EFFECT OF PROJECT MANAGEMENT PRACTICES ON IMPLEMENTATION OF HOUSING DEVELOPMENT PROJECTS IN KENYA: A CASE STUDY OF KENYA PROPERTY DEVELOPERS ASSOCIATION

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ABSTRACT

The study was on the effects of project management practices on implementation of housing development projects in Kenya. The study used descriptive research design. The target population in this research were 241 employees in 15 selected registered property developers in Mombasa County. Stratified sampling technique was used to select a sample size of 149 respondents. Primary data was collected by use of self-administered structured questionnaires. The secondary data collected was used to cross validate the primary data results. The collected data was analyzed quantitatively and qualitatively. Descriptive and inferential statistics was done using Statistical Package for Social Sciences (SPSS) version 24 and specifically multiple regression model was used for hypotheses testing. The study findings established that three objective namely project team competency, project planning and project stakeholders' management had a positive correlation with implementation of housing development projects in Kenya. However, the independent variable project cost management had no correlation with the dependent variable. On regression analysis results rejected null hypotheses for project team competency, project planning and project stakeholders' management but accepted the null hypothesis for project cost management . The study conluded that project team competency, project planning and project stakeholders' management have a significant effect on implementation of housing development projects in Kenya and further concluded that project cost management has no significant effect on implementation of housing development projects in Kenya. The study recommended that staff working in a projects needs to be trained before projects commences; that projects should hire project managers that have project academic and practical experience; that projects are financed after proper evaluation of projects viability by quantity surveyors', that project managers should adopt the use of innovation and technology in their project planning process that would be accurate and that project stakeholders' should be involved in all milestones of the projects to enrich the project in cases of variances in costing.

Key Words: Project Team Competence, Cost Management, Project Planning, Stakeholder Management

Page: - 1276 -

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INTRODUCTION

Housing is regarded as a system made up of shelter and the supporting basic infrastructure required by man. It is a basic human need in every society and is considered a fundamental right of every individual (Akinwunmi, 2018). The right to housing is embedded in various international instruments including the United Nations Human Rights Declaration of 1948, the International Covenant on Economic, Social and Cultural Rights of 1966, the Istanbul Declaration and Habitat Agenda of 1996 and the Declaration on Cities and other Human Settlements of 2011 (Bui & Ling, 2017).

The National Housing Corporation, a state corporation under the ministry of land is charged with implementation of the Housing policy. It is expected to provide low cost housing and social housing, its board has targeted to construct 30,000 housing units by 2017. According to Hassanali (2016) in the past, the government took up the role of housing supplier by controlling planning, land allocation, and development and maintaining housing estates, through the National Housing Corporation (NHC). The NHC is charged with the responsibility of providing subsidized housing and implementing government housing policies and programs through tenant purchase, mortgages, rental and rural housing loan schemes. The National Housing Corporation was formed as part of Kenya's post-colonial housing policy, underscoring the importance of providing decent shelter for all urban workers in the country (Hassanali, 2016). While theoretically this should have been feasible, an acute problem has arisen as central government expenditure on housing has been on a consistent decline, stemming from activities of the parastatals, price controls, inappropriate building regulations and codes as well as a lack of basic planning and provision of services (Otiso, 2017).

Project management is the integral of the entire project functions which include coordination of subcontractors, scheduling, cost control, labor relation, billing, purchasing, expending, and other functions related to the project (Graham, 2014). In Construction Company, project manager is in charge of these functions. The use of project management techniques is very important in the construction industry, because the coordination and use of the many types of labor, skills, materials, and equipment's which are used in construction require daily application of proper project management techniques (Phua & Rowlinson, 2013). The success of any project is highly dependent on its completion time from start to delivery of results. This has a direct bearing on management decisions such as budgets, targets and standards (Seddon, 2016).

Project implementation involves coordinating people and other resources to carry out the project's plans in order to achieve the project's objectives. Translating plans into action is the science of implementation. It is based on a systematic process of rigorously discussing who, what, how and when; constantly questioning; actively following up; and ensuring accountability Steson *et al.*, (2013). Pinto and Morris (2014) state that project implementation phase can be thought of as part of the project life cycle that starts after the project funding and approval and concludes with the successful handover of the end of the product to the client organization, including the contractual closeout of the project, lessons-learned and documentation, and archiving of the projects documents. Triantis (2013) argues that project implementation is an afterthought, something that needs to be done after agreements are concluded. It oversees the formation of the implementation sub team, creates linkage to the core project team, advises on implementation planning, and establishes processes to resolve implementation issues.

Statement of the Problem

Housing in Kenya is on the rise according to the GOK (2007). Kenya National Bureau of Statistics (KNBS) has estimated the Kenyan growth population at 4.2% and is expected to reach 50 million by 2020. Based on

Page: - 1277 -

The Strategic Journal of Business & Change Management. **ISSN** 2312-9492 (Online) 2414-8970 (Print). www.strategicjournals.com

these estimates there is an annual demand of 206,000 units of houses and the current supply is 50,000 units per year which creates a shortfall of 156,000 units every year (KNBS, 2018). Consequently, the government's commitment to adequate shelter for all Kenyans is clear in various policy documents (Huchzermeyer, 2018).

According to the Ministry of Housing 2015, the costs of building materials have increased by as much as 70 per cent since 2007 resulting in increased cost of construction while the income earned by Kenyans has not grown by the same margin which is also a main contributor to the shortage of housing in the Kenyan market (GOK, 2014). The government of Kenya seeks to march the supply of houses to the existing demand by 2030 (GOK, 2015). Ministry of Housing, Land and Urban Development (2011) reported that 48% of construction projects in Nairobi County are still incomplete and 10% of this project has completely stalled. This leads to slow uptake of construction projects. Failure of these construction projects will result in reduced supply of quality houses as well as a less vibrant economy which consequently contributes to a lower standard of living for Kenyans as well as increased unemployment (GoK, 2018).

The construction industry has recorded dismal performance when it comes to the under lying factors that contribute to successful completion of these projects some of which are very complex in nature. One of these factors is delays in completion of these projects where developers fail to deliver the complete houses as well as the facilities advertised (Oguoko, 2017). In most cases the developers invite investors to buy the units 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 (Chinyio & Olomaliye, 2018). In some other instances, residents realize substandard finishing in the units, poor waste

management plans as well as inadequate property management of the facilities after purchase of the property. Distrust, litigation, cash flow problems as well as feelings of apprehension during the projects are some of the consequences of improper management of the stakeholder's expectations (Towey, 2016).

Previous studies have identified project personnel, communications, site management, supervision, client competencies, contactor competencies, top management support, project manager's experience amongst others as determinants of completion of various projects around the globe Alexandrova *et al*., (2016). Most of these studies conducted on determinants of completions of projects have focused on developed countries outside Africa. Therefore, the study sought to investigate the effects of project management practices on implementation of housing development projects in Kenya.

Objectives of the Study

The general objective of this study was to investigate the effect of project management practices on implementation of housing development projects in Kenya a case study of Kenya Property Developers Association, Mombasa County. The specific objectives were;

- To determine the effect of project team competence on the implementation of housing development projects in Kenya.
- To examine the effect of project cost management on the implementation of housing development projects in Kenya.
- To evaluate the effect of project planning onthe implementation of housing development projects in Kenya.
- To establish the effect of project stakeholder management on the implementation of housing development projects in Kenya.

Page: - 1278 -

The Strategic Journal of Business & Change Management. ISSN 2312-9492 (Online) 2414-8970 (Print). www.strategicjournals.com

The study was guided by the following research hypotheses;

H_{01}: Project team competence has no significant effect on the implementation of housing development projects in Kenya.

H_{02}: Project cost management has no significant effect on the implementation of housing development projects in Kenya.

H_{03}: Project planning has no significant effect on the implementation of housing development projects in Kenya.

H_{04}: Project stakeholder management has no significant on the implementation of housing development projects in Kenya.

LITERATURE REVIEW

Contingency Theory of leadership

Contingency thinking recognizes the uniqueness and complexities of construction projects and attempts to identify practices that best fit with the unique demands of different situations. This therefore highlights the complexity involved on managing of risks in construction projects. The application of various management tools and techniques must be appropriate to the particular situation because each situation presents unique problems. This theory rejects the idea that there is one best way to manage because of the varying management situations (Ghahramanzadeh, 2013). According to Mutema (2013), contingency theory takes into account the interaction and interrelation between the organization and its environment. This includes the recognition and accommodation of those elements that cannot be controlled. He articulates that contingency theory involves recognizing that those elements that can be controlled and influenced must be addressed in ways that vary depending on prevailing situations. In applying this theory, it is emphasized that each project is unique and has got its own specifications which therefore requires suitable management practice according to its situation and specifications.

Competency Theory

The work of McClelland & McBer in the 1980s established the competence theory. The authors defined 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. Since then a number of competency frameworks have been developed by different project management institutes. Boyatzis, (2002) & Spencer, (2003), puts a model of competence that integrates knowledge, skills, demonstrable performance, and core personality characteristics, noting the last, personality characteristics, as challenging to develop and assess through training. Boyatzis, (2002) & Spencer, (2003), argues that two of the most influential project management standards, the PMBOK, address only the knowledge aspect of competence while a third, Australia's National Competency Standards, draws from knowledge but focuses only on demonstrable performance.
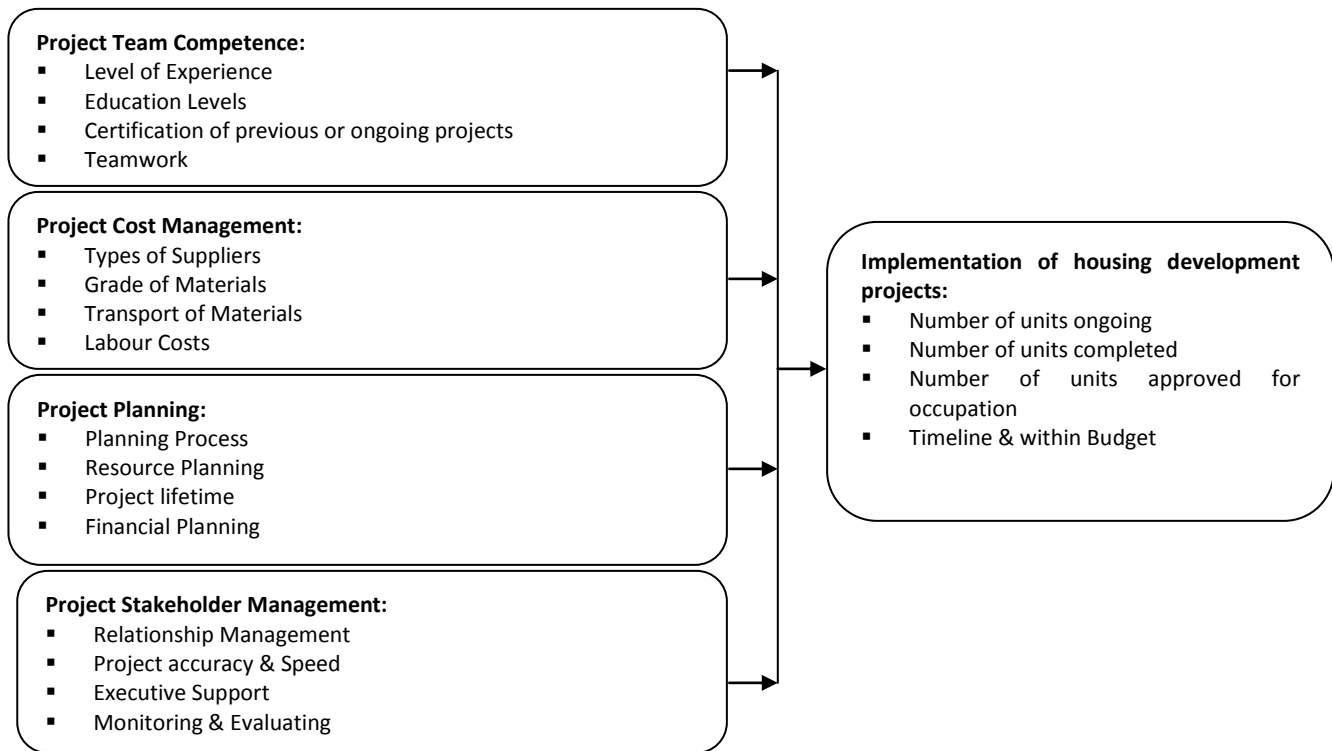
Theory of Constraints

The theory of constraints is a systems-management philosophy developed by EliyahuGoldratt in the early 1980s. The fundamental thesis of theory of constraints is that constraints establish the limits of performance for any system. Most organizations contain only a few core constraints. Theory of constraints advocates suggest that managers should focus on effectively managing the capacity and capability of these constraints if they are to improve the performance of their organization (Budiman, 2004). Theory of constraints challenges managers to rethink some of their fundamental assumptions about how to achieve the goals of their organizations, about what they consider productive actions, and about the real purpose of cost management.

Emphasizing the need to maximize the throughput revenues earned through sales theory of constraints focuses on understanding and managing the constraints that stand between an organization and

the attainment of its goals. Once the constraints are identified, theory of constraints subordinates all the no constraining resources of the organization to the needs of its core constraints. The result is optimization of the total system of resources. As organizations and the financial practitioners who support them continue to learn which questions to ask, as well as which information best addresses these concerns, the need to add new models to the information toolkit grows (Shah &Ierapetritou, 2011). Theory of constraints is a vital part of this expanded toolkit, providing unique insights and focus into the ongoing challenges of identifying the products and services that will maximize customer value-added and organizational profitability.

Management by Objective Theory

The theory of Management by Objectives was developed by Peter Drucker in 1954. The concept of MBO is closely connected with the concept of planning. The process of planning implies the existence of objectives and is used as a tool/technique for achieving the objectives. Modern managements are rightly described as 'Management by Objectives' (MBO). The MBO concept suggests that objectives should not be imposed on subordinates but should be decided collectively by all concerned with the management (Gerry-Johnson, 2015). This gives popular support to them and the achievement of such objectives becomes easy and quick.

Project Team Competence:
- Level of Experience
- Education Levels
- Certification of previous or ongoing projects
- Teamwork

Project Cost Management:
- Types of Suppliers
- Grade of Materials
- Transport of Materials
- Labour Costs

Project Planning:
- Planning Process
- Resource Planning
- Project lifetime
- Financial Planning

Project Stakeholder Management:
- Relationship Management
- Project accuracy & Speed
- Executive Support
- Monitoring & Evaluating

Implementation of housing development projects:
- Number of units ongoing
- Number of units completed
- Number of units approved for occupation
- Timeline & within Budget

Independent variables   Dependent variable

Figure 1: Conceptual Framework

Empirical Review

Nyangilo (2018) did an assessment of the organization structure and leadership effects on construction projects' performance in Kenya, he

found out that lack of appropriate project organization structures, poor management systems and leadership are the major causes of poor project performance. Kigari & Wainaina, (2018) in a journal of

emerging trends in economics and management sciences time and cost overruns in power projects in Kenya by closely relating the factors to the various variables, it was observed that they resulted to overrun on the projects by varying magnitudes. Amusan, (2018) studied factors affecting construction cost performance in Tanzani construction sites. It was discovered from the analysis that factors such as contractor's inexperience, inadequate planning, Inflation, incessant variation order, and change in project design were critical to causing cost overrun, while project complexity, shortening of project period and fraudulent practices are also responsible.

Fetene, (2018) did a study on causes and effects of cost overrun on public building construction projects in Ethiopia. From the results it was found that 67 out of 70 public building construction projects suffered cost overrun. The rate of cost overrun ranges from a minimum of 0% to the maximum of 126% of the contract amount for individual projects. Iyer and Jha (2018) did a research on factors affecting cost performance evidence from Indian construction projects and found out that the project manager's competence and top management support are found to contribute significantly in enhancing the quality performance of a construction project. Gbadura and Oke (2018) examined project management leadership styles of Nigerian quantity surveyors, on the general note, Nigerian quantity surveyors were found to be autocratic using Jerrell/Slevin measuring instrument while in the opinion of Nigerian construction professionals; they are more of task oriented in discharging their duties as construction project managers.

Enshassi *et., al* (2018) studied causes of contractor's business failure in developing countries. These were grouped together to only five main groups which are: managerial, financial, business growth, business environment and political factors. Managerial factors are mainly related to experience, decisions, procurement, control, productivity, communication and claims factors; financial factors are mainly related to loans, cash flow, profit, expenditures, material wastages, equipment cost and usage, and variation order; business growth factors are mainly related to managerial development, size of projects, type of work and number of projects; business environment factors are mainly related to regulations, awarding, economy, owner involvement and accounting practices and political factors are mainly related to delay, closure, lack of resource, high cost of materials, banks policy and dealing with suppliers. The results showed that political group is the most important influencing factor on contractor's business failure in Palestine. Otherwise, Business growth and Business environment had been ranked as the lowest influencing factors on failure.

Bui and Ling (2018) in the study that was carried out in Vietnam on factors affecting construction project outcomes discovered that major enablers that lead to project success are foreign experts' involvement in the project, government officials inspecting the project, and very close supervision when new construction techniques are employed. A factor which leads to poor performance is the lack of accurate data on soil, weather, and traffic conditions. Odeyinka and Yusif (2018) have shown that seven out of ten projects surveyed in Nigeria suffered delays in their execution. Kimani and Kimwele (2018) mixed two research designs; case study and descriptive. The authors also conducted their research on a government organization while this study was conducted in private organizations with government entities (NCA and county government) providing supervisory roles. Ndungu (2018) conducted research in public education institutions in Nairobi that failed to link the relationship between cost overruns and project time on implementation of housing projects.

Page: - 1281 -

The Strategic Journal of Business & Change Management. **ISSN** 2312-9492 (Online) 2414-8970 (Print). www.strategicjournals.com

METHODOLOGY

This study used descriptive research design which is a method or process of collecting data in order to answer questions concerning current status of the subjects in the study (Gay &Airasian, 2013). The target population in this research was the 241employee's in 10 selected registered property developers in Mombasa County. Therefore, property manager, project quantity surveyors and other staff were the respondents for the study, because they were perfect choice to answer the questions that arose from the study objectives due the information they hold. The sampling frame for the study consisted of 10 selected registered property developers in Mombasa County. The total sample size for this study was obtained by using the formulae developed by Saunders, Thornhill, and Lewis (2013) and the adjusted sample size was 149 respondents. The study used both primary and secondary data. The main primary data source was the semi structured questionnaire. The study used secondary data sources of a ten-year period from 2005-2015 based on the availability and accessibility of data. The secondary data was obtained from the Kenya

Property Developers Association and websites belonging to the target property developers in Mombasa County to help evaluate their implementation of housing development projects. Qualitative as well as quantitative methods of data analysis was used to analyze the research variables. Data analysis was done with the help of SPSS version 24.0.

RESULTS AND DISCUSSION

In the research analysis the researcher used a tool rating scale of 5 to 1; where 5 were the highest and 1 the lowest. Opinions given by the respondents were rated as follows, 5= Strongly Agree, 4= Agree, 3= Neutral, 2= Disagree and 1= Strongly Disagree. The analyses for mean, standard deviation was based on this rating scale.

Project Team Competency

The first objective was to examine the effect of project team competency on implementation of housing development projects in Kenya a case study of Kenya property developers association. Table 1 presented descriptive results on project team competency.

Table 1: Project Team Competency

Project Team Competency	N	Mean	Std. Deviation
Level of experience of the project team is paramount to the project implementation	111	3.60	1.337
The level of education of the project team has a great impact to the project implementation	111	3.72	1.356
Certification of previous or ongoing projects of the project team has a great impact to the project implementation	111	3.79	1.088
Technical experience is the key to quality projects implements	111	3.57	1.233
Facilitation of continuous refresher courses on property development is key to project implementation	111	3.59	1.310
Certification of engineers in the construction industry provides confidence of quality implementation of projects.	111	3.57	1.450
Project Team Competency			

The statement that level of experience of the project team is paramount to the project implementation had a mean score of 3.60 and a standard deviation of

1.337. The statement that the level of education of the project team has a great impact to the project implementation had a mean score of 3.72 and a

standard deviation of 1.356. The statement that certification of previous or ongoing projects of the project team has a great impact to the project implementation had a mean score of 3.79 and a standard deviation of 1.088. The statement that technical experience is the key to quality projects implements had a mean score of 3.57 and a standard deviation of 1.233. The statement that Facilitation of continuous refresher courses on property development is key to project implementation had a mean score of 3.59 and a standard deviation of 1.310. The statement that certification of engineers in the construction industry provides confidence of quality implementation of projects had a mean score of 3.57 and a standard deviation of 1.450. These results concurred with Nyaga and Otieno (2018) study that found out that Projects are 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.

Project Cost Management

The second objective was to examine the effect of project cost management on implementation of housing development projects in Kenya a case study of Kenya property developers association. Table 2 presented descriptive results on project cost management.

Table 2: Project Cost Management

Project Cost Management	N	Mean	Std. Deviation
Identification of the total cost of the housing project should be identified prior to the commencement of the project	111	3.68	1.519
The transportation cost of the materials is paramount to the project implementation	111	3.38	.821
The cost of construction materials has a great impact to the project implementation	111	3.85	1.138
Types of Supplier has a great impact to the housing project implementation	111	3.82	1.259
The grade of materials determines the quality of construction materials in property industry	111	3.32	1.646
Supplier competence is key to the implementation of property development Project Cost Management	111	3.51	1.052

The statement that identification of the total cost of the housing project should be identified prior to the commencement of the project had a mean score of 3.68 and a standard deviation of 1.519. The statement that the transportation cost of the materials is paramount to the project implementation had a mean score of 3.38 and a standard deviation of 0.821. The statement that the cost of construction materials has a great impact to the project implementation had a mean score of 3.85 and a standard deviation of 1.138. The statement that types of Supplier has a great impact to the housing project implementation had a mean score of 3.82 and a standard deviation of 1.259. The statement that The grade of materials determines the quality of construction materials in property industry had a mean score of 3.32 and a standard deviation of 1.646. The statement that supplier competence is key to the implementation of property development had a mean score of 3.51 and a standard deviation of 1.052.

Page: - 1283 -

The Strategic Journal of Business & Change Management. **ISSN** 2312-9492 (Online) 2414-8970 (Print). www.strategicjournals.com

Project Planning

The third objective was to examine the effect of project planning on implementation of housing development projects in Kenya a case study of Kenya property developers association. Table 3 presented descriptive results on project planning.

Table 3: Project Planning

Project Planning	N	Mean	Std. Deviation
Proper resource allocations in the housing project affects project implementation	111	3.34	1.681
The project scope should be well defined in the planning phase	111	3.87	1.453
A projects life time is effective in theimplementation of housing development projects	111	3.36	1.333
Project planning is key to the success of implementation of housing development projects	111	3.47	1.512
Project lifetime should be well defined with strict adherence to timelines	111	3.97	1.048
Project resource mobilization should be clearly defined to prevent stalling of development projects	111	4.10	1.395
Project Planning			

From the results in table 3, the statement that proper resource allocations in the housing project affects project implementation had a mean score of 3.34 and a standard deviation of 1.681. The statement that the project scope should be well defined in the planning phase had a mean score of 3.87 and a standard deviation of 1.453. The statement that a projects life time is effective in theimplementation of housing development projects had a mean score of 3.36 and a standard deviation of 1.333. The statement that project planning is key to the success of implementation of housing development projects had a mean score of 3.47 and a standard deviation of 1.512. The statement that project lifetime should be well defined with strict adherence to timelines had a mean score of 3.97 and a standard deviation of 1.048. The statement in agreement that project resource mobilization should be clearly defined to prevent stalling of development projects had a mean score of 4.10 and a standard deviation of 1.395. These results are in agreement with Githenya and Ngugi, (2018) study that established that project planning, project control, motivated project team and project management competency have a great influence on housing project implementation in Kenya.

Project Stakeholder's Management

The fourth objective was to examine the effect of project stakeholders involvement on implementation of housing development projects in Kenya a case study of Kenya property developers association. Table 4 presented descriptive results on project stakeholder's management.

Table 4: Project Stakeholder's Management

Project Stakeholder's Management	N	Mean	Std. Deviation
Stakeholders with high power influence and high interests affected timely completion of this project	111	3.59	1.575
Stakeholder analysis and management enabled timely completion of this project	111	3.79	1.466
Stakeholders communication affects implementation of housing development projects	111	3.63	1.501

	N	Mean	Std. Deviation
Projects with the support of executive management have got a high degree of success	111	3.92	1.244
Project relationship management by coordinating various departments in the project is key to project implementation	111	3.79	1.508
Project accuracy and speed is an attribute to project success	111	4.01	.869
Project Stakeholder's Management	111		

The results in table 4 showed that the statement that stakeholders with high power influence and high interests affected timely completion of this project had a mean score of 3.59 and a standard deviation of 1.575. The statement that stakeholder analysis and management enabled timely completion of this project had a mean score of 3.79 and a standard deviation of 1.466. The statement that stakeholders communication affects implementation of housing development projects had a mean score of 3.63 and a standard deviation of 1.501. The statement that projects with the support of executive management have got a high degree of success had a mean score of 3.92 and a standard deviation of 1.244. The statement that project relationship management by coordinating various departments in the project is key to project implementation had a mean score of 3.79 and a standard deviation of 1.508. The statement in agreement that project accuracy and speed is an attribute to project success had a mean score of 4.01 and a standard deviation of 0.869.

Implementation of Housing Development Projects

The respondents were asked to rate the extent of housing projects development implementation. Table 5 presented the results.

Table 5: Implementation of Housing Development Projects

Implementation of Housing Development Projects	N	Mean	Std. Deviation
Number of units approved for occupation affects implementation of housing development projects	111	3.65	1.627
Number of units completed affects implementation of housing development projects	111	3.68	1.192
Number of units ongoing affects implementation of housing development projects	111	3.98	1.070
The skills and competence level of project management team is key to implementation of development projects	111	3.86	1.299
Stakeholder participation is key in the project management development and implementation	111	4.00	1.027
Project planning and execution is fundamental in implementation of housing development projects	111	4.09	1.593
Implementation of Housing Projects	111		

The statement that number of units approved for occupation affects implementation of housing development projects had a mean score of 3.65 and a standard deviation of 1.627. The statement that number of units completed affects implementation of housing development projects had a mean score of 3.68 and a standard deviation of 1.192. The statement that Number of units ongoing affects implementation of housing development projects had a mean score of 3.98 and a standard deviation of 1.070. The statement that the skills and competence level of project management team is key to implementation of development projects had a mean score of 3.86 and a standard deviation of 1.299. The

statement that stakeholder participation is key in the project management development and implementation had a mean score of 4.00 and a standard deviation of 1.027. The statement that

Project planning and execution is fundamental in implementation of housing development projects had a mean score of 4.09 and a standard deviation of 1.593.

Inferential Statistics

Table 6: Pearson Correlation

		IHDP	PTC	PCM	PP	SM
IHDP	Pearson Correlation	1				
	Sig. (2-tailed)					
	N	111				
Project Team Competence	Pearson Correlation	.207*	1			
	Sig. (2-tailed)	.029				
	N	111	111			
Project Cost Management	Pearson Correlation	-.213*	-.165	1		
	Sig. (2-tailed)	.025	.085			
	N	111	111	111		
Project Planning	Pearson Correlation	.451**	.090	.322**	1	
	Sig. (2-tailed)	.000	.348	.001		
	N	111	111	111	111	
Stakeholder Management	Pearson Correlation	.078	-.599**	.296**	.344**	1
	Sig. (2-tailed)	.420	.000	.002	.000	
	N	111	111	111	111	111

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

According to the findings, it was clear that there was a positive correlation between the independent variables, project team competency, project cost management, project planning and project stakeholder's management and the dependent variable implementation of housing development projects. The analysis indicated the coefficient of correlation, r equal to 0.207, -0.213, 0.451 and 0.078 for project team competency, project cost management, project planning and project stakeholders' management respectively. This indicated a positive relationship between the independent variable namely project team competency, project planning and project stakeholder's management and the dependent variable implementation of housing development projects whereas project cost management and implementation of housing development projects showed that there was no relationship.

Table 7: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.833^a	.693	.685	4.02206

a. Predictors: (Constant), StakeholderManagement, ProjectCostManagement, ProjectPlanning, ProjectTeamCompetence

The model explains 69.3% of the variance (R Square = 0.685) on implementation of housing development project. Clearly, there are factors other than the four proposed in this model which can be used to predict

Page: - 1286 -

The Strategic Journal of Business & Change Management. **ISSN** 2312-9492 (Online) 2414-8970 (Print). www.strategicjournals.com

implementation of housing development project. However, this is still a good model as Bryman and Bell, (2018) pointed out that as much as lower value R square 0.10-0.20 is acceptable in social science research. This means that 69.3% of the relationship is explained by the identified four factors namely project team competency, project cost management, project planning and project stakeholders management. The rest 30.7% is explained by other factors in the implementation of housing development project in, Kenya not studied in this research. In summary the four factors studied namely, project team competency, project cost management, project planning and project stakeholders management or determines 69.3% of the relationship while the rest 30.7% is explained or determined by other factors.

Table 8: ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	3827.022	4	956.756	59.708	.000[b]
Residual	1698.578	106	16.024		
Total	5525.600	110			

a. Dependent Variable: ImplementationofHousingDevelopmentProjects
b. Predictors: (Constant), StakeholderManagement, ProjectCostManagement, ProjectPlanning, ProjectTeamCompetence

In testing the significance level, the statistical significance was considered significant if the p-value was less or equal to 0.05. The significance of the regression model was represented with P-value of 0.00 which was less than 0.05. This indicated that the regression model is statistically significant in predicting factors of implementation of housing development projects. Basing the confidence level at 95% the analysis indicates high reliability of the results obtained. The overall Anova results indicated that the model was significant at F = 59.708, p = 0.000.

Table 9: Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	21.927	6.944		3.158	.002
	Project Team Competence	.411	.158	.142	2.601	.004
	Project Cost Management	-.955	.210	-.388	-4.558	.000
	Project Planning	.639	.113	.528	5.652	.000
	Stakeholder Management	.340	.165	.095	2.061	.001

a. Dependent Variable: Implementation of Housing Development Projects

The regression equation was:
$Y = 21.927 + 0.411 X_1 + -0.955 X_2 + 0.639X_3 + 0.340X_4$
Where;
Y = the dependent variable (Implementation of Housing Development Projects), X_1 = Project Team Competency, X_2 = Project Cost Management, X_3 = Project Planning, X_4 = Stakeholder's Management

The regression equation above established that taking all factors into account (Implementation of Housing Development Projects) constant at zero implementation of housing development projects, Kenya would be 21.927. The findings presented also showed that taking all other independent variables at zero, a unit increase in project team competency would lead to a negative 0.411 increase in the scores

of implementation of housing development projects, Kenya; a unit increase in project cost management would lead to a negative 0.955 increase in implementation of housing development projects, Kenya; a unit increase in project planning would lead to a 0.639 increase the scores of implementation of housing development projects, Kenya and a unit increase in project stakeholders management would lead to negative 0.340 increase the scores of implementation of housing development projects in Kenya.

Table 10: Test of Hypotheses

Hypothesis Statement	Regression Results	Decision
Ho1: Project team competence has no significant effect on the implementation of housing development projects in Kenya..	t = 2.601 P = 0.004	**Reject** Ho1 null hypothesis Project team competence has no significant effect on the implementation of housing development projects in Kenya.
Ho2: Project cost management has no significant effect on the implementation of housing development projects in Kenya.	t = -4.558 P = 0.000	**Accept** Ho2 null hypothesis Project cost management has no significant effect on the implementation of housing development projects in Kenya.
Ho3: Project planning has no significant effect on the implementation of housing development projects in Kenya.	t = 5.652 P = 0.000	**Reject** Ho3 the null hypothesis project planning has a significant effect on implementation of housing development projects in Kenya.
Ho4: Project stakeholder management has no significant on the implementation of housing development projects in Kenya.	t = 2.061 P = 0.001	**Reject** Ho4 null hypothesis Project stakeholder management has no significant on the implementation of housing development projects in Kenya.

DISCUSSION

This study was on effect of project management practices on implementation of housing development projects in Kenya a case study of Kenya developers association. The study was based on four objectives namely project team competency, project cost management, project planning and project stakeholders' management.

On project team competency Project managers within ineffective virtual teams exhibited an inability to partner with clients and find expert resources necessary for collaborative problem solving. The inability to determine team member resources was also associated with poor communications, as was the lack of effort afforded to managing client expectations. Goal setting and performance management was inhibited by project managers' lack of confidence in self and other members of the team. Finally, project managers' inability to understand the virtual teamwork processes required to complete interdependent performance objectives hindered virtual project team success. Personal skills or competencies were described by project managers as lacking the necessary talent, experience and expertise for the timely delivery of team objectives. Finally, critical team member resources were thought to be generally uncooperative in planning and coordinating the completion of interdependent tasks.

Page: - 1288 -

The Strategic Journal of Business & Change Management. **ISSN** 2312-9492 (Online) 2414-8970 (Print). www.strategicjournals.com

On project cost management, cost and resources management plan, Basis of cost estimates, project schedule & risk register, Business case, benefits management plan, agreement information and costs relating to products, services, results, Existing formal and informal cost budgeting, Cost budgeting tools reporting methods, Determine Budget process, project characteristics (parameters), reconciled with any funding limits on the commitment of funds for the project, Financing entails acquiring funding for projects . Cost management plan, performance measurement baseline, projected expenditures plus anticipated liabilities, contains data on project status such as which costs have been authorized, Existing formal and informal cost control-related policies, procedures, guidelines Cost control tools, Monitoring and reporting methods, Control Costs process including Variance analysis, Earned value analysis, Forecasting and Financial analysis.

On project planning the study established that planning was the cornerstone of any project success. That planning involved sourcing for financing, sourcing for building materials, sourcing and securing construction site workers and construction permits, machinery for works, laying out the project matrix that shows milestones and when timelines when they should be achieved. Further the study revealed that project planning determine delivery of project within the set time and budgeted capital.

On project stakeholders' management the study established that stakeholders during the project cycle and that stakeholder management involves managing stakeholder strategies. Further the property developers undertake early identification and management of stakeholders at the start of a project and that stakeholder's needs and expectations can influence project decisions and that stakeholder's influence strategy.

CONCLUSIONS

There is always a relationship between the correlation analysis and regeression analysis in research. From the study findings, it was established that there was a strong positive correlation between the independent variable project team competency and the dependent variable implementation of housing development projects in Kenya. Therefore from the study findings, it was conclusded that project team competency has a significant effect on implementation of housing development projects in Kenya.

On project cost management results showed that there was negative correlation with the dependent variable implementation of housing development projects in Kenya. The study therefore concluded that project cost management has no significant effect on implementation of housing development projects in Kenya.

From the study findings, it was established that there was a strong positive correlation between the independent variable project planning and the dependent variable implementation of housing development projects in Kenya. Project planning has no significant effect on implementation of housing development projects in Kenya. Therefore from the study findings, it was concluded that project planning has a significant effect on implementation of housing development projects in Kenya.

From the study findings, it was established that there was a strong positive correlation between the independent variable project stakeholders' management and the dependent variable implementation of housing development projects in Kenya. Project stakeholders' management has no significant effect on implementation of housing development projects in Kenya. Therefore from the study findings, it was concluded that project planning has a significant effect on implementation of housing development projects in Kenya.

RECOMMENDATIONS

From the study results the following are the recommendations:

- That staff working in a project needs to be trained before projects commences:
- That projects should hire project managers that have project academic and practical experience.
- That projects are financed after proper evaluation of projects viability by quantity surveyors.
- That project managers should adopt the use of innovation and technology in their project planning process that would be accurate.
- That project stakeholders' should be involved in all milestones of the projects to enrich the project in cases of variances in costing.

Areas for Further Studies

This study focused on the effect of project management practices on implementation of housing development projects in Kenya. Since only 69.3% of results was explained by the independent variables in this study, it was recommended that a study be carried out on other project management practices that affect project implementation, specifically, a study should be carried out on project management practices and project completion with a focus on all government projects across the country in order to pick out other variables not covered in the current study.

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Page: - 1290 -

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Page: - 1291 -

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Page: - 1292 -

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