INFLUENCE OF INNOVATIVE STRATEGY PRACTICES ON PROJECT TEAM EFFECTIVENESS IN REAL ESTATE CONSTRUCTION FIRMS IN NAKURU TOWN

Wycliffe Muhoma ✉

Jomo Kenyatta University of Agriculture & Technology,

School of Entrepreneurship, Procurement and Management, Kenya

mosmuhoma@gmail.com

Josphat Kwasira

School of Entrepreneurship, Procurement and Management,

Jomo Kenyatta University of Agriculture & Technology, Kenya

jkwasira7@gmail.com

Abstract

Real estate development in Kenya is a multifaceted business, growing rapidly across urban areas. This study is focused on assessing innovative strategies influencing team effectiveness in real estate construction projects in Nakuru town, Kenya. Therefore, a cross-sectional survey research design was employed with a target population of 300 workers in real estate construction projects. A sample size of 75 was selected and administered with structured questionnaires. Collected data was coded and analyzed for descriptive and inferential analyses using SPSS 21. The response rate was 93.3%. There was indifference (mean 2.48) that real estate projects budgeted for technology adoption. Project teams need clearly defined roles and responsibilities (mean 2.51). There were adequate project controls during planning; implementation and project closure (mean 2.52). Project team cohesion enhances efficiency and collaboration in project implementation (mean 3.25). A strong positive correlation was found between all the four strategies (communication planning, technology adoption, project leadership and team cohesion) with r = 0.762, 0.714, 0.802 and 0.750) and team effectiveness. The regression analysis explained that the selected factors explained 77.46% variance in the

team effectiveness. The study recommended training of project teams, budgeting for technology adoption and holding continuous meetings to discuss team performance.

Keywords: Communication; Planning; Leadership; Team; Cohesion; Assessment; Real estate; Construction projects

INTRODUCTION

Real estate refers to land, as well as any physical property or improvements affixed to the land and other developments on it. Real estate development, or property development is a multifaceted business, encompassing activities that range from the renovation and re-lease of existing buildings to the purchase of raw land and the sale of improved land or parcels to others for a profit (Mwithiga, 2010, Sara & Richard, 2008). As a result, real estate investment plays a crucial role in providing employment opportunities, offering shelter to households, enhancing income distribution and alleviating poverty (Knight Frank, 2011). Globally, real estate development has played a profound role in growing the economies of nations over time. For instance, organized real estate in USA and Canada is almost as old as the countries themselves (Luigi, 2005).Already, half of the world's population lives in urban centers and one third of them in slums and is expected to increase by one billion in a decade. Slums will grow at an accelerated pace unless 35million housing units are made available annually (UN-Habitat, 2002).

Hass Consultants and CFC Stanbic bank in 2010 reported that the real estate sector in Kenya has been vibrant for the past decade. The capital gains from Kenyan properties far outstrip gains from US and UK properties (Mwithiga, 2010). Nakuru is Kenya's third largest residential town after Nairobi and Mombasa and located about 160 kilometers to the North West of Nairobi. It was rated the fastest developing town in sub-Saharan Africa in 2011 by the UN habitat. Real estate developers in Nakuru have stepped up investments in commercial buildings, learning institutions and the retail sectors. Old buildings in the CBD are being demolished to build higher density buildings in bid to maximize use of vertical space (Damary, 2012).

According to Klein and Sorra (2006), project implementation effectiveness describes the quality and consistency of the use of a specific innovation. Sawang and Unsworth (2011) posited that during implementation, the immediate outcome of interest is the initial or early use of technology in implementing projects. According to King (2002), project leadership plays a key role in times of change, because in order to succeed, a project will need commitment at

organizational level. Ke and Wei (2006) contended that top leadership also assists in getting user support in system implementation. Ineffective implementation arises from lack of knowledge rather than failure of the innovation being adopted (Klein & Knight, 2005). Wunderlich and Größler (2011) posited that in looking at project success, there is a need to assume a range of different project lenses encompassing all stakeholders. Jhurree (2005)reported that technology adoption has the potential to drive economic, social, political and educational transformations.

Further, communication is the key to keeping team members, managers, and stakeholders informed about project implementation. Effective communication is a critical element of team effectiveness, both in traditional and virtual teams (Pitts et al., 2012). In case of many projects, activities in the field of communication management becomes disordered (Paasivaara&Lassenius, 2003; Adera, 2013). Project communication management in Slovakia revealed that in 66% had no written document or methodology prepared (Samáková et al., 2013). Remidez and Jones (2012) claimed that task-oriented communications that lack relationship building aspects are insufficient to support effective teams. Ling et al., (2007) reported that having more face-to-face communication than written communication is very effective in sharing information among teams. Papke-Shields et al., (2010) in their study on project management discovered that practices related to communication are not given enough attention. That is why many project failures are experienced (Conboy, 2010; Stoica&Brouse, 2013). Cantu (2007)posited that the more effectively a team functions, the more benefits they are likely to realize. According to Gibson et al. (2003), an organization's team effectiveness is a key juncture of theory development. Lowe (2009) reported that team performance can be increased by keeping basic teamwork principles at the forefront.

According to Defense AT&L (2008), to build an effective team, the management must provide an environment which is conducive to team work. It is a real challenge to management to learn how to use teams more effectively (Duarte and Snyder 2004). A team is as good as the individuals who form the team(Salas, Rosen, Burke & Goodwin, 2009). Project teams have leaders to help distinguish front from back stage behavior and get to the heart of leading teams (Moeran, 2005).High degree of cohesion is highly motivating in achieving the project team goals. Vakola and Wilson (2004) however, warn that the importance of the human element and the way that people co-operate with each other should not be taken for granted. Kenya's Vision 2030 aims at providing affordable and adequate housing. There is an annual demand of about 150,000 housing units but the supply is at 35,000 units. This portends enormous opportunities and a major market with appropriate and innovative financing mechanisms (Njuguna, 2010). In Sub-Saharan Africa, the urban population is growing at 6% per year and will double in the next

twelve years (UNHabitat, 2007).According to Practical Action (2007), baseline survey report on a housing project in Nakuru,68% of the houses have only one room shared by four people.The Kenyan building Act 2009 require that before any building and construction project commences, the contractor must obtain a building permit, environmental impact assessment certificate, building plan approvals, construction sign board fee payment, open an inspection file and get an occupation certificate.

Statement of the Problem

Real estate development is an integral aspect in the economy of any country, county and even a town. It involves building of commercial and residential structures that provides office spaces, business sites and residential homes. However the real estate sector in Kenya has faced a lot of challenges including collapse of weak buildings, failure to meet project time limits and wastages of resources and construction materials. These challenges are greatly contributed by project team ineffectiveness leading to poor workmanship, poor quality, resource wastage, and failure to meet scheduled timelines. Available data shows that structures collapse at a rate of 2-3 buildings per year in Kenya for the last couple of years. There is also evidence of about 10% of structures stalling in Nakuru due to material wastage and poor planning. This has resulted in many law suits on breach of contracts for real estate projects. There is also failure to deliver on agreed tasks, timeline and impacts of projects. This has led to economic losses to the country and more so Nakuru region. All this relates to project teams ineffectiveness and lowproject performance. As a result, teams are unable to execute their functions, responsibilities and tasks effectively. It's in this regard that innovative strategies had to be invented to influence teams' effectiveness. However it's not clear on how influential this innovative strategies impact on real estate projects and this study aimed to find out.

LITERATURE REVIEW

Theoretical Literature

Innovation theory is very important in project management but there is paucity of research for project based firms. Project based firms are simultaneously becoming a more vital and important organizational contexts, exemplifying many current managerial challenges (OECD 2006). Innovation projects are intrinsically uncertain making it difficult to gauge the net present value of such projects. Considerable evidence has been amassed that redundancy and slack are important in fostering innovation in projects (Morgan (2007).According to ZviGriliches (2005), empirical evidence worldwide points to a positive link between technological innovation and economic performance. However, the relationship between innovativeness and

performance seems to differ in intensity and significance across various aspects (Sheehan & Wyckoff, 2003). Indeed, the benefits of many radical innovations are realized in incremental improvements (Geels 2005; Dolata 2011). Knowledge is often claimed to be the most fundamental resource in an innovation system, while learning is the most important process (Lundvall 2007; Wieczorek 2012). In addition, technology adoption and innovation go hand in hand in delivering projects on time and tracking impacts created. Further, innovation promotes better project leadership if appropriately implemented. One of the most influential models of teamwork theory was developed in 1965 by Bruce Tuckman. It is critical for the project manager to provide structure and direction for the team. He should clearly define the project's objectives, roles and responsibilities.

According to Benson & Lawler, 2007), pressures deriving from the need to develop new ideas in dynamic, uncertain and complex environments cause the start of team conflicts. The Storming stage is characterized by interpersonal issues such as conflict and polarization. As the project manager, this will likely be the most challenging time leading your project. It is also important for the project manager to be assertive, confident and positive(Sims, Salas & Burke, 2005).Communication and constructive feedback will help keeping everyone moving in the right direction (Aritzeta & Alcover, 2006). In the performing stage, team members are comfortable with each other and group norms have been accepted. Interpersonal and structural issues have been settled and support project task performance and team synergy is high leading to high performance. At this level, the project managers are able to focus their energy on leadership activities and less on supervisory activities (Goodwin et al., 2009). This level of synergy amplifies the overall effectiveness of your project. As the project comes to an end; the team moves into the adjourning stage(Salas & Rosen, 2009). This theory supported this research study by extensively exploring the project team cohesion, project leadership, technology adoption and communication planning.

Empirical Review

Good communication can be defined, assessed or measured, but it is fundamental to successful technology-driven change management. Harison and Boonstra (2009) pointed out that managing a techno-change trajectory is not a matter of managing a technical project but an organizational one. Changing the culture in an organization requires people skills. Understanding the functioning of work teams, through their theoretical and methodological diversity integrates and consolidates their communication and interdependence to obtain great results (Weingart&Cronon, 2009). This plays a crucial role in the effectiveness of teams (Hackman, 2002). This further supports organizational climate for teams and organizational

culture, communication and conflict or flexibility (Rico & Cohen, 2005, Stewart &Barrick, 2000). Langfred (2005) showed how the positive effects of autonomy on team performance only occur in conditions of high interdependence. Sharing of information, coordination and interdependence among and between teams enhances their effectiveness.

PMI (2007) defines competency as "a cluster of related knowledge, attitudes, skills, and other personal characteristics that affects a major part of one's job. A competent person is considered a capable person. Competencies apply regardless of whether the individual is a portfolio manager, program manager, project manager, or team member but depends on environment and initiative uniqueness of the project. There is no one-size-fits-all approach as leadership is embedded into one's job at any level of an organization or project team. If one is managing a routine project, one can follow existing guidelines and procedures used in the organization or practices and procedures that have been successful in the past (Lira, Ripoll, Peiro, & Gonzalez, 2007).

One of the most important steps of a project is to carefully choose the team. This is done by relegating sympathies and friendship to the core in order to make the right choices for the sake of the project (Carson et al., 2007). This is one of the most difficult aspects to deal with. Teambuilding means talking, discussing, asking and answering, being ready for brainstorming or working harder than usual; listening and asking for suggestions(Avolio, & Jung, 2002).For the projects whose staffs is sent out to the field in carrying out project activities on their own, there is a need for contact support to ensure quality (Ramesh, 2002, Vanessa and Gala, 2011). Chan and Kumaraswamy (2005) stated that a number of unexpected problems and changes from original design arise during the construction phase, leading to problems in time schedule and performance. Okuwoga (2008) stated that cost and time performance has been identified as general problem in the construction industry worldwide. Dissanayaka and Kumaraswamy (2005) reported that project complexity, client type, experience of team and communication are highly correlated with the time performance; whilst project complexity, client characteristics and contractor characteristics are highly correlated with the cost performance.

Poor leadership often leads to reduced project team performance, coordination and overall morale. Leadership integrates the team vision, stakeholders, their expectations and the project goals. Project leadership is an essential competency associated with human behavior covering areas such as negotiating, communicating, problem solving, and critical thinking. One of the major risks of technology-driven change is that if it is not managed effectively, employees will not use the new information (Markus, 2004).The goal of technology-driven change is to drive organizational performance improvement (Weick 2001, Harison&Boonstra, 2009).This is in tandem with project team effectiveness, coordination and performance. Indeed, technology

adoption has more benefits in enhancing project implementation, communication and cost reduction. However, technology adoption requires that employees or project team members are trained to adopt the new work changes and transformations. Team members can in this case strongly support and accept the leader, accept the leader with reservations, or reject the leader. In every respect, team leadership may be the most challenging of all leadership roles.

The beginning (and middle and end) of a change initiative involves planning, starting with a compelling case for change or sense of urgency (Kotter, 2012).Duan et al. (2014) stated that informal influencers are everywhere, in every organization. The single most important ingredient in team success is a clear, common, and compelling purpose. Too often, a team's purpose is ill-defined, uninspiring, or foggy, leaving the team to figure out what success is supposed to look like. Teams are merely a means to an end and it is team purpose that provides the reason for collaboration (Hiller, Day, & Vance, 2006). A clear, compelling purpose gives reason for people to commit to a team. According to Dixon, & Robertson, (2006), a common mistake is to launch the team too quickly and push them into implementation before members have had the opportunity to coalesce around a purpose and ensure that everyone is aligned to it. High-performing teams leverage individuals' different roles against the collective work products.A common purpose not only calls the team together, it also holds the team together during the inevitable turbulences.

There is often a tendency to take role definition to extremes or not to take it far enough (Mehra, et al., 2006). If the team purpose is the reason for cooperation, then the development and division of clear roles is a team's strategy for cooperation. Inadequate team leadership is often the single biggest reason for team ineffectiveness (Stewart, 2006). In most organizational settings, it is the leader who frames the team purpose and facilitates discussions on its meaning and nature. According to Hackman &Wageman (2005), teams and processes go together. It would never occur to a surgical team, construction crew, string quartet, or film crew to approach tasks without clearly defined processes. Organizations that leverage cross-functional project teams have learned that new team skills and well defined processes go hand in hand(Carson et al., 2007).

One of the biggest misperceptions in the world of teams and teamwork is the belief that to work and communicate effectively, team members must be friends (Wheelan, 2009). In fact, the diversity of skills, experience, and knowledge needed to divide tasks effectively almost precludes high levels of friendship. According to Wageman (2005), solid team relationships provide the climate needed for high levels of collaboration and are characterized by trust, acceptance, respect, understanding, and courtesy. Trust is clearly the non-negotiable element

of interdependent relationships. A team cannot move faster than it communicates. Fast, clear, timely, accurate communication is a hallmark of high levels of team performance and cohesion.

Figure 1. Conceptual Framework
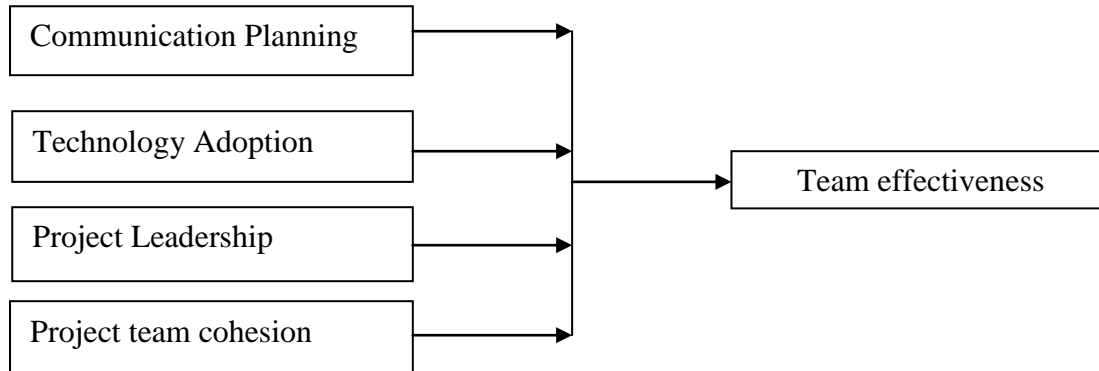
Critique of Reviewed literature Relevant to the Study

It's not just in the communication field that project managers can use theories for their own personal development. As leaders, they need to constantly find ways to improve and develop initiatives. Adapting to different schools of knowledge is one way to do that. Stakeholders can also affect an organization's functioning, goals, development, and even survival. In particular, stakeholders could be beneficial when they facilitate the realization of the projects' goals. In managing a techno-change trajectory it is not a matter of managing a technical project but an organizational one. Promoters need to be capable of changing both the technology and the organization. This requires different skills in addition to developing and constructing technology. Other aspects of the organizational context in which people are working also require a different set of skills. Project complexity, client type, experience of team and communication are not always highly correlated with the time performance. Similarly, project complexity, client characteristics and contractor characteristics are not always highly connected with the cost performance.

Research Gaps

Several researches have been done on team performance, project team leadership styles, project team management and project team execution. Ten characteristics of project team effectiveness have been established. However there is a major gap considering that most of these researchers have not critically outlined how the ten characteristics would influence team effectiveness. There is a lot to be studied on how fast project team effectiveness can be enhanced to achieve the desired project output and impact. Team training helps the employee

to get job security, satisfaction and motivation. However, the impacts that job training will have in influencing team effectiveness has not been ascertained. This creates a gap in the link between various studied attributes of an employee in an ordinary project setup in comparison to a corporate sector project team.

METHODOLOGY

This research study adopted a cross-sectional survey research design. This research strategy was preferred because it permits the collection of data through questionnaires administered to a sample (Saunders &Thorn Hill, 2007). This design was also used to facilitate the collection of a considerable amount of data quickly, efficiently and accurately (Oso&Onen, 2005). The study targeted a population of 300 respondents working in real estate construction projects. The sample frame for this study was the target population of 300 respondents, large enough to allow the researcher to make inferences of the entire population (Silverman, 2005).

Table 1: Sampling Frame

No.	Category	Target population	Percentage
1	Real Estate contractors	20	6.7
2	Construction project managers	40	13.3
3	Construction workers	195	65
4	Clerks of works	45	15
	Total	**300**	**100**

The sample size of the study was determined using the Nassiuma (2000) formula.

$$n = \frac{NC^2}{C^2 + (N-1)e^2}$$ Where

n = sample size;

N = population size;

C = coefficient of variation which is 50%

e = error margin which is 0.05.

Substituting these values in the equation, estimated sample size (n) was:

n = $\underline{\quad 300\ (0.5)^2 \quad}$

$0.5^2 + (300\text{-}1)0.05^2$

n = 75.2

n= 75

Stratified random sampling was used to draw the sample. According to Saunders *et al.* (2009), dividing the population into series of relevant strata means that the sample is more likely to be representative as one can ensure proportional representation within the sample.

Table 2: Sampling Distribution

No.	Categories	Target population (N)	Sample (n)
1	Real Estate contractors	20	5
2	Construction project managers	40	10
3	Construction workers	195	49
4	Clerks of works	45	11
	Total	**300**	**75**

This study used a structured questionnaire to collect data from the sampled respondents. The questionnaire consisted of close-ended questions so as to control the responses to an allowable limit. A pilot study was conducted in Free Area in the suburbs of Nakuru town and targeted one real estate construction firm in early February 2016. The objective of the pilot study was to pre-test the reliability of the questionnaire(Small *et al.*, 2011, Strauss & Corbin, 2007). The questionnaire was pilot tested on 10% of the accessible population as recommended by (Mugenda&Mugenda, 2003).Validity as noted by Robinson (2009) and Kothari (2004) is the degree to which results obtained from the analysis of the data actually represents the phenomenon under study. Content validity was ensured through pilot testing and pre-testing the research instrument. According to Sukaran (2010), content validity is a function of how well the dimensions or elements of a concept have been captured.

Reliability test looks at the ability of research instruments to give consistent results over and over again (Kombo et al., 2006, Mugenda&Mugenda, 2003). Test re-test method was used to pilot the questionnaires, which formed the sample of the study. Cronbach alpha was used to test the internal consistency estimate of reliability of the test scores. A correlation coefficient greater or equal to 0.7 is acceptable (George &Mallery, 2003).

The questionnaire was self-administered. Prior to issuing of the questionnaire, the necessary permits were obtained from the relevant authorities. Drop-and-pick-later method was employed to allow the respondents' time to fill the questionnaire.Both descriptive and inferential data analyses using mean, standard deviation and percentages were generated. The researcher further used regression analysis to establish the strength of the relationship between the dependent and independent variables.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4$$

Where:

Y= Project team effectiveness, X_1= Communication planning, X_2= Technology adoption, X_3= Project leadership, X_4= Project management Competency, ε = error term, assumed to be 0. β_1, β_2, β_3, β_4 are the coefficients of the linear regression equation. The findings were presented using percentages and frequency distribution tables.

EMPIRICAL FINDINGS AND DISCUSSIONS

Reliability Test Results

A pilot study was conducted to examine the reliability and validity of the research instrument. A sample of 8 respondents was randomly picked representing 10% of the accessible population. The return rate was 100%. The Cronbach's Alpha Test was conducted on all measures for the independent and dependent variables with a threshold of 0.7. All the variables gave a Cronbach's alpha of more than 0.7.

Table 3: Reliability Test Results

Variable	N	Cronbach's Alpha
Communication Planning	5	0.763
Technology Adoption	5	0.714
Project Leadership	5	0.802
Team Cohesion	5	0.752

Preliminary Findings

A total of 75 questionnaires were distributed to the respondents in the real estate construction Firms in Nakuru town. 70 questionnaires were completely filled translating to 93.3% response rate. The high response rate was occasioned by the fact that the questionnaires were administered by the researcher himself hence provided the opportunity for clarification of the questions to the respondents and face to face interviews.

Table 4: Demographic Characteristic of the Respondents

Section		Frequency	Percent (%)
A	Gender		
	Male	49	70.0
	Female	21	30.0
	Total	70	100.0

B	Age Category		
	20-25 years	21	30.0
	26-30 years	28	40.0
	31-35 years	14	20.0
	Above 35 years	7	10.0
	Total	**70**	**100.0**
C	Level of Education		
	Primary	35	50.0
	Secondary	13	18.6
	College	11	15.7
	University	11	15.7
	Total	**70**	**100.0**

Table 5: Position and Working Experience of Respondents

Section		Frequency	Percent (%)
D	**Role**		
	Engineer	4	5.7
	Project Manager	7	10.0
	Construction worker	49	70.0
	Surveyor	3	4.3
	Project Accountant	7	10.0
	Total	**70**	**100.0**
E	**Working Experience**		
	Less than 1 year	14	20.0
	1-5 years	28	40.0
	5-10 years	14	20.0
	Above 10 years	14	20.0
	Total	**70**	**100.0**

From Table 4, 70% percent were male while 30% were female. Majority were aged between 26 and 30 years (40%). On the level of education, majority of the respondents (50%) had attained primary level education while 15.7% had attained college and university levels of education. The findings show the respondents were capable of comprehending and answering the research questions.

Findings in Table 5 shows that 5.7% were engineers, 10% project managers and 70% construction workers respectively. Regarding working experience in terms of number of years,

20% had worked for less than one year and 20% worked for 5 to 10 years. These findings show a relatively well distributed and experienced staff in the real estate construction industry.

Descriptive Analysis

Table 6: Descriptive Analysis of Communication Planning

	Statement	N	Min	Max	Mean	Std. Deviation
1.	Real estate construction projects puts in place adequate communication plans for project teams and overall projects	70	1	5	3.42	.910
2.	Real estate construction projects trains on communication procedures, channels and reporting regularly	70	1	4	2.50	1.000
3.	There are continuous meetings to discuss project team performance, communication and progress assessments	70	1	5	2.57	.974
4.	Project team leaders regularly update team members on their targets, progress and shared team vision	70	2	5	3.06	.965
5.	Project team communications' plan is dynamic and adjusted throughout life of project	70	2	5	3.11	.818

In Table 6 above, majority of the respondents (mean 3.42 and sd.910) agreed that real estate construction projects have put in place adequate project communication plans for the project teams. Further analysis on whether real estate construction projects trains teams on communication procedures, channels and reporting revealed the respondents were indifferent (mean 2.50 and sd. 1.000). On continuous meetings to discuss project team performance, communication and progress assessments, majority agreed (mean 2.57 and sd.974).The study also sought to ascertain whether team leaders regularly updated project team members on their targets and progress and majority were in agreement (mean 3.06 and sd.965). Again, on further analysis of the project team communication plan dynamics and adjustments throughout the life of a project, majority of the respondents agreed with the view (mean 3.11, sd.818). The findings on communication planning imply that information flow between project teams and their leaders should be enhanced. Involvement of the project teams in communication planning, regular trainings and continuous performance review meetings will greatly boost team effectiveness.

Table 7: Descriptive Analysis of Technology Adoption

	Statement	N	Min	Max	Mean	Std. Deviation
6.	Real estate construction projects budgets for technology adoption and implementation	70	1	4	2.48	1.010
7.	The top management supports technology adoption to enhance efficiency	70	1	5	2.58	.809
8.	The project team adopts technology implementation without resistance or fear of change at work	70	1	4	2.46	1.210
9.	Project team members are regularly trained on technology adoption especially on new challenges	70	1	5	2.44	1.220
10.	Technology adoption increases the efficiency of implementing projects and reduces costs and wastage	70	2	5	3.78	.898

The study in Table 7 above analyzed the influence of technology adoption on project team effectiveness. Half of the respondents neither agreed nor disagreed on budgeting for technology adoption and implementation (mean 2.48, sd.1.010). The majority (mean 2.58, sd.809) agreed that the top management supported technology adoption to enhance efficiency. This finding contradicts with the level of budgeting presumably done by the top management for technology adoption and their support for its implementation. The findings are consistent with PMI, (2013) which stated that the end is reached when the project's objectives have been achieved. Project managers and sponsors are judged more by the value their projects create than by simply delivering projects on time, within budget and according to scope.

The findings also show that project teams did not accept technology adoption without resistance due to fear at work (mean 2.46, sd.1.210). Apparently, the project teams were not supportive of technology adoption probably due to employee redundancy or loss of their jobs. The findings imply that training on new technologies has not been prioritized or focused on by top management (mean 2.44 and sd. 1.22). Majority reported that technology adoption increases the efficiency of implementing projects, reducing wastage and costs (mean 3.78, sd.898).

Table 8: Descriptive Analysis of Project Leadership

	Statement	N	Min	Max	Mean	Std. Deviation
11.	Project teams always have clearly defined roles and responsibilities in projects	70	1	5	2.51	.991
12.	Team leaders have effective procedures of project planning and implementation outlining work flows and sequence	70	1	4	2.49	1.113
13.	Project top management have the ability to supply high quality project coordination information	70	2	5	3.59	.810
14.	There are adequate project controls during planning, implementation and closure of the projects	70	1	5	2.52	1.021
15.	There is always early and continued engagement of the project teams	70	1	5	2.61	.980

The study sought to find out the influence of project leadership on real estate project team effectiveness. In Table 8, the findings shows project teams may be marred with confusion on their roles or probably the project team members are engaged in dynamic engagements or jobs (mean 2.51 and sd.991). This may also reveal lack of specialization. However, the top management was capable to supply high quality project coordination information (mean 3.59and sd.810). Moreover, majority of the respondents did not agree that team leaders have effective procedures for project planning and implementation outlining work flows and sequence (mean 2.49 and sd. 1.113). The findings imply that project scheduling and work break down structures should be enhanced. In addition, the study established that there were adequate project controls during planning, implementation and closure of the projects (mean 2.52, sd.1.021). There was also early and continued engagement of the project teams (mean 2.61, sd.980). In conclusion, real estate projects should have clear definition of roles and responsibilities, proper coordination and communication by top management and proper planning of project work schedules. The findings are consistent with the PMI, (2014) which points out that the right combination of abilities and competencies for program and project success needs to be determined for each environment and initiative.

Table 9: Descriptive Analysis of Project Team Cohesion

	Statement	N	Min	Max	Mean	Std. Deviation
16.	Project leaders encourages team cohesion in their project work	70	2	5	2.53	.971
17.	The project team cohesion enhances efficiency and collaboration in project implementation	70	2	5	3.25	.874
18.	Team leaders regularly conducts project team building sessions to enhance bonding and sharing of experiences	70	1	4	2.38	1.224
19.	The top management supports and facilitates high quality project team cohesion activities	70	1	5	2.35	1.241
20.	The project teams understand the importance of cohesion and its effectiveness in project implementation	70	2	5	2.51	1.232

The findings in Table 4.7 analyzed the influence of project team cohesion on project team effectiveness. The findings show that project leaders encourage team cohesion in their project work (mean 2.53, sd.971). Project team cohesion enhances efficiency and collaboration in project implementation (mean 3.25, sd.874). Team leaders should enhance regular project team building sessions to enhance bonding and sharing of experiences (mean 2.38, sd.1.224). According to Hiller, Day, & Vance (2006), it is team purpose that provides the reason for collaboration. A clear, compelling purpose gives reason for people to commit to a team.The findings imply that team building has not been given enough emphasis by the top management especially on the benefits it has to improve team effectiveness and exposure (mean 2.35, sd.1.241). The project teams understand the importance of cohesion and its effectiveness in project implementation (mean 2.51, sd.1.232).

Inferential Analysis

Table 10: Relationship between Communication Planning and Team Effectiveness

		Influence of Communication Planning
Project Team Effectiveness	Pearson Correlation	.761[**]
	Sig. (2-tailed)	.000
	N	70

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

The study established a strong positive correlation between communication planning and project effectiveness. Based on significance level, the study rejected the null hypothesis and concluded that communication planning strategy influences team effectiveness. Communication planning strategy has an effect on project team effectiveness. The findings imply that integration and interdependence of communication planning helps to obtain great results and plays a crucial role in the effectiveness of project teams.

Table 11: Relationship between Technology Adoption and Team effectiveness

		Influence of Technology Adoption
Project Team Effectiveness	Pearson Correlation	.711*
	Sig. (2-tailed)	.046
	N	70

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

The coefficient of Correlation in Table 11 shows a strong positive and significant correlation between technology adoption and project team effectiveness. Therefore based on the decision rule, the study rejected the null hypothesis and concluded that technology adoption strategy influences team effectiveness. These findings imply that technology adoption increases the efficiency of project teams and has the potential for significant transformations in people's work and organizational business processes.

Table 12: Correlation between Project Leadership and Team Effectiveness

		Influence of Project Leadership
Project Team Effectiveness	Pearson Correlation	.798*
	Sig. (2-tailed)	.029
	N	70

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

In Table 12, the findings show the existence of a strong positive relationship between project leadership and project team effectiveness. Based on the decision for significance level, the study rejected the null hypothesis and concluded that project leadership influences team effectiveness. The findings also confirm that inadequate team leadership is often the single biggest reason for project team ineffectiveness.

Table 13: Relationship between Team Cohesion and Effectiveness

		Influence of Team Cohesion
Project Team Effectiveness	Pearson Correlation	.749*
	Sig. (2-tailed)	.035
	N	70

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

From Table 13, the correlation analysis findings show that there exists a strong positive relationship between project team cohesion strategy practices and team effectiveness. The study therefore rejected the null hypothesis and concluded that team cohesion strategy influences team effectiveness. The findings implies that solid team relationships provide the climate needed for high levels of collaboration and are characterized by trust, acceptance, respect, understanding and courtesy.

Regression Analysis

Table 14: Regression Model Analysis

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.8802	0.7746	0.7245	0.4448

The researcher further conducted a multiple regression analysis to relate the independent variables and the dependent variable (project team effectiveness). The coefficients in Table 14 show the findings explained only 77.46% of the project team effectiveness factors. The findings imply that there are other factors constituting 21.3% that also influence project team effectiveness.

In Table 15, the results of the multiple regression analysis are illustrated.

$Y= 1.3075+ 0.762X_1+ 0.714X_2+ 0.802 X_3 +0.750 X_4$

Taking all the four strategies variables at zero, the constant is 1.3075. Further, analysis shows that taking all other independent variables at zero, a unit increase in communication planning will lead to a 0.762 increase in project team effectiveness while a unit increase in technology adoption will lead to a 0.714 increase in team effectiveness respectively. The findings imply that all the four variables are critical in enhancing project team effectiveness in real estate construction firms in Nakuru town.

Table 15: Regression Coefficients

Model	Un-standardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	1.3075	1.330		1.622	.346
Communication planning	0.7615	0.3161	0.173	2.353	.0281
Technology Adoption	0.7142	0.3171	0.166	3.581	.0363
Project Leadership	0.8015	0.3543	0.161	3.521	.0223
Team Cohesion	0.7496	0.3243	0.163	3.567	.0257

SUMMARY OF FINDINGS

Influence of Communication Planning Strategy

From the findings, real estate construction firms have put in place adequate project communication plans for the project teams. However on project team training, the study found out that real estate construction firms did not train teams on communication procedures, channels and reporting. Meetings to discuss project team performance, communication and progress assessments were done. The team leaders did not regularly update project team members on their targets and progress hence real estate construction projects should re-evaluate their communication procedures and plans for effectiveness and efficiency. In addition, it was established that project team communication plan dynamics and adjustments throughout the life of a project were being implemented. The findings on communication planning imply that information flow between project teams and their leaders should be enhanced. Involvement of the project teams in communication planning, regular trainings and continuous performance review meetings will greatly boost team effectiveness.

Influence of Technology Adoption Strategy

Majority of the respondents were indifferent on whether real estate projects budgets for technology adoption and implementation. Further, the study established that the top management supports technology adoption to enhance efficiency in their projects. This was found to be in contradiction with the level of budgeting presumably done by the top management of real estate firms. There was uncertainty between budgeting for technology adoption and supporting its implementation. The top management should be more concerned with the value the projects create by managing organizational change and facilitating adoption than by simply delivering projects on time, within budget and according to scope. The project

teams did not to accept technology implementation without resistance or fear of change at work. Project team training on technology adoption especially on new technologies was not prioritized or focused upon. However, majority supported the view that technology adoption increases the efficiency of implementing projects, reducing wastage and costs.

Influence of Project Leadership Strategy

The study found out that project teams did not have clearly defined roles and responsibilities. These findings imply that project teams may be marred with confusion on their roles or probably the project team members are engaged in dynamic engagements or jobs. This reveals lack of specialization in terms of work or profession. The top management did not have the ability to supply high quality project coordination information. The findings imply that there is relatively low coordination and communication between top management and project teams in real estate construction projects. The team leaders should improve on effective procedures of project planning and implementation outlining work flows and sequence. Project scheduling and work break down structures must be prioritized.In addition, the study established that there were adequate project controls during planning, implementation and closure of the projects. Moreover, there was always early and continued engagement of the project team. Overall, there should be clear definition of roles and responsibilities, proper coordination and communication by top management and proper planning of project work schedules. Enhancement of these factors will lead to improved project team effectiveness.

Influence of Project Team Cohesion

The analysis on project team cohesion found that project leaders encouraged team cohesion in their project work. In addition, majority agreed that project team cohesion enhances efficiency and collaboration in project implementation. Further analysis show that majority of the respondents were indifferent that team leaders regularly conducts project team building sessions to enhance bonding and sharing of experiences. According to earlier studies on team cohesion, it is team purpose that provides the reason for collaboration. A clear, compelling purpose gives reason for people to commit to a team. Team building has not been given enough emphasis especially on the benefits it has to improve team effectiveness and exposure. Majority were either neutral or disagreed that the top management supported and facilitates high quality project team cohesion activities. The study also found out that half of the respondents supported the view that the project teams understand the importance of cohesion and its effectiveness in project implementation.

CONCLUSIONS

The study concludes that for project team effectiveness to be realized, training of project teams on communication procedures, channels and reporting must be prioritized. The real estate projects should have continuous meetings to discuss project team performance, communication and progress assessments. Regular updates to project team members regarding their targets, progress and performance should be inclusive and integrated during planning phases of the projects. Information flow between project teams and their leaders should be enhanced by involving project teams in communication planning, regular trainings and continuous performance review meetings. Furthermore, project team members should be sensitized and trained on the benefits of technology adoption. The top management should budget for technology adoption and support its implementation. The top management should be more concerned with the value the projects create by managing organizational change. Project teams should endeavor to have clearly defined roles and responsibilities, proper project schedules and work break down structures to ensure smooth execution of projects. There should be enhanced coordination and communication between top management and project teams. The top management should strive to provide high quality project coordination information to the project teams. The project team leaders should continue improving on effective procedures of project planning and implementation and outline work flows and sequence. Project leaders should regularly conduct team building sessions to enhance bonding and sharing of experiences. Team building should be given more emphasis especially on the benefits it has to improve team effectiveness and exposure. The top management should support and facilitates high quality project team cohesion activities.

RECOMMENDATIONS

The study recommends that for project team effectiveness to be realized, training of project teams on communication procedures, channels and reporting must be prioritized. Continuous project team meetings to discuss project team performance, communication and progress assessments should be conducted regularly. There should be inclusive and integrated project planning phases and increased information flow between project teams and their leaders.The study further recommends that project team members should be sensitized and trained on the benefits of technology adoption. The top management should budget for technology adoption and at the same time support its implementation. The top management should be more concerned with the value the projects create and not only delivering projects on time, budget and scope.The project teams should have clearly defined roles and responsibilities, proper project schedules and work break down structures to ensure smooth execution of projects.

There should be enhanced coordination and quality communication between top management and project teams. The project team leaders should continue improving on effective procedures in project planning and implementation.The study recommended that project team leaders should regularly conduct team building sessions to enhance bonding and sharing of experiences while giving a clear purpose for people to commit to a project team. Team building should be given more emphasis especially on the benefits it has to improve team effectiveness and exposure. The top management should support and facilitates high quality project team cohesion activities.

LIMITATIONS OF THE STUDY

This study experienced limited access to workers in real estate construction sites due to fear of building progress audits at the beginning. This was overcome by explaining the purpose of the data collection to the project managers, foremen and engineers on the construction sites. The researcher also issued the research introduction letters to the construction project managers for easy of understanding that the information given was confidential. In addition, the study covered only four strategies and their influence on team effectiveness. Further, other limitations arose from limited information on real estate construction projects in Nakuru town as compared to other major towns in Kenya. This was sorted out by seeking clarification from the relevant authorities in the County government of Nakuru and the experts in real estate construction projects.

RECOMMENDATION FOR FURTHER RESEARCH

The study recommends further research study on barriers facing communication planning strategy in real estate construction firms. It is also advisable to conduct a comparative study on challenges facing budgeting for technology adoption in real estate firms in Kenya. Further should also assess the effectiveness of project team building and contribution to the real estate construction projects in Nakuru.

REFERENCES

A Survey on Communication between Developers (2010): International Journal of Software Engineering & Its Applications, 8(6). 241-251.

Carson, J.B., Tesluk, P.E., &Marrone, J.A. (2007). Shared leadership in teams: An investigation of antecedent conditions and performance. Academy of Management Journal, 50, 1217-1234.

Chen, G. (2005). Newcomer adaptation in teams: Multilevel antecedents and outcomes. Academy of Management Journal, 48, 101-116.

Chen, G., Kirkman, B.L., Kanfer, R., Allen, D., & Rosen, B. (2007). A multilevel study of leadership, empowerment, and performance in teams: Journal of Applied Psychology, 92, 331-346.

Conboy, K. (2010). Project failure en masse: a study of loose budgetary control in ISD projects. European Journal of Information Systems, 19(3), 273-287.

Han, J., & Jung, W. (2014). How Geographic Distribution Affects Development Organizations:Journal of Development 8(6),252-278.

Kothari, C. (2004). Research Methodology, Methods and Techniques. New delphi: International P Limited. Linking Practice and Policy in Eastern Africa. New York: Routledge.

Langfred, C.W. (2005). Autonomy and performance in teams: The multilevel moderating effect of task interdependence. Journal of Management, 31, 513.

Mahoney, J.T., (2004). Edith Penrose's (1959) contributions to the resource-based view of strategic management. Journal of management studies, 41, (1), 183-191.

Mehra, A., Smith, B., Dixon, A., & Robertson, B. (2006). Distributed leadership in teams: The network of leadership perceptions and team performance. Leadership Quarterly, 17, 232-245.

Meredith, J. R., & Mantel Jr, S. J. (2011). Project management: a managerial approach. John Wiley & Sons. City Publishers.

Monteiro de Carvalho, M. (2013). An investigation of the role of communication in IT projects: International Journal of Operations & Production Management, 34(1), 36-64.

MugendaM.O. &Mugenda A. (1999), Research methods: Qualitative and Quantitive approaches, African Centre for Technological Studies, Nairobi.

Mugenda, A.G. (2008).Social science Research: Theory and Principles. Nairobi, Arts Press.

Okuwoga&Adeyinka A. (2008). Cost and time performance of public sector housing projects in Nigeria, Habital International journal, 22 (4), 389-395.

Oyewobi, L. O. &Ogunsemi, D. R. (2010). Factors Influencing Reworks Occurrence in Construction: A Study of Selected Building Projects in Nigeria. Journal of Building Performance 1(1), 147-165.

Oyewobi, L. O. Ibironke, O. T., Ganiyu, B. O. & Ola –Awo, A.W. (2011). Evaluation Rework Cost. A Study of Selected Building Projects in Niger State, Nigeria. Journal of Geography and Regional Planning, 4(3), 147-151.

Paasivaara,M,&Lasseinius, C.(2003).Collaboration practices in global inter-organizational software development projects. Software Process: Improvement and Practice, 8(4), 183-199.

Papke-Shields, K. E., Beise, C., &Quan, J. (2010). Do project managers practice what they preach, and does it matter to project success?.International Journal of Project Management, 28(7), 650-662.

Pitts, V. E., Wright, N. A., &Harkabus, L. C. (2012). Communication in Virtual Teams: The Role of Emotional Intelligence. Journal of Organizational Psychology, 12(3/4), 21-34.

PurnaSudhakar, G. (2012). A model of critical success factors for software projects. Journal of Enterprise Information Management, 25(6), 537-558.

Republic of Kenya.(2000). A strategy for Small Enterprises Development in Kenya. Nairobi: Government printer.

Satterthwaite D., Reid H. & Bass S. (2012). Reducing Poverty and Sustaining the Environment: The Politics of Local Engagement. London: CRC Press.

Segone Marco et al (2004). Evidence-Based Policy Making and the Role of Monitoring & Evaluation within the New Aid Environment. Bridging the Gap: The role of M&E in Evidence based Policy Making; UNICEF, 12(1), 56-78.

Stoica, R., &Brouse, P. (2013). IT project Failure: A proposed four-phased adaptive multimethod approach. Procedia Computer Science, 16, 728-736.

Takao, K. (2005). A Simulation Analysis of the Urban Informal Sector. Journal of Development Economy, 33-66. 47

Wanjohi, A. M. (2010). Sustainability of Community Based projects in Developing countries with reference to Kenya. New York: Lambert Academic Publishing.

World Bank, (2004). Infrastructure Assessment, Finance, Private Sector and Infrastructure Group: Middle East & North Africa, December 2004.