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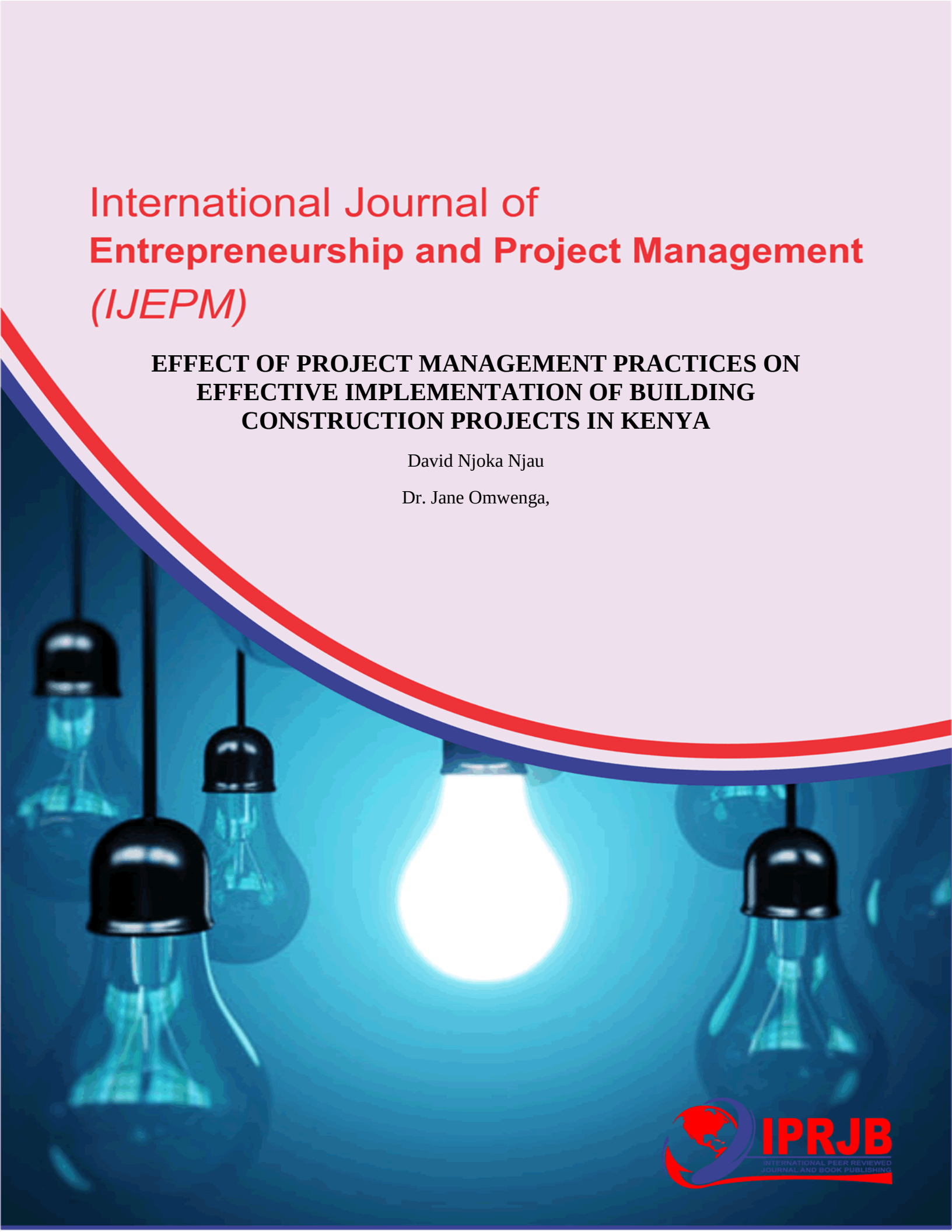

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EFFECT OF PROJECT MANAGEMENT PRACTICES ON EFFECTIVE IMPLEMENTATION OF BUILDING CONSTRUCTION PROJECTS IN KENYA

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Abstract

Purpose: The purpose of this study was to examine effect of Project Management Practices in effective implementation of building construction Projects in Kenya.

Methodology: This study adopted a descriptive survey design. The target population of the study were the capital intensive building construction projects undertaken by the licensed architectural, quantity surveyor firms and engineering firms, who totaled to 703. The study used stratified sampling to select 96 projects. The sample size was calculated using Krejcie and Morgan's formula. This study used primary data which was collected through use of a questionnaire. The questionnaires were self-administered with the help of research assistants. Descriptive statistics such as percentages, mean and standard deviations were used to perform data analysis. After data had been collected through questionnaires, it was prepared in readiness for analysis by editing, handling blank responses, coding, categorizing and keying into statistical package for social sciences (SPSS) computer software for analysis.

Results: The study finding was that resource planning, monitoring, top management support and communication were significantly and positively related with effective implementation of building construction Projects in Kenya.

Unique contribution to theory, practice and policy: The study recommends the management of firms undertaking building construction projects to set up rules and regulations that will guide the adoption of these management practices in order to effectively implement the projects they undertake. They should make objectives that incorporate these practices. The study also recommends that the agents regulating the firms undertaking building construction projects to formulate policies that will ensure that proper management practices are adopted in these firms. They can also support the firms by providing training programs for the management to train on these aspects.

Keywords: *project management practices, implementation, building construction projects*

1.0 INTRODUCTION

1.1 Background of the Study

Construction projects take place all over the world. Construction entails building works, water works civil works, road works and many others. Every single construction project has the following constraints; time, cost and quality. It is often common to experience delays during construction projects. These delays do not always result from a single catastrophic event and can cause substantial damages to a project and the firms undertaking the project. The construction industry has been frequented with occasional delays and disruptions causing time and cost overruns. Globally, delay in construction projects is one of the most common, costly, complex and risky problems encountered in construction projects success. These delays and disruptions are sources of potential risks that current studies are looking into ways to manage such as technical, social, economic, legal, financial, resource, construction and commercial (Kikwasi, 2012).

Clients finance projects with the sole purpose of reaping benefits from the investments. The construction industry is known to be a time-consuming and material depleting industry, due to its complexity and volatility occasioned by varied needs, wants and preferences. No investor would invest in a project that seem to last forever, with indefinite cost or budget. There is thus a direct co-relation between time and cost of project. Projects are deemed thus because they have definite start and finish time, consume resources and meet certain criterion in satisfaction to the beneficiaries. In a construction project, contracts are based on price or cost and time period needed to finish a project (Waihenya, 2011).

In Kenya, building and construction industry has been robust (Kenya facts and Figures, 2012; Kenya National Bureau of Statistics, 2012). Foreign investors have shown a lot of keenness to have a stake in Kenya, considering it is a business hub in east and central Africa, and a center from which they can operate within Africa. As a result of this, Nairobi and its environs have witnessed a boom in construction projects. These projects are government, private individuals, private companies and international businesses and institutions sanctioned.

Construction industry has recorded bleak performance with regards to the basic factors that add to effective culmination of these activities, some of which are extremely unpredictable in nature. One of these components is delays in completion of these projects where the developers fail to deliver the completed houses on time (Oguoko, 2014). Customers count on polished skill and commendable project administration skills of the developers as they buy the units off plan. Beautiful earth shattering functions are conducted at the beginning of these projects yet years down the line, the developers have a perimeter wall fence and a gate house to show as progress. Cost management in these projects is a major indicator of performance especially in cases where banks have financed it. In most cases the developers invite investors to buy the unit while still under construction which increases their liquidity. Poor cost management may arise due to improper financial plans made in the initial project document which may result in stalling of construction until intervention by financiers come through. Some of the project management factors that impact on budget performance include: experience of the project manager, rate of project team workmanship, frequency of control meetings as well as control system budget (Towey, 2013).

1.2 Statement of the Problem

According to Kenya Bureau of Statistics (2016), the construction sector is seen to be a key driver of economic growth in Kenya. It is therefore important to have building construction projects effectively implemented ensuring quality works, timeliness in delivery of the project outcome and the projects to be in the budget with no overruns. Implementation of building and construction projects have remained poor. According to the economic survey conducted by Kenya National Bureau of Statistics (2017), the ratio of completed building projects reduced from 32.9% in 2016 to 24.7% in 2017. Further, the economic survey of 2018 indicated that the value of building project completed in 2018 decreased from Ksh 3.8 billion in 2017 to 2.3 billion. The report also indicated that 52% of the projects were not completed within the projected budget and 33% were not completed within the planned schedule. In as addition 22% of the projects had errors identified during the first and second phases. This therefore is an indication of ineffective implementation of building construction projects in Kenya. This indicates that the projects do not deliver the expected outcomes which need be addressed by the management of such firms who are responsible for the implementation of the projects. There is therefore need to investigate the factors that are contributing to this ineffectiveness which drives the focus of this study to assess how management practices affect the effective implementation of building construction projects.

Studies have been conducted on performance of construction projects but few have been conducted on effect of project management practices on effective implementation of building construction projects in Kenya. Kihoro (2015) conducted a study on factors affecting performance of projects in the construction industry in Kenya: a survey of gated communities in Nairobi County. This study focused on factors affecting performance. The current study focused on effective implementation of building construction projects. Nyaga (2014) conducted a study on the role of project management skills on performance of construction projects: a case of selected construction firms in Mombasa County, Kenya. The study focused on performance of construction projects in Mombasa County, while the current study will be conducted in Kenya. Enshassi, Mohamed and Abushaban (2016) conducted a study on factors affecting the performance of construction projects in the Gaza strip. The study was conducted in Gaza thus presenting a geographical gap. The current study therefore focused on effective implementation of building construction projects in Kenya

1.3 Objective of the Study

To examine effect of Project Management Practices in effective implementation of building construction Projects in Kenya.

1.3.2 Specific Objectives

The specific objectives of the study were;

i. To determine the effect of resource planning on effective implementation of building construction Projects in Kenya.
ii. To investigate the effect of monitoring on effective implementation of building construction Projects in Kenya.
iii. To determine the effect of top management support on effective implementation of building construction Projects in Kenya.

iv. To establish the effect of communication on effective implementation of building construction Projects in Kenya

2.0 LITERATURE REVIEW

2.1 Resource Mobilization Theory

The resource mobilization theory of social developments holds that a social development emerges from the extension of institutional actions due to institutional change that attempt to change the elements of social structure and the reward of distribution of society (Jenkins, 1983).

The resource mobilization hypothesis, includes an action orientation towards clearly defined and fixed goals with a centralized organisational control over the resources and assets and very clearly demarcated outputs that can be evaluated in the form of tangible gains. This co-operation between social developments and institutional actions gives a view of a person's decisions about the management of investments and assets (Klandermans, 1984). Resource mobilization hypothesis of social developments clarifies how social developments assemble assets, from inside and outside their development, to achieve objectives (Jenkins, 1983).

Resource mobilization hypothesis contends that social developments prevail through the compelling assembly of assets and the advancement of political doors for individuals. Social developments can assemble both tangible and non-tangible/human assets. Tangible assets incorporate cash, associations, labor, innovation, methods for correspondence, and broad communications, while non-tangible assets incorporate authenticity, reliability, social connections, systems, individual associations, open consideration, specialist, moral responsibility, and solidarity (Fuchs, 2006).

Resource mobilization theory holds that social development associations with powerless or asset poorbeneficiaries require outside help and financing. There are two sorts of individuals having a place with social development associations: conscience constituents and beneficiary constituents. Social developments frequently search out and acquire assets from conscience constituents. Conscience constituents allude to people or gatherings outside of the social development that have an ethical organization together with the social development's motivation, objective, or mission. The social development and the mass media are in charge of defining the social movement's message and character. Resource mobilization theory research scholars have discovered that conscience constituents have a tendency to contribute more when beneficiary constituents are encircled, by the social development itself or mass media, to emphasize shared goals with conscience constituents (Paulsen and Glumm, 1995)

Resource mobilization scholars trust that the results of social developments are affected by vital decisions, the positions and activities of elites, the help of compelling associations, and representing coalitions and administrations. There are four results for social association: full achievement, acknowledgment without advantages or picks up, advantages and picks up without acknowledgment, and disappointment. The mass communications is a vital piece of the political support exertion by social movements. It impacts the governmental issues of social developments by educating the elites and open about the activities of social developments and in addition, translating these activities (Jenkins, 1983).

Social movements frequently request media scope through the production of semi political occasions that will bear some significance with the news media. Social developments that take part in mighty, brutal, or hostile to tyrant acts have a tendency to be portrayed contrarily (Paletz, 2002)

2.2 Empirical review

Karimi (2017) conducted a study on the effects of enterprise resource planning implementation on organizational performance in the transport industry in Kenya. The research adopted a descriptive approach. The study population was composed of the management staff of small and medium enterprises (SMEs) which was 300 respondents. The study applied stratified random sampling technique. Primary data was collected directly from the respondents by the use of a questionnaire which was composed of both close ended and open ended questions. Qualitative data was collected by the use of questionnaires and analyzed using descriptive and inferential statistics using SPSS. Multiple regression analysis was used in the study. The study found that communication, training, top level management support, and management skills affect Enterprise Resource Planning (ERP) implementation in the transport sector. There exist a conceptual research gap between the above study and this study. The above study focused on the effects of enterprise resource planning implementation on organizational performance in the transport industry while the current study focused on the effect of project management of building construction Projects in Kenya.

Gachogu (2012) conducted a study on the Examine factors influencing formulation of strategic plans in public secondary schools in Kirinyaga County, Kenya. The study was guided by the Goal-Based strategic planning model. The study employed the descriptive survey research design. The data collected was organized as per items in the questionnaires and interview schedules, and then analyzed using SPSS computer software. The study established that formulation of strategic plans in public secondary schools was hindered by absence of policy framework, inadequate knowledge and skills on strategic management among school leaders, and inadequate allocation of resources to the process.

Okero (2011) conducted a study on factors influencing implementation of Local Authority Transfer Fund (LATF) infrastructure projects in Kenya: the case of selected projects in Mombasa County. The study sought to determine how technical capacity, community participation, political influence, monitoring and evaluation and delayed payments influence the implementation of LATF infrastructure projects. This study employed descriptive survey design using questionnaires. The study findings indicated that there are challenges in implementation of these projects. Delayed payments was the greatest factor influencing implementation followed by Political influence, Technical capacity, community participation and finally monitoring and evaluation system in that order.

Rogito (2010) conducted a study to assess the influence of Monitoring and Evaluation on project's performance as a case of Youth Enterprise Development Fund in Marani district in Kisii. The investigation was directed through descriptive design. Information was gathered utilizing questionnaires and interview responses from 79 youth ventures with 240 respondents who were chosen utilizing purposive inspecting, strict arbitrary testing and stratified irregular examining from the available populace. The examination inferred that absence of trainings in M&E is probably going to prompt project failures. Base surveys which are to a great extent not done may prompt difficulties on the best way to track project progress. Lack of contribution from specialists

and inadequately outlined M&E designs with absence of detail of information to be gathered for M&E, lack of schedule for M&E exercises and someone accountable for M&E, is probably going to lead to an ineffectively executed M&E, hindered completion of the project and low objective accomplishment. This study portrayed a contextual gap since it focused on Marani district only while the current study focused on Kenyan projects.

Hatch and Dyer (2014) studied the relationship between human capital and learning as a source of competitive advantage hence firm performance using a sample of semiconductor manufacturing facilities located in the United States, Asia and Europe. In Resourced Based View (RBV) of the firm, human capital is frequently assumed to contribute to competitive advantage due to its inimitability. The study found that investments in firm-specific human capital have a significant impact on learning and firm performance. Human capital selection, development through training, and deployment significantly improve learning by doing, which in turn improves performance. Interestingly, the study found that acquiring human capital with prior industry experience from external sources significantly reduced learning performance, while firms with high staff turnover significantly underperformed their rivals, revealing the time compression diseconomies that protect firm-specific human capital from imitation. There is therefore new empirical evidence that human capital is inimitable and has an impact on the performance of the firm. The study concentrated on United States, Asia and Europe projects thus presenting a geographical gap. The current study focused on Kenyan projects.

Nyaga (2014) conducted a study on role of project management skills on performance of construction projects: a case of selected construction firms in Mombasa County, Kenya. The study adopted a descriptive research design with a target population of 111 staffs working at the construction firms in Mombasa which generated a sample of 33 respondents. Questionnaires were the main data collection instruments. The study employed both quantitative and qualitative research in its data analysis. Data was presented using tables. The study found out that projects were constrained by inadequate planning skills that are required for effective planning for project success; Project planning is complicated and risky, hence requires varying skills sets for successful project implementation and management; Increasing complexity in the projects with pressure of time and costs has led to the introduction of high quality software and hardware which requires skilled planning. Hence this study portrayed a geographical gap as it focused on Mombasa County while the current study focused on Kenya projects.

In a study by Abbasi and Zamani-Miandashti (2013) to examine the role of transformation leadership, organizational culture and hierarchical learning in enhancing the execution of Iranian farming resources, the research population comprised of all employees of public agricultural facilities partnered with Iran's Ministry of Science, Research and Technology. The outcomes demonstrated that there was a positive and significant connection between communication components including transformational leadership, learning hierarchical culture and process components of organisational learning, with the two relevant segments explaining 87.3 % of the process component variance. Furthermore, there was a positive and significant relationship between the communication component and the performance component. These discoveries demonstrate that learning hierarchical culture with the impact on organizational learning process enhances the staff execution, as well as change them to learning organizations. This study suffered

from conceptual gap since it focused on the role of transformational leadership, organizational culture and organizational learning in improving the performance of Iranian agricultural faculties while the current study focused on the effect of project management factors on effective implementation of building construction projects in Kenya .In addition this study presents a geographical gap since it focused on Iran projects

3.0 RESEARCH METHODOLOGY

This study adopted a descriptive survey design. The target population of the study were the capital intensive building construction projects undertaken by the licensed architectural, quantity surveyor firms and engineering firms, who totaled to 703. The study used stratified sampling to select 96 projects. The sample size was calculated using Krejcie and Morgan's formula. This study used primary data which was collected through use of a questionnaire. The questionnaires were self-administered with the help of research assistants. Descriptive statistics such as percentages, mean and standard deviations were used to perform data analysis. After data had been collected through questionnaires, it was prepared in readiness for analysis by editing, handling blank responses, coding, categorizing and keying into statistical package for social sciences (SPSS) computer software for analysis. SPSS was used to produce frequencies, descriptive and inferential statistics which were used to derive conclusions and generalizations regarding the population.

4.0 PRESENTATION OF FINDINGS, ANALYSIS AND INTERPRETATION

4.1 Correlation and Regression Analysis

Correlation analysis is used to determine the strength of the relationship between the variables. In this study, correlation analysis was used to determine the relationship between the independent variables, resource planning, monitoring, top management support and communication and the dependent variables effective project implementation.

Influence of resource planning on effective project implementation.

Table 1: Correlation Analysis

		Resource Planning
Resource Planning	Pearson Correlation	
	Sig. (2-tailed)	
Effective Project Implementation	Pearson Correlation	.296*
	Sig. (2-tailed)	0.018

* Correlation is significant at the 0.05 level (2-tailed).
** Correlation is significant at the 0.01 level (2-tailed).

The correlation results revealed that the variable resource planning have a positive and significant relationship with effective project implementation variable r=0.296, p=0.018). This was in line with results of Thuva (2011) who found that there was a strong positive correlation between project resource planning and project implementation.

Regression Analysis for Resource Planning and Effective Implementation of Building Construction Projects

Linear regression analysis was conducted to determine the relationship between the variable resource planning and effective implementation of building construction projects. Model fitness indicates the percentage of the dependent variable that is influenced by the dependent variables.

Table 2: Model Fitness

R	R Square	Adjusted R Square	Std. Error of the Estimate
.453a	0.205	0.196	0.44525

The results indicated that the variable resource planning was satisfactory in explaining the independent variable effective implementation of building construction projects as shown by an R square of 20.5%. Therefore, the variable was found to explain 20.5% of the independent variable effective implementation of building construction projects.

Table 3: ANOVA Results

	Sum of Squares	df	Mean Square	F	Sig.
Regression	4.357	1	4.357	21.977	.0230b
Residual	16.851	62	0.198		
Total	21.208	63			

The ANOVA results revealed that resource planning has a significant relationship with effective implementation of building construction projects (p=0.023). The results also revealed that resource planning is a good predictor of effective implementation of building construction projects as indicated by an F statistic of 21.977 and a corresponding p value of 0.000.

Table 4: Regression of Coefficient Results

	B	Std. Error	t	Sig.
(Constant)	2.155	0.373	5.771	0.000
Resource Planning	0.471	0.1	4.688	0.001

Regression of coefficient results indicated that resource planning had a positive and significant relationship with effective implementation of building construction projects (β= 0.471, p=0.001). The findings were further supported by a t statistic of 4.688 which was greater than the calculated t statistic of 1.96.

Influence of monitoring on effective project implementation.

Table 5: Correlation Analysis

		Monitoring
Effective Project Implementation	Pearson Correlation	.275*
	Sig. (2-tailed)	0.028

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

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

The results further indicated that the independent variable project monitoring and effective project implementation have a positive and significant relationship (r=0.275, p=0.028). These findings

were consistent with those of Phiri (2015) who found that there is a positive correlation between project monitoring and project implementation.

Regression Analysis for Monitoring and Effective Implementation of Building Construction Projects

Linear regression analysis was conducted to determine the relationship between the variable monitoring and effective implementation of building construction projects.

Table 6: Model Fitness

R	R Square	Adjusted R Square	Std. Error of the Estimate
.515a	0.265	0.256	0.42829

The results indicated that the variable monitoring was satisfactory in explaining the independent variable effective implementation of building construction projects as shown by an R square of 26.5%. Therefore, the variable was found to explain 26.5% of the independent variable effective implementation of building construction projects.

Table 7: ANOVA Results

	Sum of Squares	df	Mean Square	F	Sig.
Regression	5.616	1	5.616	30.615	0.03
Residual	15.592	62	0.183		
Total	21.208	63			

The ANOVA results revealed that monitoring has a significant relationship with effective implementation of building construction projects (p=0.03). The results also revealed that monitoring is a good predictor of effective implementation of building construction projects as indicated by an F statistic of 30.615.

Regression of coefficient results for monitoring and effective implementation of building construction projects were further shown.

Table 8: Regression of Coefficient Results

	B	Std. Error	t	Sig.
(Constant)	1.781	0.384	4.639	0.000
Monitoring	0.557	0.101	5.533	0.01

Regression of coefficient results indicated that monitoring has a positive and significant relationship with effective implementation of building construction projects (β= 0.557, p=0.01). The findings were further supported by a t statistic of 5.533 which was greater than the calculated t statistic of 1.96.

Influence of Top Management Support on Effective Project Implementation.

Table 9: Correlation Analysis

		Top Management Support
Effective Project Implementation	Pearson Correlation	.327**
	Sig. (2-tailed)	0.008

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

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

Furthermore, results indicated that the variable top management support has a positive and significant relationship (r=0.327, p=0.008). These findings agreed with those of Jitpaiboon and Kalaian (2015) who established a positive correlation between top management support and project implementation.

Regression Analysis for Top Management Support and Effective Implementation of Building Construction Projects

Linear regression analysis was conducted to determine the relationship between the variable top management support and effective implementation of building construction projects.

Table 10: Model Fitness

R	R Square	Adjusted R Square	Std. Error of the Estimate
.519a	0.269	0.261	0.42704

The results indicated that the variable top management support was satisfactory in explaining the independent variable effective implementation of building construction projects as shown by an R square of 26.9%. Therefore, the variable was found to explain 26.9% of the independent variable effective implementation of building construction projects.

ANOVA Results for top management support and effective implementation of building construction projects are presented.

Table 11: ANOVA Results

	Sum of Squares	df	Mean Square	F	Sig.
Regression	5.707	1	5.707	31.297	0.021
Residual	15.501	62	0.182		
Total	21.208	63			

The ANOVA results revealed that top management support has a significant relationship with effective implementation of building construction projects (p=0.021). The results also revealed that top management support is a good predictor of effective implementation of building construction projects as indicated by an F statistic of 31.297.

Regression of coefficient results for top management support and effective implementation of building construction projects were further shown.

Table 12: Regression of Coefficient Results

	B	Std. Error	t	Sig.
(Constant)	1.781	0.38	4.691	0.000
Top management support	0.542	0.097	5.594	0.001

Regression of coefficient results indicated that top management support has a positive and significant relationship with effective implementation of building construction projects (β= 0.542, p=0.001). The findings were further supported by a t statistic of 5.594 which was greater than the calculated t statistic of 1.96.

Influence of communication on Effective Project Implementation

Table 13: Correlation Results

		Communication
Effective Project Implementation	Pearson Correlation	0.484**
	Sig. (2-tailed)	0.010

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

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

Moreover, the results revealed that the variable communication has a positive and significant relationship with effective project implementation (r=0.484, p=0.010). This concurred with Omwaka and Wanyoike (2016) who found that communication is positively correlated with effective project implementation.

Regression Analysis for Communication and Effective Implementation of Building Construction Projects

Linear regression analysis was conducted to determine the relationship between the variable communication and effective implementation of building construction projects.

Table 14: Model Fitness

R	R Square	Adjusted R Square	Std. Error of the Estimate
.497a	0.247	0.235	0.44940

The results indicated that the variable communication was satisfactory in explaining the independent variable effective implementation of building construction projects as shown by an R square of 24.7%. Therefore, the variable was found to explain 24.7% of the independent variable effective implementation of building construction projects.

Table 15: ANOVA Results

	Sum of Squares	df	Mean Square	F	Sig.
Regression	4.109	1	4.109	20.345	0.012
Residual	12.522	62	0.202		
Total	16.631	63			

The ANOVA results revealed that communication has a significant relationship with effective implementation of building construction projects (p=0.012). The results also revealed that communication is a good predictor of effective implementation of building construction projects as indicated by an F statistic of 20.345.

Table 16: Regression of Coefficient Results

	B	Std. Error	t	Sig.
(Constant)	1.893	0.444	4.262	0.000
Communication	0.538	0.119	4.511	0.019

Regression of coefficient results indicated that communication has a positive and significant relationship with effective implementation of building construction projects (β= 0.538, p=0.019). The findings were further supported by a t statistic of 4.511 which was greater than the calculated t statistic of 1.96.

Overall Regression Analysis

Correlation analysis is used to determine the strength of the relationship between the variables. In this study, correlation analysis was used to determine the relationship between the independent variables, resource planning, monitoring, top management support and communication and the dependent variables effective project implementation.

A multivariate regression analysis was used.

Table 17: Model of Fitness Results

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.812a	0.660	0.637	0.30953

The results of the model of fitness revealed that the R square which gives the amount of the dependent explained by the dependent variable was 66%. This means that project management practices explain 66% of the dependent variable effective project implementation.

Table 18: ANOVA Results

	Sum of Squares	df	Mean Square	F	Sig.
Regression	10.978	4	2.745	28.646	0.03
Residual	5.653	59	0.96		
Total	16.631	63			

The ANOVA results showed that the relationship between project management practices and effective project implementation was significant (p=0.03). The results also indicated that project management practices are good predictors of effective project implementation as supported by an F statistic of 28.646.

Table 19: Regression of Coefficient Results

	B	Std. Error	t	Sig.
(Constant)	-0.441	0.425	-1.038	0.304
Resource Planning	0.236	0.095	2.487	0.016
Monitoring	0.556	0.104	5.326	0.002
Top Management Support	0.599	0.193	6.064	0.002
Communication	0.259	0.090	2.873	0.006

Overall regression of coefficient results indicated that resource planning had a positive and significant effect on effective implementation of projects (β=0.236, p=0.016). This implied that a unit increase in resource planning would lead to an improvement in effective implementation of projects by 0.236 units. These findings are consistent with those of Umulisa, Mbabazize and Shukla (2015) who found that project resource planning which includes financial resource planning, human resource planning, material and time resource planning has positive and yet significant relationship with project implementation.

Results also revealed that project monitoring had a positive and significant effect on effective implementation of projects (β=0.556, p=0.002). This implied that a unit increase in monitoring would lead to an improvement in effective implementation of projects by 0.556 units. These results agreed with those of Wachaiyu (2016) who found that monitoring significantly influence project implementation success.

Results further revealed that top management support had a positive and significant effect on effective implementation of projects (β=0.599, p=0.002). This implied that a unit increase in top management support would lead to an improvement in effective implementation of projects by 0.599 units. These results were in line with those of Ahmed (2016) who established that top management support have significant positive influence on project implementation success.

Furthermore, results revealed that communication had a positive and significant effect on effective implementation of projects (β=0.259, p=0.006). This implied that a unit increase in communication would lead to an improvement in effective implementation of projects by 0.259 units. This concurred with Rao (2015) who found that effective communication has a positive and significant relationship with success of projects.

Therefore, the optimal model would be presented as

$Y= 0.441 +0.236x_1 +0.556x_2 +0.599x_3 +0.259x_4$

Where

Y= Effective Building Construction Projects

X_1 = Resource Planning

X_2 = Monitoring

X_3 =Top Management Support

X_4= Communication

4.2 Discussion of Key Findings

From the results presented above, the study found that resource planning had a positive and significant effect on effective implementation of projects. This implied that increase in resource planning would lead to an improvement in effective implementation of projects. These findings were consistent with those of Umulisa, Mbabazize and Shukla (2015) who found that project resource planning which includes financial resource planning, human resource planning, material and time resource planning has positive and yet significant relationship with project implementation.

Results also revealed that project monitoring had positive and significant effect on effective implementation of projects. This implied that an increase in monitoring would lead to an improvement in effective implementation of projects. These results agreed with those of Wachaiyu (2016) who found that monitoring significantly influence project implementation success.

Results further revealed that top management support had a positive and significant effect on effective implementation of projects. This implied that an increase in top management support would lead to an improvement in effective implementation of projects. These results were in line with those of Ahmed (2016) who established that top management support have significant positive influence on project implementation success.

The results revealed that communication had a positive and significant effect on effective implementation of projects. This implied that an increase in communication would lead to an improvement in effective implementation of projects. This concurred with Rao (2015) who found that effective communication has a positive and significant relationship with success of projects.

5.0 CONCLUSIONS AND RECOMMENDATION

5.1 Conclusion

The study finding was that resource planning is significantly and positively related with and effective implementation of building construction Projects in Kenya. Based on this finding, the study concludes that resource planning affects effective project implementation in a positive and significant way.

Secondly, the study found that project monitoring has a positive and significant effect on effective implementation of building construction projects in Kenya. The study therefore concluded that project monitoring positively and significantly affects effective implementation of building construction projects.

In addition, the study found that top management support has a positive and significant effect on effective implementation of projects. This led to the conclusion that top management support on projects significantly and positively affects effective implementation of building construction projects.

Finally, the study found that communication has a positive and significant effect on effective implementation of projects. Therefore, the study concluded that communication positively affects effective implementation of building construction projects.

5.2 Recommendation

The study recommends that project planners need to involve all stakeholders in designing the project, monitoring it, controlling it and evaluation. Project planning and implementation need to check each other to ensure the project is on schedule, budget and scope. Monitoring and Evaluation need to be applied in every project via participatory method which facilitates communication of challenges and successes in the project implementation process

Project implementation cannot be effective without an excellent or good level of support from top management. The top managers from the construction companies should ensure proper planning, organizing is done according to the set objectives of the project and also lead and motivate the staff involved in the implementation of the projects.

The study recommends the management of firms undertaking building construction projects to set up rules and regulations that will guide the adoption of these management practices in order to effectively implement the projects they undertake. They should make objectives that incorporate these practices.

The study also recommends that the agents regulating the firms undertaking building construction projects to formulate policies that will ensure that proper management practices are adopted in these firms. They can also support the firms by providing training programs for the management to train on these aspects.

The study recommended that project activities should be communicated to every party concerned during implementation of projects and the manufacturing companies should establish the right channels of delivery messages and feedback in both top-down and bottom-up communication

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