

# FACTORS INFLUENCING THE SUCCESS OF CONSTRUCTION PROJECTS IN KENYA: GATED COMMUNITY PROJECTS IN NAIROBI CITY COUNTY

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**Abstract:** To establish the factors influencing the success of construction projects in Kenya; gated community projects in Nairobi City County.

**Methodology:** This study employed descriptive research design. The design was suitable for the study because it described the situation regarding the success of construction projects in Kenya; gated community projects in Nairobi City County. A target population of 95 developers from Kenya Property developers Association was identified from which a sample size of 88 was selected through Stratified random sampling technique. Structured questionnaires containing both open and closed ended questions was used to collect data from the identified respondents and they were administered physically. Multiple linear regression was done to establish the influence of independent variables that is; planning, monitoring, shareholders participation and construction technology on dependent variable.

**Results:** Taking all factors (Project planning, project monitoring, construction technology and stakeholders participation) constant at zero, the overall Success of Construction Projects in Gated Community projects in Nairobi City County will be 5.674. The data findings also show that a unit increase in project planning will lead to a 0.332 increase in Success of Construction Projects in Gated Community projects; a unit increase project monitoring will lead to a 0.376 increase in Success of Construction Projects in Gated Community projects; a unit increase in construction technology, will lead to a 0.355 increases in Success of Construction Projects in Gated Community projects. A unit increase in stakeholders participation will lead to a 0.398 increase in Success of Construction Projects in Gated Community projects in Nairobi City County.

**Unique Contribution to theory, practice and policy** The study recommends that project team must ensure that the work progresses is well scheduled since Project monitoring is the process of keeping track of all project related metrics including team performance. On project technology the study recommends that technology systems should be fully implemented as it increases success of construction of gated community projects in Nairobi City County Kenya. on Stakeholder participation the study recommends that the stakeholders should be engaged as this will greatly minimize the problems that could arise during project implementation or after. The list of stakeholders can be very large in a project. In construction of gated community projects, key stakeholders include the project sponsor, the consultants, the contractor, subcontractors and suppliers, end users, and government agencies concerned with regulation.

**Keywords:** Project management, project planning, stakeholder, Gated Community, monitoring.

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## 1. INTRODUCTION

### 1.1 Background to the study

The contribution of the construction industry to a country's economy is very vital and cannot be ignored as it contributes to gross domestic products (GDP). Countries invest in capital projects to stimulate the economic growth and therefore delivery of this project within the specified parameters is of paramount importance. Aon (2016) defines a project as series of task, arranged in a defined sequence or link that produces predefined output or effect and it has definite a start and end. He further defines Construction Project Management (CPM) as an approach used in the construction industry with the aim of increasing efficiency and effectiveness in performance in the management and coordination of a project during its lifecycle. The essence of project management therefore, is to deliver projects successfully. Successful projects are executed and completed within time, budget, scope and achieves the originally set goals as well as satisfying the client. Projects require huge capital outlay from organizations and or government (Panayides et al., 2015) and as such calls for good management practices to deliver value for money projects and programmes.

Analysis of completed projects, however, reveals that a number of projects are not completed within time, budget and quality with a lot of scope creep consequently reducing the benefits to stakeholders. This is because construction is increasingly becoming complex and executed in turbulent environments. Several studies have been done to reveal the underlying causes of project failures. Identification of the success factor is therefore important as they will ensure proper utilization of the limited available resources. Yu and Kwon (2014) recognized that without a common understanding of the success factors of a project, it is very difficult to monitor and control project performance effectively. However the unique nature of projects dictates that critical success factors identified in one industry cannot be directly transferred to other industries (Yang, Shen and Ho, 2009: 162).

### 1.2 Statement of the Problem

Construction projects are a means of achieving strategic goals of individuals, organizations and government. Construction industry in Kenya contributes 5% to the GDP and creates 10% employment (Republic of Kenya, 2010a). With the population growth rate of 4.2% there is an annual demand of 206,000 housing units (KNBS, 2013). This demand is, however, not met with only 50,000 units produced annually and therefore need for projects to be completed successfully.

However, Construction industry is dynamic and unpredictable due to increased uncertainty, budgets, technology and development process (Albert, Chan, David and Ada, 2004) posing major challenges to completion of projects successfully. Osazuwad (2010) found that delayed completion of projects cause stress to sponsors due to accumulated rate of interests by commercial banks, cost overrun, inflation, and the possibility of disputes and claims leading to litigations or arbitrations. Improper project planning, resource planning, interpretation of requirements, works definition, timeliness, government bureaucracy, and risk allocation significantly contribute to time and cost overruns in the projects (Kagiri, et al., 2008). 48% of projects in Nairobi County are still incomplete and 10% of these projects have completely stalled. Others researchers who have studied the same subject include NCA, (2015), Muchungu (2012) and Nyangilo (2012). According to the researcher knowledge no know study has been conducted on factors influencing the success of construction projects in gated community projects which this study will be done to bridge the gap.

### 1.3 Purpose of the study

To establish the factors influencing the success of construction projects in Kenya; gated community's projects in Nairobi City County.

## 2. LITERATURE REVIEW

### 2.1 Theoretical Review

Theories are analytical tools for understanding, explaining, and making predictions about a given subject matter (Hawking, 2010). This chapter reviews the theoretical and empirical literature from past studies on the subject of factors influencing project success in construction projects. Theory of change, program theory, competency theory and stakeholder theory was reviewed to guide this study.

### 2.1.1. The Change Theory

The theory of change (TOC) defines the long-term goals and then works backwards to identify the necessary precondition. It's an approach for planning, participating and evaluating and is mainly used in sectors such as government, the philanthropy, and nonprofit organization to bring social change.

The theory of change emerged in mid 1990s at the Aspen Institute Roundtable on Community Change to provide a model for assessing community programs comprehensively. This theory was popularized by Carol Weiss in 1995 through a publication of 'New Approaches to Evaluating Comprehensive Community Initiatives. Carol argues that poor articulation of the project assumption is the main reason why complex community projects fail. According to the theory of change, there is short term, mid-term and long-term goals to be attained and in most cases the stakeholders are not clear on how the changes process will take place and therefore place little emphasis on the early and midterm changes needed to reach the long term goals.

In developing TOC, the two main questions to ask are 'what is our long term goal or outcome?' and 'what conditions must be in place for us to reach the goal?' TOC show the outcomes or preconditions outline the causal linkages in an intervention between the shorter-term, intermediate, and longer-term outcomes.

To apply the TOC, a long term goal and long-term outcomes that are realistic to achieve and well understood by all stakeholders should be identified. Then the necessary preconditions to achieve the outcome are identified through the backward mapping process. Indicators for each precondition/ outcome are developed to help evaluate performance of each intervention. The theory of change continuously has been used as a method of conducting evaluations in different types of projects and organizations.

The long-term objective of any project is to have it completed successfully that is within the set time, cost, scope, quality and satisfy the client or end user. A means to achieve this objective is identified and clearly documents. This includes designing short term and midterm plans that will enable achieve the long term plans. This plans followed throughout the project enhance the success of a project. A project is decomposed down into simpler work packages that are easier to understand and manage in terms of costing, executing and tracking. Accomplishment of these units successfully ensures project is successfully completed.

### 2.1.2. Program Theory and Logic Models

Program theory explains why a program is expected to work and a logic model illustrates a program theory. Rogers (2000) described a program theory as an open illustration of the mechanisms by which program activities are understood to contribute to the intended outcomes. Program theory provides a structure or framework that directs practice and it specifies what must be done to achieve the predetermined goals, what other important impacts may also be anticipated, and how these goals and impacts could be generated (Chen and Rossi, 1992). A program theory consists of a set of statements that describe a particular program, explain why, how, and under what conditions the program effects occur, predict the outcomes of the program, and specify the requirements necessary to bring about the desired program effects (Sedani and Sechrest, 1999). It establishes a link between the assumptions and what actually happen until the goals are achieved (Weiss, 2000).

The program theory helps define and identify the critical components of a project that will affect the project. Rogers et al (2000) identifies programs activities, the inputs and outcome and the mechanism adopted to achieve the goals as the critical components. The inputs that describe the program components should be described and how they are to be delivered, their ranking importance and attention to be given to each to induce the required outcome (Sedani and Sechrest, 1999). The program theory gives detailed information about the processes and mechanisms of the programs, inputs, important steps, phases in the program where transformation occurs and implementation issues. According to Lipsey (1993) implementation issues or resources necessary to carry out the program should be detailed.

The program theory forms the basis of evaluating programs and helps to explain how funds are being utilized. It further helps the program investors to focus on specific outcomes without wastage of resources (Rodgers 2000a). Also, it clarifies the perspective of the program which helps to evaluate the quality of the program.

In projects, we are faced with many options but only one can be chosen. Project theory helps in choosing one option that is best from the many that are available. It helps to decide which activities to include, which activities are most important and which activities can be combined to achieve optimal result. It explains how and why a program is expected to work. Projects are to be monitored to ensure they are in line with the developed plans during the planning phase. Cost plans, time schedule, quality plans, resource plans and other plans should be scrutinized at all time during implementation to ensure deviation. If deviation occurs necessary actions should be taken to bring the project back on track and mitigate the effects on the project. Developing a monitoring system is therefore critical to project performance.

### 2.1.3. Competency Theory

Competence is defined as harmonized combination of multiple resources and skill that distinguish a firm in the market place. The competency theory was introduced by C. K. Prahalad and Gary Hamel in 1990. The theory argues that with core competence, a firm has a greater opportunity to penetrate into a wide market, improve customer satisfaction by offering a superior end product and competitors will find it difficult to replicate or imitate. Core competencies of a firm leads to development of a core product which further will be used to several end products for the customers. Core competence is achieved over a long period of time and therefore a continuous improvement process. Core competencies can be used to product innovation and raise the value of its customers and stakeholders.

The core competence enables a firm to develop strategic plans that are necessary to adapt the firm into any industry changes and how to control resources that will enable the firm attain its goals despite any constraints. Top management can use the core competencies to create new business lines. This will put the firm in a strong competitive position to tap future market opportunities. Both tangible and intangible resources are needed for a firm to remain competitive. According to Hamel and Prahalad (2001) the strategic objectives should focus on creating a new competitive space and look to the future. Resources, competitive advantage, capability and strategy are the key core competencies of a firm.

New trends have emerged in construction which if adopted will reduce construction time and improve quality and give an organization a competitive edge. The technological changes in the industry such as prefabricated houses, design software, new methods of construction, construction equipment, use of drones can be used to gain a competitive advantage.

### 2.1.4. Stakeholders Theory

This theory was advanced by Edward Freeman in 1984. It's a theory of organization management and business ethics aimed at addressing morals and values in organization management. Freeman (2004) defines stakeholders as those groups who are vital to the survival and success of the organization. There are those who own an organization, those who manage the organization and those who consume from the organization. Besides the shareholders there are people or organizations that can affect or be affected by the business and they should be considered. The objective of a business is to create greatest value possible for the stakeholders. The interest of the stakeholder should be considered for business to succeed and sustainability. Freeman categorizes stakeholders into two groups according to the level of involvement. Customers Employees, Local community, Suppliers and distributors and shareholders as the main group and the media, the public in general, business partners, competitors, NGOs or activists, Financiers and Government, regulators, policymakers as minor group.

## 2.2 Empirical review

This section reviews and discuss studies from the past that have researched on factors influencing project success in construction projects. The study was structured based on the objectives of the study.

### 2.2.1 Project Monitoring

During project implementation sometimes deviations occur that may cause the project to fail. The project team must ensure that the work progresses well as scheduled. The process of tracking, reviewing and coordinating or organizing progress and performance of a project and identifying areas in the plan that needs changes and initiate the required changes is referred as monitoring and control (PMBOK Fifth Edition, 2013).

The monitoring and control comprises several processes which include project scope management, project cost control, risk management, quality control, communication control, procurement management and stakeholder management. The Aim of monitoring and control is to bring back to track projects that are not going according to plan. Monitoring also help

in analyzing emerging issues in a project and develop appropriate corrective action. The most important reason of managing construction projects is to complete them as per the planned time and budgets while meeting the set requirements and specifications (Pewdum et al., 2009). Project cost, time and quality can be tracked through performance measurements (Yang et al., 2010). An effective performance monitoring system such as reporting structure, assessing progress, and communication system is therefore required to track cost, time and scope in a construction project.

According to Masudifar, P. & Fardad, F. (2013) the cost baseline is a “time-phased budget that is used as a basis against which to measure, monitor, and control overall cost performance on the project. Project schedules offer a baseline for tracking and managing changes in schedules. It shows the link between the tasks to be executed and the resources required to complete the tasks. The PMBOK (Fifth Edition, 2013) states several techniques used in monitoring and control of cost and time in a project. This include Earned Value Management, Forecasting, Variance Analysis, To Complete Project index and Performance reviews.

Harold Kerzner(2013). defines Project Scope as the The work that needs to be accomplished to deliver a product, service, or result with the specified features and functions. Project scope management comprises three processes: Planning process which focuses in defining the work to be done, controlling and monitoring which focuses on documenting, tracking scope creep and approving or disapproving changes, and closure process which include auditing the deliverables and comparing the project outcome against the planned. Project scope clearly sets out what is or is not included in the project, and controls what gets added or removed as the project is executed.

### 2.2.2. Construction Technology

Due to technological changes new materials, new methods of design and building have been introduced. Most modern housing project systems deliver innovative solutions and its management process has the latest tools, techniques, systems, and schemes in use (Thorpe and Mead, 2001). Some of the new technologies in construction industry include new smart, super-strong and sustainable materials, new energy technologies, GPS, Building Information Modeling (BIM), 3D printing, wireless, ultra-mobile, wearable computers, drones and new touch screen APPs.

Materials that are long lasting and environmentally safe have been introduced and promote sustainability owing to mass production of construction projects. The green materials are environmentally friendly and cost effective. As a result of technological changes new software allow project designs to be analyzed by project team and plan for the whole construction process before implementation kicks (Beaver, 2017).

According to Oladapo and Olotuah (2007) appropriate housing construction technology can be measured by the availability of locally made plant and equipment, skilled manpower resources, extent of local material resources and the degree of utilization of such local construction resources as well as use of Information and Communication Technology (ICT) in the design, communication and keeping and retrieving information. Musyoka et al. (2017) alludes that lack of technological know-how and the scarcity of managerial manpower are the major problems and constraints facing the industry. The challenges posed by changing technology include factors such as the pace of changing customer expectations, cultural transformation, outdated regulation, and identifying and accessing the right skills (World Economic Forum 2016). The rate at which the construction stakeholders are educated and trained on the new technologies and how to integrate new construction technology into projects is low. According to the World Economic Forum (2016), new technologies are playing a key role in reducing construction costs as well as completion timelines while improving quality of structures.

### 2.2.3. Stakeholders Participation

Freeman, (1984) defines stakeholders as an individual or group of individuals who can be influenced or influence a project. Projects are done in environment and therefore will affect those directly involved and those who are not involved directly. The cooperation of these two groups of stakeholders therefore is necessary for the project success. McElroy and Mills (2000) assert that the aim of stakeholder management is to realize project success through the continuing cooperation with the stakeholders. It's important that all stakeholders who will impact or be impacted by the project be identified at the earliest time possible of the project startup process. Some stakeholders have greater influence than others. The influence and impact exerted by each stakeholder identified need to be analyzed.

Berman (2007) noted that efficiency of project can be enhanced through proper management of information to the stakeholders, their perception and clear feedback on their concerns. Developing and maintaining relationships with individuals that are impacted by the project is a critical aspect in managing projects (Griffin, 2010). The stakeholders should be engaged as this will greatly minimize the problems that could arise during project implementation or after.

The list of stakeholders can be very large in a project. In construction of gated community projects, key stakeholders include the project sponsor, the consultants, the contractor, subcontractors and suppliers, end users, and government agencies concerned with regulation.

#### 2.2.4. Success of Gated Community projects

Completion of projects within time scope cost quality and performing the intended use and meeting the goals of all stakeholders is referred as project success. The absence of reworks as well as 'fitness of purpose' for the occupiers has also been considered as project success (Pidd, 2012). Gated community is a type of housing estate with strict entrance for its residents, vehicles and it is often characterized with a perimeter wall to provide security (Landman, 2012).

### 2.3 Critique of the Literature Review

A number of researches have been done on factors influencing success of construction projects. Muysoka et al., (2017) conducted a study on Influence of Technological Environment on Performance of Gated Community Housing Projects in Nairobi County, Kenya. He focused on the influence of availability of skilled manpower, use of computer aided design, Building integrated model ling and 3-d models and use of email for communication on projects performance. Xin Liang, et al., (2017) studied Stakeholders' Influence on Project Success: A Case Study of the Green Retrofit in China. The study developed a link between project stakeholders and the critical success factors which in turn affect project success. The study established that Understanding the influence of stakeholders on project success is essential in project management, particularly in projects with complex stakeholder relationships.

Kihoro (2015) researched on factors affecting performance of projects in the construction industry in Kenya a survey of gated community in Nairobi County. The study found out that poor planning, poor project monitoring and lack of competent project team contribute to project failure. Murithi, et al., (2017) conducted a study on Factors Affecting Timely Completion of Public Construction Projects in Trans-Nzoia County. The study recommended adequate allocation of resources to project, implement avenues for reporting corruption and form agencies to deal with project implementation. Ambura (2015) researched on factors influencing completion of building projects in Kenya, ministry of land, housing and urban development, Nairobi County. The study identified Human Related Factors, procedure related factors, project management factors and Business-Related Factors as factor influencing completion of projects. From this studies, it's evident they have studied factors influencing project success but in general; they have covered housing in general.

### 2.4. Summary of Literature

Based on the study objectives, relevant literature works was reviewed to establish the underlying concepts in the field and what other researchers have found out in earlier studies. Some of the factors causing project failure identified from these studies can be specific or general. They include poor project planning, poor or lack of monitoring and control systems and use of inappropriate technology. Gated community project have gained popularity in Kenya in recent years. With the high rate of population increase and the high annually shortage of projects in Nairobi, there is need to improve delivery of housing units. If the right strategies are adopted which will also increase the speed of construction of projects which will also, cut the cost and improve quality.

### 2.5. Research Gaps

Previous studies have highlighted factors influencing project performance locally and globally. Kihoro (2015) researched on factors affecting performance of projects in the construction industry in Kenya a survey of gated community in Nairobi County. The study considered project planning, stakeholder management, project attributes and competence of project team. The study recommended further study on the government's influence on the performance of these projects. Ambura's (2015) research on factors influencing completion of building projects in Kenya, ministry of land, housing and urban development, Nairobi County focused on influence of business related factors, procedures , project management factors and human related factors variables. The author recommended further study on influence of governance structures

on project implementation and project completion and factors affecting stakeholder's involvement in project management. A study on Factors Affecting Timely Completion of Public Construction Projects in Trans-Nzoia County by (Murithi, et al., 2017) recommended inclusion of more stakeholders in future studies. The reviewed studies have shown factors influencing completion of public buildings in Kenya. Kihoro has also studied gated community projects in Nairobi County focusing on project planning, stakeholder management, project attributes and competence of project team. However in studying the stakeholder management the study considered only the main stakeholders and but not the minor who are also impacted by the project.

### 3. RESEARCH METHODOLOGY

This study employed descriptive research design. The design was suitable for the study because it described the situation regarding the factors influencing the success of construction projects in Kenya; gated community projects in Nairobi City County. A target population of 95 developers from Kenya Property developers Association was identified from which a sample size of 88 were selected through Stratified random sampling technique. Structured questionnaires containing both open and closed ended questions was used to collect data from the identified respondents and they were administered physically. Multiple linear regression was done to establish the influence of independent variable on dependent variable.

### 4. RESULTS

#### 4.1 Respondents' Response Rate

The study recorded a response rate of 84%. The study enrolled 88 questionnaires out of whom 74 successfully responded to the study questionnaire. This represented was a very good response rate, which is considered satisfactory to make conclusions for the study. This can be related to Mugenda and Mugenda (2013) who said a 50% response rate is adequate, 60% good and above 70% rated very good. This implies that basing on this assertion, the response rate in this case of 84% is very good.

Table 4.1 shows the output for the SPSS ANOVA procedure to compare the means of the four determinants of successful completion of housing projects.

**Table 4.1: Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.857 <sup>a</sup>	.735	.719	.225

**Source: Research, 2019**

- a. Predictors: (Constant) Project planning, project monitoring, construction technology and stakeholders participation.  
 b. Success of Construction Projects in Gated Community projects in Nairobi City County

**Table 4.2: ANOVA**

**ANOVA**

ANOVA <sup>a</sup>						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	9.707	4	2.427	47.750	.000 <sup>b</sup>
	Residual	3.507	69	.051		
	Total	13.214	73			

- a. Predictors: (Constant) Project planning, project monitoring, construction technology and stakeholders participation.  
 b. Success of Construction Projects in Gated Community projects in Nairobi City County

The F critical at 5% level of significance was 2.8943 while the F calculated was 47.750 which is higher than the F critical value. This shows that the overall model was significant. The significance is less than 0.05, thereby signifying that the predictor variables, explain the variation in the dependent variable which is Success of Construction Projects in Gated Community projects in Nairobi City County. If the significance value of F was more significant than 0.05, then the independent variables would not explain the variation in the dependent variable.  $F(4,69)=2.8943, P<.001, R^2=.735$ .

**Table 4.3: Multiple Regression Analysis**

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error			
1 (Constant)	.348	.309		1.127	.264
Stakeholders participation	.181	.089	.177	2.022	.047
Project monitoring	.213	.093	.194	2.290	.025
Construction technology	.023	.064	.024	.361	.719
Project planning	.500	.054	.646	9.287	.000

The regression equation ( $Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \epsilon$ ) was interpreted to mean

$$Y = 0.348 + 0.500X_1 + 0.213X_2 + 0.181X_3 + 0.023X_4 + \epsilon$$

Y= Success of construction of gated community projects in Nairobi City County, Kenya

$X_1$  is Project planning;  $X_2$  is Project monitoring;  $X_3$  is Stakeholders participation and  $X_4$  is the Construction technology.

## 5. CONCLUSION AND RECOMMENDATION

### 5.1 Conclusion

Project planning requires a detailed analysis and structuring project goals, deliverables, schedules and supporting plans. Identification of activities to be performed, schedule development, organizational planning, acquisition of staff, communications plan and development of a project plan were identified as the planning processes that are key to project success. The project planning phase process involve creating a project plan, a resource plan, a financial plan, a quality plan, a risk plan, an acceptance plan, a communication plan, a procurement plan, suppliers contract plan and perform a review.

The monitoring comprises several processes which include project scope management, project cost control, risk management, quality control, communication control, procurement management and stakeholder management. The Aim of monitoring is to bring back to track projects that are not going according to plan. Monitoring also help in analyzing emerging issues in a project and develop appropriate corrective action. The most important reason of managing construction projects is to complete them as per the planed time and budgets while meeting the set requirements and specifications.

Technology is rapidly changing and affecting many industries including construction industry. This has made industries to embrace it and change way of doing things for success or fail. Due to technological changes new materials, new methods of design and building have been introduced. Most modern housing project systems deliver innovative solutions and its management process has the latest tools, techniques, systems, and schemes in use. Some of the new technologies in construction industry include new smart, super-strong and sustainable materials, new energy technologies, GPS, Building Information Modeling (BIM), 3D printing, wireless, ultra-mobile, wearable computers, drones and new touch screen APPs.

The study concluded that stakeholders have significant influence on project success and proposed a model that could be used in stakeholder management risk analysis and critical factor control. This can help project managers focus on



stakeholders who exert more influence on project and facilitate proper allocation of the limited resources, and provide details of anticipated opportunities and problems to the project manager at the earliest time possible so that there is enough time to manage them. The study revealed that involvement of stakeholders in project identification; project planning, project implementation and monitoring all have significant influence on project performance. Through involvement, stakeholder resources are assessed, problem analysis is enhanced and decision making process improved. Further, involving the stakeholders during planning it improves budgeting; identify roles and responsibilities for personnel availing resources.

## 5.2 Recommendations

On project planning the researcher recommends that Project planning should include and involve all stakeholders including the recipient community since Project planning is an important as the plans created help the project team to manage cost, time, quality, scope, changes and other issues. secondly through planning, the project is able to eliminate or reduce uncertainty, improve efficiency, obtain better understanding of project objectives and provide a basis for monitoring and controlling of work.

On project monitoring the study recommends a close monitoring system on project schedule to improve project performance. The study recommends that project team must ensure that the work progresses is well scheduled since Project monitoring is the process of keeping track of all project related metrics including team performance and task durations, identifying potential problems and taking corrective actions necessary to ensure that the project is within scope, on budget and meets the specified deadlines. The process of tracking, reviewing and coordinating or organizing progress and performance of a project and identifying areas in the plan that needs changes and initiate the required changes.

On project technology the study recommends that technology systems should be fully implemented as it increases success of construction of gated community projects in Nairobi City County Kenya. For Nairobi City County to realize success, investment in technology should be made in order to enhance service delivery and transparency in construction of gated community projects. The study also recommends that government should make the adoption of technology easy by reducing cost of acquiring new equipment and other innovations.

On Stakeholder participation the study recommends that they should be engaged as this will greatly minimize the problems that could arise during project implementation or after. The study further recommends involvement of government agencies in feasibility studies and planning of projects.

## 5.3 Suggestions for Further Studies

A similar study should be carried out to determine the factors affecting the success of construction projects in community projects in other Counties for purposes of comparison, identifying the gap as well as making recommendations for improvements.

Further research should be conducted to investigate the other factors not studied by this research that affect the Success of Construction Projects in Gated Community projects in Nairobi City County

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