCTION PROJECTS IN KENYA

[1] Kinyanjui Phyllis Mbutu, [2]Prof. Ngugi Patrick Karanja (PhD) and [3]Dr. Ombui Kepha (Ph.D.)

[1] Corresponding author's, PhD Scholar, Jomo Kenyatta University of Agriculture and Technology; e-mail: mbutu2015@gmail.com

[2,3] Lecturers, Jomo Kenyatta University of Agriculture and Technology

ABSTRACT

The purpose of this study was to establish the relationship between project team selection and performance of government construction projects in Kenya and the moderating role of resource mobilization on the relationship. The study was guided by project management competency theory. The study used a cross sectional research design. The unit of observation was the project managers while the unit of analysis was the construction projects in the ministry of transport, infrastructure, housing and urban development. Simple random sampling was used to select 178 construction project that formed the sample size. Data was collected using semi- structured questionnaire. After the data was collected, it was subjected to editing, handling blank responses, coding categorizing and keyed into statistical package for social science computer software for analysis version 24. The study adopted descriptive statistics and inferential statistics. The data was presented using tables, charts and graphs. The study found that there was significant corresponding change in project performance for change in project team selection. Based on the findings, it can be concluded that project team selection had a positive and significant relationship with performance of construction projects in Kenya. Further it was established that resource mobilization had an influence on project performance and it is very essential during project commencement meaning it was good moderator to moderate the relationship between project initiation practices and project performance. The study recommends the need to conduct an effective process of selecting the project team to ensure the right project team is selected. The study recommended that future research should be carried out to focus on other categories of projects, which are also essential in economic growth and development. A similar study should be carried out to assess other factors that could be missing in the performance of the construction projects.

Key Words: project team selection, project initiation practices, government construction projects

Background of the Study

From its roots in the management, and particularly the control, of large-scale industrial and military projects, there have been increasing calls for project management to better reflect the lived reality and actual approaches of project managers (MARIĆ, 2019). According to (R. Turner, 2020) areas of concern are how the organization decides to initiate projects, and how it ensures that the projects that are chosen are the right ones. (Cha et al., 2018) notes that improved framing of project initiation decisions requires a better understanding of the link between projects and organizational strategy, including an understanding of the influence of political processes on initiation decisions and of the broader context in which project results will be implemented.

Klakegg et al., (2016) argued that the development of the project idea is the most critical stage associated with the project, and the one likely to have the highest influence on project success or failure. According to Weninger & Huemann, (2015) project initiation, which he calls 'project scoping' consists of recruiting the project manager, eliciting the true needs of the client, documenting the client's needs, negotiating with the client about how those needs will be met, writing project overview statement, gaining senior management approval to plan the project. The initial strategic conception of a project represents possibly the most critical decision, and is likely to have the greatest impact on project success or failure (Shenhar *et al.*, 2016). This proclamation also recognizes the role of the project as a vehicle for creating strategic value, which therefore means that a project needs to be initiated with an appreciation for the context in which it will be executed (Svejvig & Andersen, 2015).

According to Mesly, (2017) understanding the initiation of projects requires first exploring and defining the domain of project management. Notably problematic in investigating the decision-making process surrounding the initiation of projects is the ability to clearly articulate where the boundaries of the project lie. Venczel et al., (2021) argue that despite the current developments in project management processes and tools, project success rate has failed to significantly improve due challenges that are traceable to factors that should have been addressed at project initiation stage. Poor project initiation practices may contribute to the shaky foundation of many projects, which make them slacken in terms of completion rates regarding the intended and actual completion period (Ngunjiri, 2018). Therefore, focusing on project initiation practices is essential in unlocking the project success.

Statement of the Problem

The construction industry has experienced exponential growth and it has a big impact on the economy of all countries (Emmett & Langston, 2019). In spite of the high importance of the sector, construction projects failures are increasingly reported around the globe with 30% of projects been cancelled midstream, while 50% of the completed projects end up to 190% over budget and 220% late because of poor handling of project initiation practices (Silva *et al.*, 2016).

In Kenya the construction industry has been faced by enormous challenges in quality assurance because of the alarming rate of collapsing structures due to poor workmanship, unqualified project team and use of substandard materials (Building Audit report, 2015). According to Ngunjiri, (2018) most construction projects are started by political elite hence no time is taken to analyse the project nor do a feasibility study. Instead, the projects are pushed by politicians for their political gain thereby undermining their quality. According to NCA report of 2018, 66% of the construction projects collapse after completion while 34% of the projects collapse during construction. In addition, the construction projects have been experiencing delays, due to inadequate pre-planning, and poor scope definition which have lead to cost overruns and schedule overruns, according to the economic survey conducted by Kenya National Bureau of statistics (2018) the value of construction projects completed in 2018 decreased from ksh 3.8 billion in 2017 to 2.3 billion and 52% of the projects were not

completed within the projected budget and 33% were not completed within the planned schedule while 22% of the projects had errors identified during the project initiation phase yet they were implemented.

According to Iha, (2014) who conducted a study on the factors influencing project initiation in respect to the bible translation projects in Kenya he conceptualized that project initiation lay down the foundation for everything that fall in place systematically as per the structure of the project. Mkuni, (2016) also conducted a study on the role of project initiation on completion of projects and established that scope definition, and risk identification were key project initiation aspects that influenced project performance. Looking more broadly a failed project may be a testimony to wrong or poor decisions been taken at project initiation phase (Ngunjiri, 2018). Poor project initiation practices may contribute to the shaky foundation of many projects, which make them slacken in terms of completion rate regarding the intended and actual completion period (Nzekwe *et al*., 2015). Despite the importance of the project initiation practices on project success, few studies have sufficiently focused on initiation phase. Hence this study aimed at bridging the existing gaps by examining the influence of project initiation practices on performance of government construction projects in Kenya.

Objectives of the Study

1. To establish the relationship between project team selection and performance of government construction projects in Kenya.
2. To examine the moderating effect of the resource mobilization on the relationship between project initiation practices and performance of government construction projects in Kenya.

Hypotheses of the Study

1. **H_0:** There is no relationship between project team selection and performance of government construction projects in Kenya.
2. **H_0:** Resource mobilization does not moderate the relationship between project initiation practices and performance of government construction projects in Kenya.

Theoretical Review

Project Management Competency Theory

The theory was established by McClelland & McBer in the 1980s. According to this theory competency as the underlying characteristic of an individual that is causally related to criterion-referenced effective and/or superior performance in a job or situation. The theory's objective and goal was to explain the roles of competency in project management and its effects on projects performance. Project management competency was necessary skills, knowledge, and attitudes that had effect to the activity and was to be measured by comparing with the set standards (PMI, 2017).

According to (Lindeman & Sarosi, 2020) project implementers had to be competent in their duties to enhance successful performance in projects. According to (Njue, 2021) project managers and project team members were needed to have ability to choose the project implementation tools, techniques and capabilities that facilitated the performance of the projects, the project team had to apply knowledge, skills and management techniques successfully to achieve the set goals of the projects (Ochenge, 2018). It is critical for project mangers to identify the key skills that are need by project team before they select them to work on a project. The theory is relevant on the association between competence of project team and performance of projects. This theory will be linked to the objective of project team selection since it emphasizes on the need to identifying the key competencies needed by project team to enhance project performance. According to(Wu et al., 2017) the project team has an impact on project success since the skills, ability and experiences have a positive and

significant influence on project performance. In additional an effective project team and the communication and collaboration of all project participants, and can also promotes the owners to improve project management capacity and define a clear and reasonable project goal

Conceptual Framework

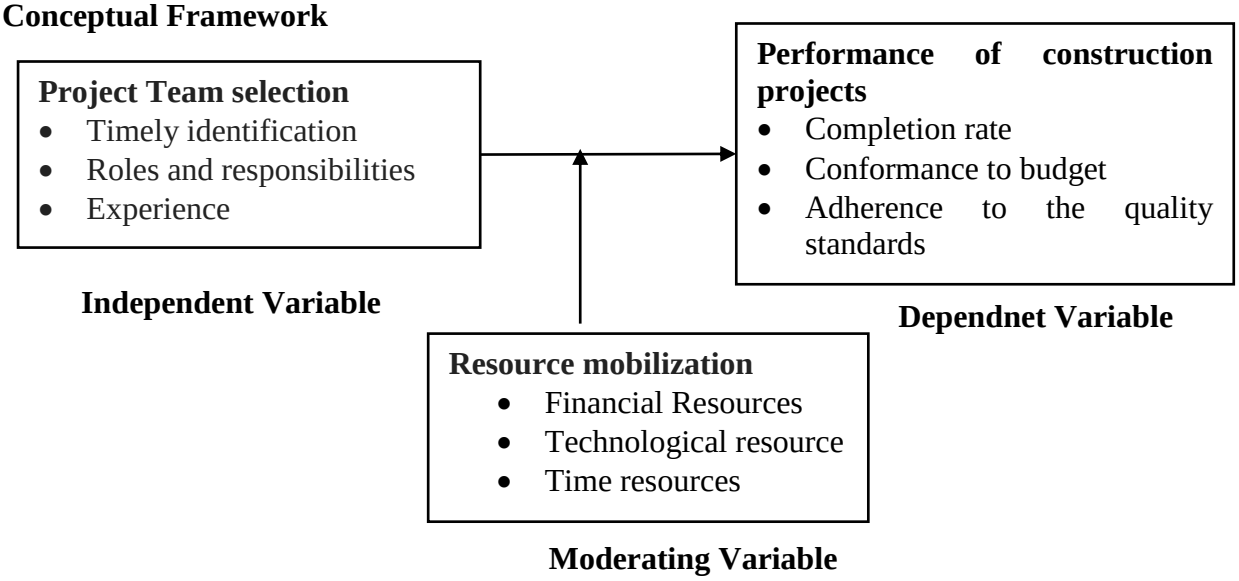

Figure 1: Conceptual framework

Project Team Selection

A project team is defined as a small or large number of people with complementary skills and committed to achieve the project objectives (Parboteeah et al., 2015). Project teams are individuals who perform defined, specialized tasks within a definite time period, and disband after the project ends. They have varied knowledge, expertise and experience and they must acquire pool vast amount of information across boundaries (Chiocchio et al., 2015). It is extremely important for project teams, regardless of their size, to maintain good performance for a project to be successfully completed. To maintain high performance team in projects, it is necessary to consider such imminent factors as: skills, experiences, interests, values, spirit of collaborations, sound behaviors, good leadership and continual improvement (Ogbu & Olatunde, 2019). According to (Wu et al., 2019), the identification of appropriate team members and skills to be used in a project is essential in ensuring that the project is implemented as per the plan and that the skills and competencies available match the specification of the project. The selection of the project team is essential in determining the extent to which the project meets it mandate (Cserháti & Szabó, 2014).

Mathu (2015), asserts that an organization must communicate the position in such a way that job seekers respond. To be cost-effective, the selection process should attract qualified applicants and provide enough information for unqualified persons to self-select themselves out. The management has to attract more candidates in order to increase the selection ratio so that most suitable candidate can be selected out of those available. It is integral to analyze the major inputs in terms of skills and competencies that the project will require thus selecting a team for the project based on the identified needs (Sankaran et al., 2020). The transient and dynamic environment of projects requires the pulling together of individual effort within a team to deliver work packages or for the whole project. Interconnections are formed as individuals and teams from different departments are brought together to deliver the project. The process of selecting team members, one of the project management processes with which the project management outcome is measured (Verner et al., 2014). It is acknowledged that individuals and teams form interconnections. Since these interconnections could potentially

lead to the creation of complexity it provides justifiable grounds to accept the notion that the selection of team members is critical in managing the effects of complexity which stem from the sub-process of team selection.

Resource Mobilization

A resource is any physical or non- physical entity of limited availability that needs to be utilized to obtain a benefit. Resources at the disposal of a project can either be physical such as machinery and equipment or intangible such as trade mark, intellectual property and processes. Adequate use of different resources can make a firm complete a project within the stipulated time and reduce the cost overruns (Musundi, 2015). Resources can either make or break a project; they have therefore to be used efficiently and effectively. The main reason behind this is that the resources are hard to obtain, expensive or even at times both (Collins & James, 2018). Resource mobilization refers to all activities undertaken by an organization to ensure supply of resources such as financial, human, and technological resources which are sufficient to maintain operations which aim to attain the organization's mission (Ndetaulwa, 2019).

Project resource mobilization is the identification of financial, human, physical and technical resources and organization of these resources in a way that leads to successfully successful execution of a project (Densford et al., 2018). According to Danes (2018) resource mobilization refers to all activities involved in securing new and additional resources for the organization. It also involves making better use of, and maximizing, existing resources.

According to Tsuma et al., (2020), time is a critical factor in projects that require to be effectively managed for better and successful completion of the projects. (González-Cacheda & Outeda, 2021) further stated that there is need for effective management of time as one of the resources and inputs for the project. Financial resources are essential in running a project to success and it is essential in meet the project objectives (Umulisa et al., 2015). Financial resources are the funds required by project contractors to buy the equipment's and machineries that are required to undertake construction projects and meet other expenses related to the project such as salaries and wages for the workers and cost of fueling the vehicles (Maendo et al., 2018). According to Maendo et al., (2018) project performance can be improved significantly using modern equipment to prevent projects delays. Technology is a critical resource in the modern era that creates a more effective framework for project operations (Surana & Anadon, 2015). Tony (2014), in Europe asserted that some of the challenges that led to poor performance of construction projects could be addressed through use of technological solutions. The use of modern techniques in the implementation of projects can result in high quality projects and reduction in the time span of construction projects. According to Mwakajo & Kidombo, (2017) resource mobilization has an influence on project performance and it is very essential during project commencement hence the choice of resource mobilization to moderate the relationship between project initiation practices and project performance was a good choice. The level of resource mobilization moderates the relationship between project initiation practices and performance. While initiation practices may be well handled, the performance can only result if the available resources are enough to implement the project. Hence, mobilizing all types of resources is important for the project to be realized.

Performance of Construction Projects

Project performance is a subject of utmost concern to most stakeholders in any project. The main expectation of many stakeholders from projects is their performance in terms of achievement of objectives. Satisfactory achievement of set objectives is what makes a project successful (Muchelule, 2018). According to Nguyen & Watanabe (2017), the measures of project performance should include the project completion time, the completion of the project within the approved budget , efficiency , effectiveness , meeting the stakeholders expectation

, with minimum conflicts and disputes . However according to Zuofa (2014), projects may be completed within their targeted time, cost and scope criteria but still be classified as failures. Therefore, it becomes necessary to consider failure beyond these criteria and include targets such as the aspiration of stakeholders, the benefits accruing to society or project organization among criteria for determining project failure.

Project performance can be explained using "two success concepts" (project management success and product success. Project management success focuses upon the fruitful accomplishment of the project time, cost and quality, which can be measured in term of meeting the project budget, schedule, and conformance to functional and technical specifications respectively. Product success deals with the effects of the project's final product with three key components which are; to satisfy the project goal, purpose and stakeholders (Turner, 2014). According to Kerzner, (2017) project performance is defined as a project that meets its objectives under budget and under schedule. This assessment criterion has remained as the most common measure in many industries.

But for a development project, success goes beyond meeting schedule and budget goals, it includes delivering the benefits and meeting expectations of beneficiaries, stakeholders, donors or funding agencies. The performance of a project is considered good if the project is completed within the schedule, within the budget, achieves the set goals and ensures stakeholders satisfaction (Gichamba & Kithinji, 2019). Project performance measurement is crucial in managing projects as it enables the project manager to establish challenges in budget and scope in time and devise proper mechanisms that address these challenges (Yeung et al., 2017).

Empirical Literature Review

Mughal, (2013) conducted a study on the effectiveness of project teams and their impact on the performance of Saudi constructions projects. Primary data was collected using semi-structured questionnaire and the target population was 13 project teams from 13 different projects in large commercial buildings in Saudi Arabia. The studied established that there is a positive and high correlation between team effectiveness and project success. The study findings also indicated that team roles and responsibilities, team goals and objectives and team leadership had a positive and significant effect on project success.

Nawaz et al., (2016) studied The Impact of Project Leadership and Team Work on Project Success. The study used purposive sampling technique. Questionnaires were used to gather data from employees from manufacturing organizations. Statistical tools like descriptive statistics, Pearson moment correlation and regression analysis were adopted to analyze direct consequence of independent variables on hooked on variables. Such as per hypothesis testing result shows that Project manager's leadership was positively correlated to project success and teamwork also have positive relationship with project success. Team performance has been established to have a direct relationship with the achievement of the project objective, cost, time and quality. This assertion was corroborated by earlier study that team effectiveness can be determined by examining the extent to which the team has achieved its priori objectives (Mbiru et al., 2021).

Alusa & Kariuki, (2015) examined the project team management practices of high performance companies and found that attracting and selecting the right project team increases team productivity, boost organizational performance and contribute in reducing turnover. Aladwan et al., (2015) pointed out that an effective hiring process ensures the presence of project team with the right qualifications, leading to production of quality products and consequently in increase of economic performance. This practice can ensure the right people, with the desirable characteristics and knowledge, are in the right place so they fit in the culture and climate of the project environment.

Umulisa et al. (2015) researched on effects of project resource planning practices on project performance of agaseke project in Kigali, Rwanda. The research adopted a cross- section research design and purposive sampling technique was employed for a target group of 400 women of Agaseke projects in Kigali, Rwanda. Primary data was collected using semi – structured questionnaire and quantitative data was analyzed using SPSS version 16.0 while qualitative data was analyzed using narratives of themes and sub themes. The study findings established that there was a positive and significant relationship between human resources, financial resources, material and time resource planning practices and project performance.

(Mwinzi & Moronge, 2018) conducted a study on determinants of completion of housing projects in informal settlements in Nairobi city county, Kenya. The study adopted a descriptive survey research design, the target population was 100 housing projects in Nairobi County and data was collected using semi- structured questionnaire. The findings showed that project leadership, stakeholder involvement, project resources and project risk management affect completion of housing projects. The study recommended that adequate resource planning for the implementation of the project activities, organizations should identify and deal with risks proactively, stakeholder's involvement should be encouraged before commencement of projects to ensure successful completion rate of the housing projects

Research Methodology

The study adopted a combination of descriptive research design and a cross sectional survey design and positivism research philosophy. The target population was the construction projects that had been implemented by the key government agencies within the Ministry of Transport, Infrastructure, and Housing and Urban Development from 2015 to 2020. There were 320 construction projects. To compute the sample size, the study adopted Yamane formula (1967). The sample size was 178 construction projects. The unit of analysis was the construction projects that had been completed by the key government agencies in the ministry of transport and Infrastructure, in the last five years. The unit of observation were the project managers, who were purposively selected as respondents since they represent the three key interests on a project namely; business interest, supplier interest and user interests. Data was collected using semi - structured questionnaires. Data was analyzed by using descriptive and inferential statistics.

Research Findings and Discussions

The questionnaires were administered to all the respondents as in the selected sample of 178 where 157 respondents returned back the fully filled questionnaires. This represented a response rate of 88.2%. According to Saunders (2019), a response rate of between 50% and 70% is adequate for the study with over a third (30%) of the population as the sample size. In this study, the sample size (178) was over 55% of the targeted population (320). This implies that a response rate of 89.2% was appropriate to represent the population of the study. Table 4.1 shows the response rate of the study.

Descriptive Analysis of the Study Findings

Project Team Selection

The first objective of the study was to establish the influence of project team selection on the performance of construction projects in Kenya. The findings are as shown in Table 1. As the findings portray, majority of the respondents disagreed that there were systematic processes in their respective projects for selecting the project team members (Mean = 2.83; standard deviation = 1.23). They however felt that there lacked clear selection criteria which is shared to the qualifying individuals in good time (Mean = 3.11; standard deviation = 1.16). The respondents agreed that the team members in their respective projects were timely identified before the projects commenced and that there were clearly set roles for every project team

member as shown by mean of 3.39 and 3.13 respectively. The findings concur with those by Wu, Zhao, Zuo, and Zillante (2019) who established that the identification of the appropriate employees and skills to be used in a project is essential in ensuring that the project is implemented as per the plan and that the skills and competencies available match the specifications of the project.

The findings further revealed that most of the respondents agreed that their respective projects' potential team members were informed of their individual roles before they joined the team (Mean = 3.36; standard deviation = 1.07) and that the roles and responsibilities of the project team were aligned to the specific objective of the projects (Mean = 3.26; standard deviation = 1.21). The respondents also agreed that the team members in their respective projects were allocated clear roles and responsibilities. This as indicated by Chiocchio (2015), ensures that there are no conflicts of duties and responsibilities and that all the project stakeholders and team members effectively play their role without interference.

It was further established that the level of expertise required in given aspects of the projects was communicated to all potential project team members (Mean = 4.08; standard deviation = 0.66) and that the skills requirement was considered important in selection of team members in the surveyed projects (Mean = 4.18; standard deviation = 0.60). The respondents further agreed that the team members in their respective projects were required to possess specialized qualifications and that the selection process of the project team was open and fair (Mean= 4.09; 3.29). The respondents further agreed that the accuracy level of the project team selection had been instrumental in the success of the projects. The findings concur with those by Collins and Baccarini (2014) who established that the selection of the project team is essential in determining the extent to which the project meets its mandate. According to Mbiru, Wickham, and Ayentimi (2021), the skills and competences possessed by the workers in a given project are the core drivers of the project success. As indicated by Sankaran, Vaagaasar, and Bekker (2019), it remains integral to analyzing the major inputs ion terms of skills and competencies that the projects will require thus selecting a team for the project based on the identified needs.

Table 1: Descriptive Statistics on Project Team Selection

Statements	Mean	Std. Dev.
There is a systematic process for selecting the project team members	2.83	1.23
A clear selection criterion is shared to the qualifying individuals in good time	3.11	1.16
The project team members are timely identified before the project commences	3.39	1.10
There are clearly set roles for every project team member	3.13	1.16
The project potential team members are informed of their individual roles before they join the team	3.36	1.07
The roles and responsibilities of the project team are aligned to the specific objective of the project	3.26	1.21
Team members are allocated clear roles and responsibilities	3.84	0.89
The level of expertise required in given aspects of the project is communicated to all potential project team members	4.08	0.66
Skills requirement is considered important in selection of team members	4.18	0.60
Team members are required to possess specialized qualifications	4.09	0.73
The selection process of the project team is open and fair	3.29	1.21
The accuracy level of the project team selection has been a determinant on the success of the project	3.43	1.26
Overall mean	3.50	

Key: SD= Strongly Disagree, D= Disagree, N= Neutral, A= Agree, SA= Strongly Agree

The qualitative data collected through the open-ended questions sought to establish the views of the respondents in regard to the effect of project team selection on the performance of construction projects. The findings revealed that most of the respondents perceived project team selection as an essential practice of project initiation that ensured the projects were well-staffed for effective implementation. The respondents indicated that the personnel in the projects were essential in the success of the projects, and this was determined by the effectiveness of the project team selection process. One of the respondents noted the following:

> *Projects are implemented by the project team, which comprises of the key personnel in the project including the project management. Having a good project team that grasps what is required of the project is essential for the project to be implemented appropriately. Although at times we have challenges in identifying the appropriate team for the project, I strongly believe that the project team plays a significant role in the success of the project.*

The respondents further indicated that their respective projects could have stalled or failed to be completed on time due to the gaps in the project team selection. The respondents felt that the project team selection process was not timely and the roles and responsibilities were not clearly put across in some instances, and this could be the reason behind the underperformance of the projects.

Resource Mobilization

The second objective of the study was to assess the moderating effect of resource mobilization on the relationship between project initiation practices and performance of construction projects in Kenya. Table 2 shows the findings. As the findings portray, the respondents agreed that the financial resources availed were adequate for financing the operations of the projects to completion (Mean = 3.38; standard deviation = 1.03) and that there were budgets drawn for the project's financial needs before the project commences (Mean = 3.32; standard deviation = 1.18). The respondents however disagreed that they had plans for meeting the financial obligations for the projects (Mean = 2.90; standard deviation = 1.24). The respondents further disagreed that in case the finances available were not adequate for their respective projects outsourcing for more finances was done (Mean= 2.88). According to Odeyinka and Yusuf (2014), financial resources are essential in running a project to success. Umulisa *et al.* (2017) contend that financing is essential for projects in that it's a crucial resource that defines the ability of the project to meet its objectives.

The findings further revealed that the timelines for the projects were not effectively set right during the initiation stage of the projects as shown by a mean of 2.97 and a standard deviation of 1.23. The respondents further disagreed that the daily working hours for their respective project's teams were adequate for carrying the projects into success as shown by a mean of 2.80 and a standard deviation of 1.25. It was also established that in cases of uncertainties, the projects' timelines were not effectively adjusted to a most appropriate deadline. According to Tsuma, Siringi, and Wambua (2020), time is a critical factor in projects that require to be effectively managed for better and successful completion of the projects. González-Cacheda and Outeda (2021) further stated that there is need for effective management of time as one of the resources and inputs for the project.

The findings further revealed that most of the projects had embraced technology as one of inputs for the projects (Mean = 3.13; standard deviation = 1.31). The respondents however disagreed that there were modern communication technologies embraced in their respective projects to enhance information sharing. The respondents however agreed that the management of their respective projects had been committed to integrate the right technology in the projects operations (Mean = 3.36; standard deviation = 1.18). The findings are in line

with those by Surana, and Anadon (2015) who found out that technology stands to be a critical aspect in the modern era that creates a more effective framework for project operations.

Table 2: Descriptive Statistics on Resource Mobilization

Statements	Mean	Std. Dev.
The financial resources availed are adequate for financing the operations of the projects to completion	3.38	1.03
There is a budget drawn for the project's financial needs before the project commences	3.32	1.18
A plan for meeting the financial obligations for the project has been put across	2.90	1.24
In case the finances available are not adequate for the project outsourcing for more finances is done	2.88	1.21
Timelines for the project are set right during the initiation stage of the project	2.97	1.23
The daily working hours for the project team are adequate for carrying the project into success	2.80	1.25
In cases of uncertainties the project timelines could be adjusted to a most appropriate deadline	3.03	1.22
Technology has been embraced as one of inputs for the project	3.13	1.31
There are modern communication technologies to enhance information sharing in the project	2.81	1.26
The project management has been committed to integrate the right technology in the project operations	3.36	1.18
The mobilization of the resources has been a determinant of the effectiveness of project initiation process	2.74	1.22
Overall mean	3.0	

Key: SD= Strongly Disagree, D= Disagree, N= Neutral, A= Agree, SA= Strongly Agree

The study further sought to establish the opinions of the respondents in regard to the role played by resource mobilization in stirring the success of their respective projects. The respondents commented that the project resources were essential for the smooth running of the projects. Most of the respondents were of the opinion that the project mobilization skills by the project managers determined the ability of the project initiation process to contribute effectively to the project success. A respondent had written the following:

> *The project management is responsible for mobilizing the right resources for the projects, be it financial resources, technical inputs and other key inputs for the project. These resources are the ones that determine the success of the project. I therefore believe that if we have the right resources mobilized and availed timely and adequately, the project would perform better.*

The respondents further indicated that the financial resources were not adequate in some phases of the project, and this affected the effective implementation of the projects. They further said that through the mobilization of the resources, their respective projects were kept afloat and capable of financing their extensive processes, thus enabling the projects to be completed within time and as per the plan.

Performance of Construction Projects

The study sought to establish the opinions of the respondents on the performance of their respective projects. The respondents were asked to indicate their level of agreement on the performance of the construction projects based on a 5-points Likert's scale. The respondents disagreed that project phases in their respective projects had been completed within the planned timeframes (Mean = 2.18; standard deviation = 1.24) and that the work done in the project was significant to the timelines used (Mean = 2.08). The study further established that majority of the respondents disagreed that the percentage of the already done work of the

project have used an equivalent percentage of budget and that the remaining funds in the budget are adequate to run the remaining part of the project into success (Mean = 2.24; 2.39). It was also established that the stakeholders in most of the projects had not shown their satisfaction with the progress of the projects and that the completed phases of the projects were not aligned to the intended quality standards.

Table 3: Descriptive Statistics on Project Performance

Statements	Mean	Std. Dev.
The project phases have been completed within the planned timeframes	2.18	1.24
The work done in the project is significant to the timelines used	2.08	1.35
The percentage of the already done work of the project have used an equivalent percentage of budget	2.24	1.42
The remaining funds in the budget are adequate to run the remain part of the project into success	2.39	1.34
The stakeholders have shown their satisfaction with the progress of the project	2.16	1.18
The completed phase of the project is aligned to the intended quality standards	1.89	0.96
Overall mean	2.16	

Results of diagnostic test

Diagnostic tests are meant to reduce the probability of Type I and Type II errors and improve accuracy of estimates (Harrell, 2015). The main tests carried out included: linearity test, normality test and multicollinearity test.

Linearity test

The study adopted a significant deviation of greater than 0.05 to imply that the relationship between the independent variable is linearly dependent, while a deviation of less than 0.05 imply that the relationship between the independent variable is no linearly dependent (Draper & Smith, 2014)

Table 4 Linearity Test Results

		Performance of Construction Projects	Project Team Selection
Performance of Construction Projects	Pearson Correlation	1	
	Sig. (2-tailed)		
	N	157	
Project Team Selection	Pearson Correlation	.703**	1
	Sig. (2-tailed)	.000	
	N	157	157

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

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

Normality Test

The Kolmogorov-Smirnov (K-S) test and Shapiro-Wilk test, which compares the scores in the sample to a normally distributed set of scores were carried out. The significance levels for variables was above 0.05 to imply that the dataset was normally distributed.

Table 5: Tests of Normality

Variables	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Project Team Selection	.147	157	.200	.960	157	.624
Resource Mobilization	.126	157	.200	.961	157	.656
Performance of Construction Projects	.153	157	.200	.948	157	.429

a. Lilliefors Significance Correction

Multicollinearity test

Multicollinearity in the study will be determined by using the variance inflation factors (VIF) and tolerance values. The VIF identifies the correlation between independent variables and the strength of the correlation. The parameters of VIF value of between 1 and 10, usually shows that there are no multicollinearity issues in the data while VIF value of greater than 10 or less than 1, indicate presence of multicollinearity issues (Mukherjeeet al., 2014). As the results show, the VIFs for all the variables are in the 1 – 10 range an indication that there was no multicollineraity in the test.

Table 6: Results of Multicollinearity Test

Model	Tolerance	Collinearity statistics VIF
Project Team selection	.465	2. 149
Resource Mobilization	.729	1.372

a. Dependent Variable: Performance of Construction Projects

Regression Analysis

A linear regression model was used to explain the relationship between project team selection and performance of construction projects. The output was presented in form of a model summary, the ANOVA results and the regression coefficient.

Model Summary

As the results portray, the R-square for the model was 0.494 This implies that through project team selection the variation of project performance will be up to 49.4%.

Table 7: Model Summary

Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
1	.703[a]	.494	.490	.55240

ANOVA

As the results portray, the F-statistic for the model was 151.038. This is at a significant level of 0.000<0.05. It therefore implies that the model is statistically significant and can predict the relationship between project team selection and project performance.

Table 8: ANOVA Results

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	46.089	1	46.089	151.038	.000[b]
	Residual	47.298	155	.305		
	Total	93.387	156			

Beta Coefficients

As the results reveal, the beta coefficient for the project team selection was 1.076. This indicates that a unit change in project team selection will influence the performance of the construction projects by 1.076 units. The t-value for the variable was 12.290 while the P-value was 0.000<0.05. This implies that there is significant relationship between project team selection and performance of construction projects in Kenya. The specific model was; where Y was project performance and **X1** was project team selection.

Y = -0.603+1.076 **X1**

Table 9: Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.603	.304		-1.981	.049
	Project Team Selection	1.076	.088	.703	12.290	.000

Moderation Effect of Resource Mobilization

The regression coefficient after moderation in table 5 show the interaction scope project team selection and resource mobilization. project team selection and resource mobilization had a beta coefficient of 0.058 at a t-value of 2.469 and a p-value of 0.015<0.05. This implies that resource mobilization significantly moderates the relationship between project team selection and performance of construction projects in Kenya.

$$\mathbf{Y = 0.786 + 0.058X_1Z}$$

Table 10: Moderation Effect of resource Mobilization

Model	**Unstandardized Coefficients**		**Standardized Coefficients**	**T**	**Sig.**
	B	**Std. Error**	**Beta**		
(Constant)	.786	.267		2.945	.004
Project team selection*Resource Mobilization	.058	.024	.200	2.469	.015

Conclusion of the study

The team of the project is essential in the project in that it is the team that implements the project and oversees the day to day operations of the project. The study concluded that the project team selection as one of the aspects of project initiation was essential in determining the success of the construction projects in Kenya. Identifying the required skills and competencies early enough and ensuring that there were set roles and responsibilities for the projects team members were the main aspects of project team selection that were found to determine the capability of the team in meeting the project goals. The study concluded that the project team selection steered the way the project plan was implemented through the level of experience, skills and competencies possessed by the team members.

The descriptive results revealed that most of the respondents agreed that resource mobilization was essential in enabling the project initiation practices be carried out effectively so as to stir performance of the projects. It is therefore concluded that project resource mobilization has a significant moderating effect on the relationship between project initiation practices and performance of construction projects. Putting in place the appropriate technological resources, allocating adequate financial resources to the projects and having proper timing for the project activities are essential resources that project initiation practices require to achieve the intended result.

Recommendation of the study

The study recommends that for the construction projects to achieve the intended purpose, there is need for an effective and properly done process of project team selection. These are the key personnel that will implement the project. Their selection should uphold fairness and openness, properly articulated roles and responsibilities as well as ensuring timely selection of the project team members. This will give the team adequate time to familiarize themselves with the plan of the project, thus making it easier to performance their mandates and responsibilities.

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