FACTORS AFFECTING PERFORMANCE OF PROJECTS IN THE CONSTRUCTION INDUSTRY IN KENYA: A SURVEY OF GATED COMMUNITIES INNAIROBI COUNTY

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ABSTRACT

There has been tremendous growth in the construction industry in Kenya with the housing sector recording double digit profit margins in recent times. Consequently, there have been an increased number of property developers bringing in different products into the real estate market. However there are various pertinent issues that have risen in regards to the performance of the projects undertaken by these developers. This study therefore sought to carry out a survey to investigate the factors influencing performance of construction projects in Kenya with a focus on gated communities in Nairobi County. This study focused on three aspects of performance namely timely completion, cost management, as well as quality. A desk- top literature review has been done where local as well as global perspectives have been looked at with the aim of filling a research gap. The study also sought to provide a conceptual framework that acted as a guide to the study. A descriptive survey design was used. Quantitative as well as qualitative techniques were used for data collection as well as data analysis. Data collection instruments that were used were close ended as well as open ended questionnaires. SPSS statistical tool was used for data analysis. The findings indicate that there is a strong positive relationship between project planning, stakeholder management, competence of project team and performance of the project. This study concluded that performance is a dependent variable that can be determined by several independent variables. Most of the property managers strongly agreed that planning as well as stakeholder management and competence of the project manager was essential in the performance of a project. The study recommended the use of multi criteria analysis during planning as well proper relationship management among all the stakeholders in the project. Further research should be done to find out the influence of the government in the performance of projects.

Key Word: Performance, Projects, Construction Industry

Background of the Study

There has been massive growth in the Kenyan real estate sector with developers coming up with varied construction concepts to attract and accommodate the diverse needs of their clients. One concept that has been wholly embraced by various stakeholders in this industry is the idea of gated communities. Landman (2012) states that a gated community is a type of housing estate that has strict entrances for its residents as well as their automobiles and is often characterized by a massive perimeter wall round the estate. Gated communities offer different types of buildings which include villas, bungalows, apartments as well as mansionnettes.

For a construction project to be considered as successful it must meet certain performance measures such as timely completion, within budget as well as satisfying all the stakeholder's needs in the project. The absence of reworks as well as 'fitness of purpose' for the occupiers has also been considered as project success (Pidd ,2012).

The construction industry plays a fundamental role in the development of a nation and helps in meeting one of the society's basic needs of shelter. The industry contributes up to 10% to a country's gross national product. Globally, there has been increased demand for houses and this has a lot to do with demographics. In Lebanon gated communities have been massively taken up by the private sector since they provide small scale solutions to nationwide problems (Atkinson 2013). In the more civilized societies ,for example Florida, gated communities have been developed to provide exclusive and luxurious facilities to the well off in secure and private settings. Developers are continuously incorporating modern designs and technologies in order to effectively compete in this dynamic market.

In Kenya, gated communities have seized to be a preserve for the wealthy as more and more middle class earners are seriously investing in these concepts. Hass Consult Housing Index, a leading indicator of performance of the real estate sector, reports that developers are making 250% returns on the sale of units in a gated community. Greenspan Estate in Nairobi, which is constructing 36 state of the art villas, has disposed 50% of its units within six months of starting construction of which all these clients were cash buyers. The price of half an acre in Tatu City in Ruiru has gone up fourfold since the project was announced despite the legal tussles between the developers. Thika Greens Golf Resort has also recorded unbelievable sales with Kenyans buying out their plots which have been sold in phases with phase three currently on going (Wainaina, 2013) All these are gated community developments which feature modern building concepts, golf courses, shopping malls, lush landscaping, club houses, massive security as well luxurious relaxation areas.

Performance of these projects can be seen as successful when one is looking at the number of units developers are selling at remarkably short periods. However, 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, 2014). Clients bank on professionalism and exemplary project management skills of the developers as they purchase the units off plan. Colorful ground breaking ceremonies are conducted at the launch of these projects yet years down the line developers have a perimeter wall fence to show as progress.

Cost management in these projects is a major indicator of performance especially in cases where banks have financed it. In most cases the developers invite investors to buy the 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. Some of the project management factors that impact on budget performance include: experience of the project manager, rate of project team workmanship, frequency of control meetings as well as control system budget (Towey, 2013).

The question of quality has continued to arise in most of these developments where residents in these gated communities are continuously complaining of sub standard finishing in the units, poor waste management plans as well as inadequate property management of the facilities. Home buyers have constantly been disappointed when they discover the heavenly artistic impressions in the sales brochures are nothing but a marketing gimmick. Home owners expect the developers to provide the highest possible quality in the market which makes identifying their hierarchy of needs a prerequisite. In most cases the investors constantly have to undertake repairs at their own cost due to poor craftsmanship by the developers who shift the blame on contractors.

Stakeholder management has also been identified as a key factor contributing to performance of construction projects (Chinyio & Olomaliye, 2010). Stakeholders are basically all the people that may influence or may be influenced by the project. 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. It is of essence to apply project management skills when carrying out a stakeholder analysis in order to successfully address all their needs.

There's an increased demand for project managers in the construction industry who are tasked with overseeing every single aspect of the project from inception all the way to its successful completion (Moris 2012). These managers are applying the concept of critical success factors (CSF's) which are defined as the areas of managerial planning which must be practiced to ensure competitive performance. Embracing these factors will not only ensure successful completion of the projects but also overall customer satisfaction which is key in any business.

The boom in residential estates especially gated communities is indisputable and developers are continuously advertising more and more projects with every waking moment. Kiambu County has seen an incredible entry of serious developers who are taking advantage of the vast chunks of land in this country as well as its incredible green scenery. The Migaa Golf Resort which is set on 774 acres of land is on its initial stages of development as well as Tatu City that is bound to change the dynamics of real estate development in Nairobi County. It will be interesting to watch the performance of these projects among many more; thus this study is nothing but timely.

Statement of the Problem

The 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 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 , 2013). The government of Kenya seeks to march the supply of houses to the existing demand by 2030 (RoK, 2005). Ministry of Housing, Land and Urban Development (2011) reported that 48% of construction projects in Nairobi County are still incomplete and 10% of this projects have 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, 2003).

Local scholars such as Madukani (2013) ,Chinyio&Olomaliye,(2010) and Kihara (2012) among others have studied on performance of construction projects. These scholars have focused on variables such as project management systems, procurement methods as well as project leadership skills. However this study will focus on the relationship between planning, stakeholder management, project characteristics as well as government policies on performance of projects in order to determine why some projects succeed while others do not and therefore fill the knowledge gap.

Objectives

The general objective of this study was to investigate the factors affecting performance of projects in the construction industry in Kenya: A survey of gated communities in Nairobi County. The specific objectives were:

1. To establish effect of project planning on performance of projects of gated communities in Nairobi County, Kenya.
2. To determine the effect of stakeholder management on performance of projects of gated communities in Nairobi County, Kenya.
3. To examine the effect of competence of project team on performance of projects of gated communities in Nairobi County, Kenya.

Research Questions

1. Does project planning affect performance of projects of gated communities in Nairobi County, Kenya?
2. Does stakeholder management affect performance of projects of gated communities in Nairobi County, Nairobi Kenya?

3. Does competence of the project team affect performance of projects of gated communities in Nairobi County, Kenya?

Scope of the Study

This study was conducted in five areas of Nairobi County namely Nairobi-North, Nairobi-South, Nairobi- Central, Nairobi- East and Nairobi – West. The study covered 254 property developers and was carried out in two months.

LITERATURE REVIEW

The classic definition of planning is "working out in broad outline the things that need to be done and the methods for doing them to accomplish the purpose", (Griffin, 2010). Gibson and Pappas (2003) define planning as "fundamentally choosing" and "Without plans, action must become merely random activity producing nothing but chaos". Cleland (1996) defines planning as "the conscious determination of courses of action designed to accomplish purposes." Costello (2008) describes planning as the effort to formalizing decision making activities through decomposition, articulation and rationalization. We may take a page from the terminology used in the construction industry.

In construction, pre-project planning is defined as the phase after business planning where a deal is initiated and prior to project execution (Gray & Larson, 2008).

(PMI, 2013) has a similar definition for the planning phase. "The Planning Process Group consists of those processes performed to establish the total scope of the effort, define and refine the objectives, and develop the course of action required to attain those objectives." The greatest difference between the definitions is that construction project planning specifically includes analysis and evaluation steps. PMI (2013) does not specifically include analysis tasks: items such as technology assessment, high-level design, architecture and analyzing different vendors or options. However, it is implied. However, the

simplest definition of the planning will be the phases and associated effort that comes before execution in a project.

Cleland (1996) questions the assumption that project planning is beneficial. He wonders if its benefits are real and asks "How can it be that project planners are able to make a detailed project plan, when either activity cannot be foreseen or they depend on the outcomes of earlier activities? Planners are compelled to make decisions early in the project, when very little is known of the project's future." He questions the value of detailed planning from a conceptual standpoint. Vater (2012) makes the point that in research and development (R&D) projects, too much planning can lead to failure as formal control limits creativity. However, he also finds that in some cases managers reduce control and planning too far to the point that it detrimental to the project.

Harrington and McNellis (2006) investigated infrastructure projects and found overwhelming statistical significance that the cost estimates used to decide whether such projects should be built are misleading. This highlights that even if planning and analysis are undertaken, senior management can choose not to use the resultant information. However, Pinko and Venkataraman (2013) state that large infrastructure projects are more often impacted by political and structural problems than misleading estimates. They also state additional planning and control cannot resolve these issues. Rojas (2009) in using fuzzy set analysis on five case studies, found that high-level planning was ranked second lowest in importance out of five critical success factors studied. Planning was ranked below top management support, user involvement and methodology.

Bonham (2008) state that in dynamic environments events arise faster than they can be accommodated by re-planning. Creating detailed long-term plans in the first place for these projects can waste time and resources and lead to false expectations. Axson (2013) in a study of project management offices (PMOs) note that for one organization studied, overly rigorous planning processes resulted in an impediment to the rapidity required to sustain successful projects

Askov (1995) touch on why planning is sometimes shortened or eliminated in information technology (IT) projects because managers think "it is better to skip the planning and to start developing the requested system." (p. 174). Experience shows that this approach does not save time. Lack of planning is likely to lead to incorrect assumptions and poorly thought out execution; the rework require to fix these mistakes will usually use up significant portions of project time.

As well Askov (1995) makes some points as to why it is rare that too much time is spent on requirements planning or as they term it, requirements capture and analysis (RCA). Deadlines need to be met; any delay in the planning phase will result not only in the increased cost of the planning stage but also in a chain reaction in the next phases of the project. Borman et al. (2008) writes "Project managers are constantly pressured to 'get started with work or make progress by senior management who fail to recognize the value of planning in a project." In most projects there are pressures to reduce the time and effort spent on the planning phase.

Traditional wisdom is that planning and analysis are important and the more planning there is in a project, the more successful the project will be (Harrington and McNellis, 2006). If poor planning has led to failed projects from large to small, then perhaps billions of dollars have been lost, Costell (2008). But how much is too much? "Light weight" project management techniques such as Agile are gaining popularity. Part of their ethos is that less initial planning is better and an evolutionary process is more efficient. Agile methodologies seem to imply that up front planning is not useful. There is also a phenomenon in business called analysis paralysis. This is when so much analysis takes place that no actual work is started or it is started much later than ideal.

The fact that a large fraction of the effort in each project is spent on research and analysis warrants investigation. According to the Project Management Book of Knowledge Fourth Edition (PMI, 2013), a project manager is expected to perform 42 processes, including 20 planning processes. Therefore, planning processes consist of about 48% of all processes that should be performed by a project manager during the project lifecycle. However, practitioners of agile methods would probably disagree with the statement that more planning is always better,Gibson and Pappas (2003). If 50% of a project's time and budget is spent on planning and analysis is this beneficial to the project or does it increase project costs and timelines without providing a corresponding benefit? Van et al (2012) note that too much time spent planning can be associated with poorly performing projects. In general the optimum amount of effort spent planning and its relationship to success is an area of interest to researchers and practitioners.

2.4.2 Stakeholder Management

One of the most critical aspects of managing a project is doing what's necessary to develop and control relationships with all individuals that the project impacts (Griffin, 2010). By successfully managing stakeholders, one is able to keep a lid on scope creep, ensure project requirements are aligned, understand tolerance for risk, and mitigate issues that would otherwise delay the project. Good stakeholder management is a testimony to your influence in an organization, and a key component to a healthy project environment (Happy, 2010).

Brown (2008) notes that to get results, project managers must create an atmosphere of enablement. He reveals that the majority of information technology projects fail and for those that succeed are what constitutes the top reasons for success. The number one reason for project success is cited as user involvement. Healthy user involvement is supported by an emphasis on quality relationships which is rooted in trust and structure, expectation management which is in achievable metrics, timing, and clear business communications which includes talking and writing plainly.

Other stakeholder-based contributions to project success include executive support which is visible sponsorship toward the core values of the project; the emotional maturity of the project manager that is the ability to rally stakeholders to the common purpose; and effective use of the organization's ecosystem that includes the infrastructure, procurement, facilities, legal, etc.in order to support the project (Buono, 2001).

With this, project managers have to be able to define their stakeholders and gain their support. Chinyio (2010) defines a stakeholder as the person, or organization that is actively involved in the project, or whose interests may be positively or negatively affected by execution or completion of the project. A stakeholder may also exert influence over the project and its deliverables (Gray & Larson, 2008). An output of the initiation step of a project is the charter which often includes a section listing the organization's functional areas involved in the project. So, early in the project startup process, you begin to uncover project stakeholders.

The list of stakeholders can be very large. In stakeholder management a stakeholder analysis is essential and involves identifying the relevant information for each stakeholder: relevant information are things like their particular interest in the project, their role in the project, their level of authority, needs, and expectations of the project, identifying the potential impact or support of each stakeholder and assessing how key stakeholders are likely to react to various situations (Van et al, 2012).

Stakeholders vary in influence, expectations, and interests and they all have the potential to impact a project (Angerame& Billows, 2002). The project manager's goal is to leverage stakeholder relationships and build coalitions that foster project success. Warning signs that stakeholder management is suffering include missed deadlines, scope creep, confusion, conflict, and churning. Often this is indicative of competing priorities, a lack of focus, or a lack of commitment and it requires a communication based approach.

The goal of a successful communications approach is to manage expectations and minimize surprises. As much as possible, it is trying to manage the information that people get, their perceptions, and clarify the kind of feedback that is needed in order to be effective in delivering the project (Berman, 2007). A communications planning matrix takes the stakeholder analysis and identifies each stakeholder or stakeholder group, the role they play on the project, what must be communicated, when and how often, how in terms of the communication format and whether a response is required. At minimum, regular progress reports should be distributed to a wide audience. Then there are various more intimate ways to discuss project health, involve key players in getting decisions made, and sharing those decisions (Griffin, 2010). The project manager's number one responsibility in the project is to communicate and they must demonstrate flexibility in how that communication is delivered to best meet the needs of their stakeholders. Communication is one of the key factors that help keep stakeholders in check.

In terms of the governance structure, at minimum there is a core team and some level of steering. Regular meetings are set up, roles and responsibilities are delineated, and it is clear how risks, scope changes, issues or other project impacts are escalated for decisions (Harris & Short, 2014). The project manager is leveraging this structure to ensure

communications are shared, roadblocks are removed, and stakeholder behaviors are monitored. Needless to say, the project sponsor is very active and visible in project governance, especially to help keep all stakeholders focused on their common goal.

However, even with all this planning, it is good to have special tactics to deal with different types of stakeholders. Brown (2008) states that different stakeholders and tactics may work better with one type of stakeholder than another, but all are useful to have. He states that some of them are; demonstrate competence, buffer from the team, advocate for those who can't, ensure traceability of agreements, requests, or decisions, make sure there is a structure to engage, make visible lost time (or other impacts) due to delayed responses, encourage delegation of authority if possible and look for informal settings to access busy stakeholders (Buono, 2001).

With stakeholder management, it is important to ascertain that ideal ones are cultivated and their example is publicized to others (Rojas, 2009). Showing how they proactively prioritize, make themselves available, accept accountability, show an interest, support and motivate the team. This can be anyone from the powerful project sponsor to the shy but determined teammate. Satisfied stakeholders get what they need, can see business value in the results, and identify your project as an overall positive experience (Brown, 2008).

2.4.3 Competence of Project Team

A project team can be viewed as a team that is newly formed to undertake a unique task (Hass, 2009). This definition of a project team frames some of the complex challenges that successful project teams must overcome, such as delivering on unique tasks which are often higher risk than more mundane operations, forming disparate participants into an effective team, preserving knowledge as the team changes over time and once the project team is disbanded (Costello, 2008).

Different types of projects require different competency sets for the team managing the project. Wang, (2013) notes that it is important for the appraisal to consider the competencies required by a project team to carry out a project proficiently and with an acceptable level of risk. Care should be taken to avoid building up a project team that is too large to manage. Where a project team becomes large due to the scale and complexity of a project consideration should be given to separating the operational project delivery team (the project team) from those with stakeholder duties (Kerzner, 2006). The stakeholder role could be formed into a separate group that meets with the Project Manager at suitable times, although this would only normally be suitable for the riskiest and largest projects. For small less risky projects one or two individuals may perform all the all of these roles. For larger riskier projects it may be necessary to have more than one team and to use external advisors and consultants (Harris, 2003).

A project manager's role is to manage the day to day activities of a project such that the outputs are delivered to time using the agreed level of resources (including the budget). The project manager should have the necessary project management skills to enable them to discharge this function efficient and effectively (Hass, 2009). The Project Manager is responsible for reporting the progress on the delivery of the project.

In all projects the user needs to be involved in how the project is progressing and as a point of contact in ensuring that complications arising during the implementation stage of the project can be discussed. Rojas (2009) states that the user representative will be the custodian of the project outputs and key deliverables. The user may comprise one representative or more.

In addition any project activities that may cause disruption to the user's operational activities need to be discussed and communicated to them through the user representative(s). Depending upon the nature of a project certain

areas of technical expertise may be required (Harris & Short, 2014). The appraisers of a project need to be satisfied that appropriate technical expertise exists within a project team to ensure that a project is capable of proficient delivery. It is possible that this will be acquired externally (for example quantity surveyors etc), but where such expertise exists within the consideration should be given to inviting these specialists on to the project team.

Different roles in project management will require different competencies (Cleland, 1996). For example, the project sponsor level will require mainly general management knowledge. The project leader will require mostly general management skills, followed by project management skills and, possibly, cursory IT management skills. The project management master will require some general management skills, many project management skills and some IT management skills. The professional may require some general management skills; he or she will require mostly project management skills and many IT management skills.

First, the Project team leader must have skills in general management (Bonham, 2008). Skills such as leadership, negotiation, communication, team building and other human resource management skills are necessary in any management position. Second, the Project team leader must have knowledge of the generally accepted project management areas, such as project scope management using a work breakdown structure; project time management using program evaluation and review technique (PERT) methods; and project cost management using budgeting and accounting methods. Third, the PM of an IT project must have IT management skills, such as skills in lifecycle phasing, estimating, constructing of software, reporting progress based on technical milestones and testing (PMI, 2013).

The communication skills of the project team leader are critical. Wang, (2013) did a study and reported that cooperation levels were higher

when team leaders clearly explain project objectives and team member responsibilities. One study asked project managers and participants to identify the threshold and superior competencies of project managers. The study found project team leader's role as a technical expert, team builder (team cohesiveness, team spirit), gatekeeper (collecting, interpreting and disseminating information from external sources to team members) and strategic planner (setting project goals, time planning, resource allocation, project evaluation etc.), all positively related to team performance. Project team leaders pushed team members to overcome obstacles.

The framework that senior management places on project team leaders is an important area for consideration. As well as manage their team members the project leader should be able to manage upwards, as the senior management team will significantly influence the environment they operate in. The project leader in conjunction with the upper management must ensure that clear performance standards are put in place and that the teams are accountable for their own actions (Costello, 2008).

However, unnecessary process controls should be avoided. As with project team leaders, the ability to communicate effectively on the intra-team level is a critical competency for project team members (Buono, 2012). Existence of team goals, positive group dynamics and project member satisfaction were all associated with less organizational conflict and project team conflict. In addition to positive attitude, an effective team member should have the ability to question assumptions. They should have problem solving skills and the capacity to analyze a range of situations. These skills should be underpinned by a broad range of technical skills and business competencies distributed throughout the team. There is importance in also recruiting high quality team members, training them and developing their skills and retaining those team members with the highest ability levels (Van et al, 2012).

Appraising project team member performance is an increasingly vital, yet complex, challenge as the teams are often cross-functional and self-managing (Wang, 2013). It is important that personal team member and team performance goals are in some way aligned. Accordingly the commitment of the project team to the task is important for project team success. The team must be provided with a supportive atmosphere where their participation and ideas are backed up. The team must clearly understand the rewards systems made available to them, but purely financial rewards need not be the main consideration. In fact, continual referral to financial rewards can be counterproductive (Askov, 1995).

The potential to improve project teams is broad, whether it is improving the team leadership skills, team member skills or team cohesion. Particularly if the project team has clear project objectives and the freedom from excessive top management intervention it stands a good chance of performing effectively.

2.4.4 Performance of Projects

Despite the great relevance of individual performance and the widespread use of job performance as an outcome measure in empirical research, relatively little effort has been spent on clarifying the performance concept. In 1990, Campbell described the literature on the structure and content of performance "a virtual desert". However, during the past 10 to 15 years, one can witness an increasing interest in developing a definition of performance and specifying the performance concept. Authors agree that when conceptualizing performance one has to differentiate between an action aspect and an outcome aspect of performance (Campbell, 1990).

The behavioral aspect refers to what an individual does in the work situation. It encompasses behaviors such as assembling parts of a car engine, selling personal computers, teaching basic reading skills to

elementary school children, or performing heart surgery. Not every behavior is subsumed under the performance concept, but only behavior which is relevant for the organizational goals: Performance is what the organization hires one to do, and do well (Costell, 2008). Thus, performance is not defined by the action itself but by judgmental and evaluative processes. Moreover, only actions which can be scaled, i.e. measured, are considered to constitute performance. The outcome aspect refers to the consequence or result of the individual's behavior (Vater, 2012). In many situations, the behavioral and outcome aspects are related empirically, but they do not overlap completely (Bonham, 2008). Outcome aspects of performance depend also on factors other than the individual's behavior. In practice, it might be difficult to describe the action aspect of performance without any reference to the outcome aspect. Because not any action but only actions relevant for organizational goals constitute performance, one needs criteria for evaluating the degree to which an individual's performance meets the organizational goals. Griffin (2010) noted that it is difficult to imagine how to conceptualize such criteria without simultaneously considering the outcome aspect of performance at the same time. Thus, the emphasis on performance being an action does not really solve all the problems. Moreover, despite the general agreement that the behavioral and the outcome aspect of performance have to be differentiated, authors do not completely agree about which (Melton, 2008).

The construction process is a very complex undertaking. It involves many different activities as well as participants from initial planning through execution (Gray & Larson, 2008). The requisite tasks, and the roles and responsibilities of the owner, architect engineers, construction managers, contractors, and subcontractors can be organized in a number of different ways to deliver a construction project. Despite these many

options, building a major construction project today without experiencing schedule delays and cost overruns is often an exception (Wang, 2013). While there are many factors that can contribute to these poor results, there are two key success factors: effectively managing time and change for timely completion of any project (Dia, 1996).

Time, with its associated costs, are vitally important for each participant in the construction process including the lender, owner, architect engineers, contractor, and subcontractors, as well as those who provide bonding and insurance coverage. Effective management and the administration of the contract time and change provisions are central to the avoidance and mitigation extended time and cost overruns (Rojas, 2009). To enhance the odds of a successful project outcome, it is essential for participants in the construction process to have a basic understanding of: Critical path scheduling techniques, the associated scheduling specifications, and the software involved, delay and how it occurs, the pros and cons of various schedule and delay methodologies being used by project participants and experts and the foundational principles for any successful schedule and delay analysis methodology (Brown, 2008).

Time management for timely completion of a project can be expensive, fraught with pressures, and subject to much uncertainty. Some key factors having an influence on successful project delivery include the use of overly complex scheduling specifications, construction brokering by the contractor, errors and omissions, differing site conditions, user changes, and inadequate time extensions (Kerzner, 2006). These can be compounded by reservation of rights for delay, cumulative impacts, and ignoring possible completion date waivers. Axson (2003) noted that there is still uncertainty and misunderstanding that remains in terms of what constitutes acceptable standards of proof for excusable delay and impacts. While computers and scheduling

software have greatly increased the potential for enhanced scheduling capabilities, they have also contributed to a variety of user quality problems. The situation is often compounded by failure of both the owner and contractor to recognize from the start the need for timely resolution of delays and keeping the schedule up to date by reflecting actual performance and delays as they occur. Costs that are associated with projects are not just the costs of goods procured to complete the project (Melton, 2008).

The cost of the labor may be one of the biggest expenses of a project. The project manager must rely on time estimates to predict the cost of the labor to complete the project work. In addition, the cost of the equipment and materials needed to complete the project work must be factored into the project expenses thus cost management is vital for any project (Schwable (2009). It constitutes the management of project costs, how to predict them, account for them, and then, with plan in hand, to control them. How costs are planned for and taken into consideration by the performing organization and how the size of the project affects the cost estimating process is essential for any given project.

According to Wisner (2005) quality is often used to satisfy excellence of a product or service. If we have to define quality in a way that is useful in its management then we recognize the need to include in the assessment of quality the requirements of a customer quality. Quality has to be managed and it must involve everyone in the organization. Many people in the support function of organization never see, experience or touch the products or service that their organizations buy of provide. The price of quality is the continual examination of the requirement and our ability to meet them (Wyosocki, 2012). If quality is meeting the customer's requirement in terms of availability, reliability, maintainability and cost effectiveness then this has a wide implication.

Research Gaps

Previous studies have highlighted on factors affecting performance of projects both in developed and developing countries. Juliet and Ruth, (2014) did an evaluation of factors affecting performance of construction projects in Niger state. The variables used in this study focused on experience and qualification of personnel, quality of equipment and raw materials as well as conformance to specifications. The research recommended further studies on continuous coordination and relation between project participants in order to develop project performance.

Enshassi, Mohamed and Abushan (2009) did a study on factors affecting the performance of construction projects in the Gaza strip. Their variables focused on delays due to road closures, qualification of personnel and availability of quality raw materials. The researchers recommended that further studies should focus on developing human resources in the construction industry through proper and continuous training programs about construction project performance.
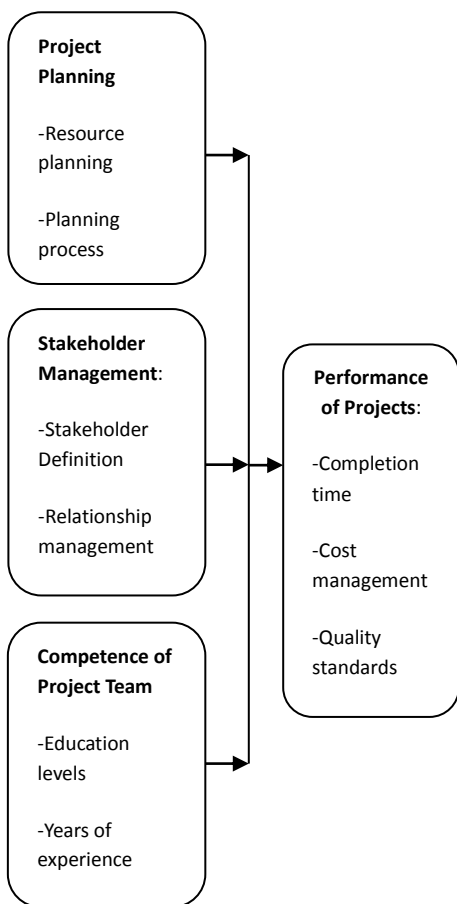
Takim and Akintoye (2010) carried out a study on the performance indicators for successful construction project management. The variables focused on three company performance indicators namely: safety, profitability and productivity. The research recommended further study in developing a robust framework for bench marking construction project development that reasonably takes into account the stakeholder's expectations, objectives and priorities for the project.

Chan, Scott and Chan (2004) also studied factors affecting the success of a construction project. The study focused on five major variables namely project-related factors, project procedures, project management actions, human related factors and external environment. They recommended that further study should be directed to identifying key performance indicators so that the casual relationship between critical success factors

and key performance indicators can be identified.

From the above, many studies have investigated on factors affecting performance. However, there is mixed results regarding the specifications and description of the construction projects. This study will focus on gated communities which is a facet of construction projects. The variables that will be considered are: project planning, stakeholder management, project attributes and competence of the project team. Therefore, this study intends to enrich literature on performance of construction projects and fill the knowledge gap.

The study has been conceptualized as follows:

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┌──────────────────┐
│ Project          │
│ Planning         │
│                  │
│ -Resource        │
│ planning         │
│                  │
│ -Planning        │
│ process          │
└──────────────────┘

┌──────────────────┐          ┌──────────────────┐
│ Stakeholder      │          │ Performance      │
│ Management:      │          │ of Projects:     │
│                  │          │                  │
│ -Stakeholder     │          │ -Completion      │
│ Definition       │          │ time             │
│                  │          │                  │
│ -Relationship    │          │ -Cost            │
│ management       │          │ management       │
└──────────────────┘          │                  │
                              │ -Quality         │
┌──────────────────┐          │ standards        │
│ Competence of    │          └──────────────────┘
│ Project Team     │
│                  │
│ -Education       │
│ levels           │
│                  │
│ -Years of        │
│ experience       │
└──────────────────┘
```

Independent variables   **Dependent Variables**

RESEARCH METHODOLOGY

Research Design
A cross-sectional survey design was adopted in this research. A cross-sectional survey design collects data to make inferences about a population of interest at one point in time (Cooper &Schinder, 2008). The use of this design is in line with a similar study entitled "Factors affecting performance of construction projects in the Gaza strip" (Enshassi, Mohammed &Abushaban, 2009).

Population
A population refers to an entire group of persons, events or elements of interest that a researcher wishes to investigate, have at least one thing in common and make inferences based on sample statistics. It is the larger group from which the sample is taken (Sekaran&Bougie, 2009).

Target Population
Target population refers to the total number of subjects of interest to the research. The target population in this study was the construction firms in Kenya (NCA, 2014).

Study Population
Study population refers to the sub-set of the target population that is accessible to the researcher. The study population comprised of property developers who initiated and completed projects specializing in gated community developments between 2009 and 2013 (NCA, 2014).

Sample and Sampling Technique
Kothari (2004) defines a sample as collection unit from the universe to represent it. To determine the sample size for this study in consideration of the small population of 200 property managers the study was the normal approximation to the hyper-geometric distribution. When dealing with large

populations, the sample size is determined using the normal approximation to the binomial distribution. This approximation is very accurate when the population is large, and the sample size is small. However, if you were to sample a population of less than 5000 individuals, then for a given accuracy, you would require a far smaller sample than that calculated using the normal approximation to the binomial.

To determine the sample size for small populations, we use the normal approximation to the hyper-geometric distribution, similar studies (Morris, 2014) have adopted the hyper-geometric distribution due to its ability to estimate sample sizes from small populations accurately. The sample size formula for small populations is shown as follows:

$$n = \frac{NZ^2pq}{\{E^2(N-1)+Z^2pq\}}$$ ....Equation (1) Morris, 2014)

Where; n= is the required sample size

N= is the population size (200 property developers)

Z= is the level of confidence of the sample size (set at 95%) thus Z=1.96

P and q are the population proportions (Each set to 0.5).

E sets the accuracy of the sample proportions (set to 0.05).

Therefore;

$$`n = \frac{200 \times 1.96^2 \times 0.5 \times 0.5}{\{0.05^2(254-1)+1.96^2 \times 0.5 \times 0.5\}}$$

n =   130.14 ~ 130

Therefore the sample size for the study will be 130 property developers.

Data Collection Instruments
Self-administered semi structured questionnaire wereused as the research instrument. A questionnaire consists of a number of questions printed or typed in a definite order on a form or set of forms (Kothari, 2004).). The self-administered questionnaires have the advantage of being flexible because they contain both open and closed-ended questions. The open and closed questions helped in gathering in-depth information so that the study will get a complete and detailed understanding of the issue under research (Kombo& Tromp, 2006). Each question in the questionnaire was developed to address a specific objective or research question of the study. This research instrument was for efficient data collection mechanism to ensure relevancy and consistency of information gathered as the responses are objective, standardized and comparable (Sekaran&Bougie, 2010).

The use of self-administered questionnaire as research instrument was in line with other similar studies such Ogano, &Petrious, (2011) in the study "Quality performance: the case of construction projects in the electricity industry in Kenya".

Data Collection Procedure
Data collection is the gathering of information to serve or prove some facts (Kombo & Tromp, 2006).Primary data was collected through a self -administered questionnaire The use of self - administered questionnaire has been previously used, for example; Kahura, (2013) in the study of "The Role of Project Management Information Systems towards the Success of a Project: The Case of Construction Projects in Nairobi Kenya".

Pilot Test
A pilot test is a preliminary small scale study done to find out the feasibility and statistical applicability of the research design. Cargan,(2007) indicates that, pilot test is necessary for

testing the reliability of the instruments and the validity of the study. Blessing, Charkrabati & Blessing, (2009) argue that a pilot study is carried out for the following reasons: to assess whether the research protocol is realistic and workable, to estimate variability in outcomes to help determine the sample size and to determine what resources are needed for the planned study. Basheka and Tumutegyereize, (2012) used a pilot test in their study on "Measuring the performance of contractors of government projects in developing countries".

The size of the pilot group may range from 25 to 100 subjects depending on the method to be tested but the respondents do not have to be statistically selected (Cooper & Schindler, 2011). The Pilot study was carried out in Kiambu area which has the second largest number of gated community projects. This study randomly sampled a target of twenty (20) property developers from this area who initiated and completed projects between 2007 and 2014. The questionnaire was self administered.

Reliability of data collection instrument

Reliability refers to the consistency of the measure of concept (Bryman, 2012). Kombo& Tromp (2006) noted the reliability of an instrument is a measure of how consistent the results of a test are. In this study reliability was carried out by pilot test and computing cronbach'sAlpha . The semi-structured questionnaire was administered to 20 property developers who initiated projects between 2007 and 2014 so that their reliability will be determined. Sekeran and Bougie, (2008) reinforces that pilot test is necessary for testing the reliability of instruments and validity of the study. The feedback of the pilot study was used to refine the questionnaire to make it reliable during the study. Cronbach's alpha was used to test the reliability of the measures of the questionnaire (Cronbach, 1951). Bryman (2012) suggests that where Cronbach Alpha is used for reliability and test a rule of thumb is also used that states that if the Cronbanch values of the

items to be included in the study should not be lower than 0.7.

Sekeran and Bougie, (2008) reinforces that pilot test is necessary for testing the reliability of instruments and validity of the study. Therefore, the research instruments were administered to 20 property developers in Kiambuarea to determine their reliability. The feedback of the pilot study was used to refine the questionnaire to make it reliable during the study. Testing of the reliability of data collection instruments has been applied previously by other scholars who include Basheka and Tumutegyereize,(2012) in their study on "Measuring the performance of contactors in government construction projects in developing countries.

Validity of Data Collection Instruments

Validity refers to the extent to which the measures used in the questionnaire are truthfully measuring the intended concept and not something else (Sekaran&Bougie, 2009). Kothari, (2004) defined validity as the extent to which differences found with a measuring instrument reflect true differences among those being tested. This study adopted content and construct validity

Content validity refers to the degree that the instrument covers the content that it is supposed to measure (Yaghmaie, 2003). To validate the questionnaire, the study adopted face validity which is a form of content validity. This involved entrepreneurship experts using review and comment on the content and quality of the questionnaire. The questionnaire was adjusted from the results obtained from validation exercise to minimize errors and ambiguity (Sushil & Verma, 2010). Content validity has been used in the study of "The effect of relationship management on project performance in construction"(Meng, 2012).

Construct validity deals with whether a measurement instrument is closely linked with the known theory in the area of study and with other related concepts (Bless, Higson, and

Kagee, 2007) by linking the items in the questionnaire to the theoretical components of the research topic.This will ensure that the questionnaire measured the intended constructs rather than irrelevant constructs. Discriminate category was be applied in this study. Explatory Factor Analysis (EFA) was used to validate constructs by clustering those indicators or characteristics that appear to correlate highly with each other (Kane, 2006). Scholar have applied EFA include Idoro, (2012) in the study on " Evaluating levels of project planning and their effects on perfomance".

Data Analysis and Presentation
Data analysis involves reducing accumulated data to a manageable size, developing summaries, looking for patterns and applying statistical techniques while else data preparation includes editing, coding, and data entry and is activity that ensures the accuracy of the data and their conversion from raw form to reduced and classified form that are more appropriate for analysis. Data coding involves assigning numbers or other symbols to answers so that the responses can be grouped into a limited numbers of categories (Cooper & Schindler,2011).Data entry converts information gathered by secondary or primary methods to a medium of viewing and manipulation. Statistical Package for Social Science (SPSS) version 17 will be used as a tool to analyze the data. The Statistical Package for Social Sciences (SPSS) for quantitative analysis was used in the study of '"Factors influencing environmental sustainability of real estate projects in Kenya: a case of gated communities in Nairobi county" (Madukani , 2013).

The study will employ descriptive statistical in form of percentages, means and measures of dispersion which allows for presentation of data in a more meaningful way and thus simpler interpretation of data. The analyzed data will be interpreted and presented in frequency tables, graphs, histograms, frequency polygons and pie charts.Responses from open ended questions will be coded,

interpreted and their frequencies determined through cross-tabulation on differences between respondents and the central tendencies of responses to each factor. To determine if associations exist between various variables, cross-tabulation will be used. Cooper and Schindler (2011) define cross-tabulation as a technique for comparing two classification variables using tables with rows and columns that correspond to the level or values of each variable's categories. The analyzed data will then be interpreted and presented in frequency tables, bar charts, graphs and pie charts.

Normality test was done for qualitative data to test for normal distribution for all dependent and independent variables. Normality is important in knowing the shape of distribution as the normality help to predict dependent variable scores (Wahab &Norizan, 2012). Factor analysis will be employed in this study in order to identify the constructs that will then be regressed against the dependent variable (Cooper & Schindler, 2003). The correlation coefficient was calculated to determine the strength of the relationship between the independent and dependent variables.

The study used standard linear regression to model the linear equation relating the dependent and the independent variables. This study had three independent variables and the multiple linear regressions will be used in place of simple linear regression. Seemingly, each independent variable was regressed singly with the dependent variable to formulate an equation dictating the relationship between the two variables. Multiple linear regression analysis was carried out to determine the form of the mathematical model that define the relationship between the dependent and independent variables previously determined by correlation analysis. This study used multiple linear regressions.

DATA ANALYSIS AND DISCUSSION OF FINDINGS

The study targeted a sample of 130 respondents of whom 100 respondents filled and returned their questionnaires which gives a response rate of 78%. The respondents comprised of project managers who were drawn from five areas in Nairobi County which are: Nairobi East, Nairobi West, Nairobi Central, Nairobi North and Nairobi South. The above response rate conforms to Kothari (2004) who stipulates that a response rate of 50% is adequate for analysis and reporting; a rate of 60% is good and a response rate of 70% and above is excellent.

Table 1 Sample Response Rate

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Nairobi west	20	20.0	20.0	20.0
	Nairobi East	20	20.0	20.0	40.0
	Nairobi Central	25	25.0	25.0	65.0
	Nairobi South	20	20.0	20.0	85.0
	Nairobi North	15	15.0	15.0	100.0
	Total	100	100.0	100.0	

Majority of the respondents were from the Nairobi Central region which had 25% of the total response rate while the least number of respondents was from Nairobi North that had 15%. Property managers from Nairobi Central composed of 25% of the total number of property managers in Nairobi County where 30 respondents were given questionnaires but 20 successfully filled and returned the questionnaires. Nairobi East region comprised of 23 property managers which represents 20% of property managers in Nairobi County.

The findings were guided by the research questions proposed during the study. Data analysis was carried out to establish how project planning, competence of the project team, stakeholder management and project characteristics affect the performance of gated communities' construction projects in Nairobi County. Questionnaires formed the main research instrument used to collect data from respondents. This data primarily constituted qualitative data. The qualitative data collected had responses of ' Yes' or 'No' which were assigned numerical values for the purpose of analysis. Other responses included strongly agree, agree, agree to an extent, disagree, and strongly disagree; extremely satisfied, satisfied, dissatisfied, extremely dissatisfied e.t.c. These were assigned values on a lickert scale ranging from 5 to 1 respectively. The values obtained were fed into SPSS 21 and used to compute descriptive statistics. It is from this data that frequency distribution tables, pie-charts, graphs, and correlations were generated.

Project Performance

Performance of a project is measured by its completion time, whether it met its quality standards and management of its costs (Costell, 2008). The study sought to establish whether the project had achieved its objectives and as such was considered a 'success' by considering the view of the respondents based on the performance parameters mentioned above. The findings are shown below:

Table 2: Project Success Rate

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	63	63.0	63.0	63.0
	No	27	27.0	27.0	100.0
	Total	100	100.0	100.0	

The findings above indicate that 63% of the respondents agree that their projects performed well while 27% of the respondents indicate that the projects performed poorly.

This high level of satisfaction is attributed to the fact that all the projects were utility projects and most of them were completed within stipulated time and budget. Gated community construction projects in Nairobi County have a 63% success rate.

Effect of planning on project performance

The first objective of the study was to determine how planning affects performance of a project. The study sought to find out whether planning was done before the project commenced.100% of the respondents agreed that planning had been done. They were further asked to indicate whether the plans were followed during project implementation by rating on a Likert scale of four grades. The findings are shown below.
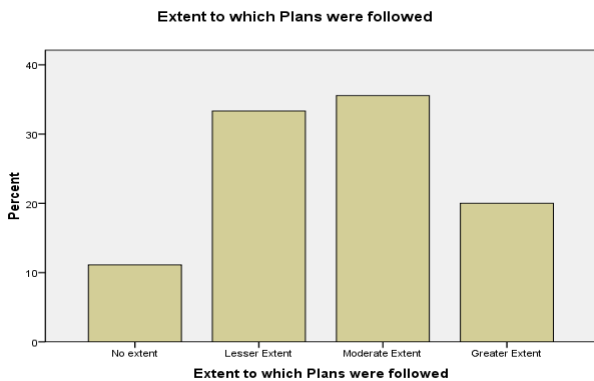

Figure 1: Extent to which plans were followed

The findings indicate that 20% of the respondents said that plans were followed to a greater extent while 35.6% said that the plans were followed to a moderate extent. 33.3% mentioned that plans were followed to lesser extent while 11.1% mentioned that the plans were not followed at all. On the overall, the project plans were followed to a moderate extent.

The extent to which planning affects project performance

The study went further to establish the extent to which planning affects project success. The respondents were asked to rate this on a lickert scale with three grades. The findings are shown below:

Table 4 Extent to which Planning affects ProjectPerformance

	Frequency	Percent	Cumulative Percent
Lesser Extent	4	8.9	8.9
Moderate Extent	16	35.6	44.4
Greater Extent	25	55.6	100.0
Total	45	100.0	

From the findings, 55.5% of the respondents indicated that planning affects project success to a greater extent while 29.1% believed that it affects to a moderate extent. A meager 8.9% said that it affected to a lesser extent while none of the respondents said it affects to no extent.Majority of the project supervisors and contractors ranked this factor very highly, to a greater extent.

These findings are consistent with the views held by various scholars in the discipline of project management. Planning is essential due to the complex nature of resources, processes, activities and parties involved in the project (Lester & Lester, 2007) .Plans are essential because they communicate the project objectives and lay out the strategies for achieving them which in turn determine the performance of the project (Buono, 2001).
This factor is hinged on management as a planning model discussed in the theoretical review. In this model, operations level is seen to consist of thecreation, revision and implementation of plans. Chinyio & Olomolaiye (2010) state that planning should focus on structuring the environment to contribute to purposeful acting and hence the realization of the intended outcomes. This approach to management views astrong causal connection between the actions of management and outcomes of theorganization or project. In conclusion, the findings confirm that planning indeed affects project success. If planning is

poorly done or not done at all, then the project may encounter huge challenges during its implementation (Axson, 2013).

Aaron, Don &Tzvi (2002) in their study of 'An empirical analysis of the relationship between project planning and project performance' concluded that no effort should be spared in the initial stage of a project that entails planning since they found a strong correlation between planning and the successful end of a project.

Table 5 Correlation analysis between planning and project performance

Correlations

		Planning	Project success rate
Planning	Pearson Correlation	1	.727**
	Sig. (2-tailed)		.000
	N	100	100
Project success rate	Pearson Correlation	.727**	1
	Sig. (2-tailed)	.000	
	N	100	100

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

The Correlation analysis between the variables is 0.727** showing a very strong relationship between the variables. This implies that planning positively affects the performance of a project.

Competence of the project team and project performance

The second objective of the study was to determine the extent to which the competence of a project manager affects performance of a project. The study sought to establish the competence of the project manager by examining their level of formal education and the number of years of experience in the construction industry. The table below captures the information. This data was collected by the questionnaires and verified from the profiles of the project managers submitted to the project managers.

Table 6 Level of education of project managers

Education

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Certificate	6	6.0	6.0	6.0
	Diploma	15	15.0	15.0	21.0
	Degree	44	44.0	44.0	65.0
	Postgraduate	35	35.0	35.0	100.0
	Total	100	100.0	100.0	

Table 7: Years of Experience of Project Managers

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0-5yrs	8	8.0	8.0	8.0
	5-10yrs	26	26.0	26.0	34.0
	10-15yrs	41	41.0	41.0	75.0
	15-16yrs	25	25.0	25.0	100.0
	Total	100	100.0	100.0	

From the findings shown in the tables above, majority of the respondents had a degree in construction or related fields at 44 % followed by those with a post graduate degree at 35%, followed by 15% with a diploma while 6% of the respondents had a certificate level of education which is a substantially reasonable level of education. The findings also show that 8% of the project managers had less than 5 years of experience in implementing projects, while 26% had 5-10 years of experience. Majority of the project managers had 10-15 years of experience at 41%. 20.0% while 25% had over 15 years of experience. This can be attributed to the fact that it takes a significant number of years to gain enough experience and a good reputation which would enable one to do consulting or undertake challenging projects.

The years of experience of the contractors concurs with the suggestion by Griffin (2010) that project managers should have past experience in managing projects in order to increase the likelihood of project success. This

is, to a large extent, due to the nature of the construction sector projects. These projects involve an inter play of different players who serve different roles in the overall completion of the project. Experience in past construction projects goes a long way in helping predict as well as plan for change and any technicalities that may arise during the project life cycle.

The data above indicates that the project managers have the necessary education and experience in the construction of projects. The magnitude of the project dictates the level of education necessary to carry out the project. Large projects require a high level of education due to the complexities involved as well as the different sectors at play.

The extent to which the competence of a PM affects project performance

The study sought to establish the extent to which the competence of a project manager affects project success. The respondents were asked to rate their responses on a lickert scale ranging from strongly agree to strongly disagree.

Table 8 Manager's Competence and Project Performance

Extent to which PM education level affects performance

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Great extent	89	89.0	89.0	89.0
	Moderate	7	7.0	7.0	96.0
	Low extent	3	3.0	3.0	99.0
	Very low extent	1	1.0	1.0	100.0
	Total	100	100.0	100.0	

From the findings of the study, 89% agreed that competence of a project manager affects performance to a great extent, 7% indicated that they agreed to a moderate extent; 3 % agreed to a low extent and 1% agreed to a very low extent.

These findings agree with views held by various scholars in the field of project management. Chan, Wong and Lam, (2006) stress the importance of past experience among project managers with a view to increasing the chances of project success. In addition, tacit knowledge, as an element of past experience, plays a vital role in enhancing organizational performance in achieving competitive advantage in the construction industry (Harrington &McNellis, 2006)Competence among teams is a further consideration. According to (Axson, 2013) comprehensive skills analysis needs to be undertaken to identify skills gaps. These can then be addressed through the relevant interventions, with a view to having competent teams.

Previous studies by Park, Lee & Lee (2013) in their study of 'Role of leadership competencies and team social capital' noted that project managers' leadership competencies were emerging as important elements that help form the project team's social capital.

Table 9: Correlations between competence of project team and project performance

Correlations

		Extent to which you agree PT competence contributes to performance	Project success rate
Extent to which you agree PT competence contributes to performance	Pearson Correlation	1	.816**
	Sig. (2-tailed)		.000
	N	100	100
Project success rate	Pearson Correlation	.816**	1
	Sig. (2-tailed)	.000	
	N	100	100

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

The Pearson's Correlation relationship between the two variable produced a value of 0.816**

showing that there is a strong positive relationship between the two variables.

StakeholderManagement and Project Performance

The third objective sought to establish the influence that stakeholders' management had on performance of projects.Young, (2009) states that stakeholders include everyone who has an interest in, can influence or is affected by the project's implementation or outcomes.Therefore, the main stakeholders were the property developers, contractors, financiers as well as the entire project team. Stakeholders are key partners in project life cycle especially during implementation**.** The study began by examining the level of stakeholder involvement in the projects.

Table 10 Level of management of stakeholders

Level of Stakeholder management

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	High	37	37.0	37.0	37.0
	Moderate	50	50.0	50.0	87.0
	Low	8	8.0	8.0	95.0
	Not at all	5	5.0	5.0	100.0
	Total	100	100.0	100.0	

From the above table, 37% of the respondents said that they managed stakeholders to a high level; 50% to a moderate level; 8% to low level while 5 % were not managed at all. It is evident that majority of the stakeholders were managed to a moderate extent.

Influence of stakeholder management on project performance

The study further sought to establish the level of influence that stakeholder involvement has on project success. A likert scale of three grades was formulated as shown below in the findings. Descriptive Statistics gave a standard deviation of 0.693 and a mean of 2.44 which was a 'moderate extent' on the coding matrix.

Table 11:Extent to which stakeholder holder management affects performance

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Great extent	81	81.0	81.0	81.0
	Moderate	9	9.0	9.0	90.0
	Low extent	8	8.0	8.0	98.0
	Very low extent	2	2.0	2.0	100.0
	Total	100	100.0	100.0	

From the findings, 81% of the respondents pointed out that stakeholder management influenced project performance to a great extent, 9% said to a moderate extent while 8 % said to a low extent while 2% were of the opinion that stakeholder management influenced project performance to a very low extent.

The findings indicate that most of the respondents were in support of stakeholder involvement in project life cycle. They felt that where stakeholders had been involved in the project adequately, then the project stood a better chance of achieving its objectives. This was based on the realization that each stakeholder had well defined roles and operated within their domain.Project managers and contractors ranked highly the involvement of stakeholders on project success. This suggests a greater appreciation for consultation with the relevant interest groups. Chinyio&Olomolaiye, (2010) advise that the inclusion of all stakeholders, including the public, is essential for successful project delivery. Harrington &McNellis, (2006) believe that the project manager has to identify the interests of all relevant stakeholders and ensure that there is buy-in to the project.

A previous study by Bourne (2006) on 'Project relationships and the stakeholder circle' noted that it was important to identify key project stakeholders to reduce the chances of project failure through support for developing and maintaining relationships within the project.

Table 12 : Correlation between stakeholder management and project performance

Correlations

		Project success rate	Level of Stakeholder Involvement
Project success rate	Pearson Correlation	1	.008
	Sig. (2-tailed)		.938
	N	100	100
Level of Stakeholder Involvement	Pearson Correlation	.008	1
	Sig. (2-tailed)	.938	
	N	100	100

A correlation analysis between the influence of stakeholders' involvement and project success produced a value of 0.938 which shows a very strong positive relationship between the two variables. Therefore involving stakeholders affect project performance positively.

Table 13 Summary of the Pearson's Correlations between the Variables.

	Planning	Competence of PT	Stakeholder Involvement
Project Performance Interpretation	.815** Strong positive Correlation	.641** Strong positive Correlation	.821** Strong positive Correlation

CONCLUSIONS AND RECOMMENDATIONS

5.2: Summary
Does project planning affect project performance of gated communities in Nairobi County?
The research question sought to establish the planning tools used in the project planning stage and how they affected the performance of the construction projects. First, the respondents were asked whether the projects were planned or not and all them gave a positive response of 100% affirmation.The

study further sought to know the extent to which the plans laid out were followed during the project implementation phase and the findings revealed that plans were followed to a moderate extent because of delay factors and other intervening factors which led to slight modifications of the scope of the projects.

Majority of the respondents stated that this variable affected the success of projects to a greater extent. However, most of the beneficiary clients held the view that it affects to a moderate extent. The findings also agree with the views held by Buono, (2001) who advises that special focus be given to activity definition and project plan development, as these serve as a basis for project plan updates.

Plans were mainly done through preliminary meetings where professional experts were engaged to draw up the architectural plans as well as the bill of quantities entailing the project specifications. Most of the project managers adopted a work breakdown structure as their planning tool. Several of the projects also incorporated Gantt charts and PERT charts during their planning. There was a strong positive Pearson's Correlation of 0.816 between project planning and project performance. The findings confirm that planning indeed affects project success. If planning is poorly done or not done at all then the project may encounter huge challenges during its implementation.

Does stakeholder management affect project performance of gated communities in Nairobi County, Kenya
This research question sought to establish the effect of stakeholder management on the performance of construction projects. Stakeholders are considered those that influence or are influenced by the project in any way.
The study noted that most of the project managers acknowledged that stakeholder management was critical in improving performance of projects. The findings show

that managing stakeholders improved the accuracy greatly and speed of project implementation hence influencing the project positively. On the question of the level of influence of stakeholders on project performance most respondents felt that stakeholders influence project performance to a great extent. This suggests a greater appreciation for consultation with the relevant interest groups. Chinyio & Olomolaiye (2010) advise that the inclusion of all stakeholders, including the public, is essential for successful project delivery. A correlation analysis between the two variables produced a value of 0.821^{**} which shows a very strong relationship between the two variables. Therefore involving stakeholders affects project success positively.

Does competence of the project team affect project performance of gated communities in Nairobi County, Kenya

This research question sought to establish the competence level of the project managers (contractors) and how this affected the achievement of project goals. The findings showed that the contractors were adequately qualified and competent to handle projects of such magnitude. The lowest level of education for a contractor was at certificate level registering a frequency of 2 out of 15. The majority of the respondents had either a degree or diploma in the field of construction or engineering and over 10 years of experience in the construction sector. This can be attributed to the fact that it takes a significant number of years to gain enough experience and a good reputation which would enable one to do consulting or undertake challenging projects.On the question of the extent to which the competence of the project manager affects project success, majority of the respondents especially project supervisors and beneficiary clients ranked this factor very highly by either strongly agreeing or agreeing.There was a relatively strong positive Pearson's Correlation of .641** between competence of project manager and project success.

These findings agree with views held by various scholars in the field of project management. Chan, Wong and Lam, (2006) stress the importance of past experience among project managers arguing that it increases the chances of project success. In addition, tacit knowledge, as an element of past experience, plays a vital role in enhancing organizational performance in achieving competitive advantage in the construction industry (Lester & Lester, 2007).

Conclusions

Performance of a project is a dependent variable which can be determined by several independent variables. In this study, project planning, competence of the project manager and stakeholder management were the independent variables.

The study established that most of the respondents were satisfied with the project achieving its goals and objectives. This is because most of the projects engaged professional experts prior to the commencement of the projects leading to good preparation. The study further revealed that stakeholders were involved to a great extent and that implementation was rigorous. The study further established that most of the projects were completed within the stipulated period and budget, key parameters of project performance.

Planning is a key factor in determining the performance of any project. The study established that many respondents believed that it affected project performance to a great extent. However, it was the preserve of the experts because all the architectural designs were done by professional experts such as architects, quantity surveyors, environmental experts. During the pre-contracting stage of the project planning was done using tools such as work breakdown structures, critical path analysis as well Gantt charts.

The study also established that skills and experience of the project manager and the

management committee in general influence the implementation of construction projects in the study area. The project manager is responsible for steering and controlling theactivities of the implementation team and ensures that the project realizes its goals.

The study also concludes that stakeholder's involvement affected project success. The study noted that stakeholder involvement improved the accuracy and speed of project implementation in the county. Their involvement meant that projects were implemented as planned without delays. The stakeholders were involved in different ways ranging from formulation of plans to regular progress reports through meetings.

Recommendations

Based on the findings, the study recommends that:

Project managers should properly liaise between the project owners and the financiers to ensure that contractors are paid in time. This facilitation of payment helps overcome disputes and claims which leads to delays. This eats into the completion time of the project and may as well lead to poor cost management which may also compromise on the quality of the project.

There should be continuous coordination and proper relationship management between all stakeholders involved in the project. Proper channels should be used to solve problems during the project lie cycle and develop performance of the project. Communication between stakeholders to keep them updated on the project's progress is essential and should be encouraged.

During planning consultants should be more interested in design cost by using multi criteria analysis and choosing the most economical criteria in order to improve performance and increase stakeholder satisfaction.

Project activities need to be properly documented irrespective of the nature and magnitude of the project. This would provide information necessary for monitoring and evaluating various project challenges and hence prevent future recurrence of such project shortcomings.

The study recommends that the project manager engages the stakeholders more so as to harmonize its goals and objectives with the aspirations of the stakeholders and hence reduce dissonance levels thereby increasing project outcome's satisfaction. This will ensure that the stakeholders support the activities of the project and hence higher chances of success.

Suggestions for Further Study

This study looked into the factors affecting performance of construction projects in Kenya with a focus on gated communities in Nairobi County. The study concentrated on the principles of project management that affect performance of these projects, Further studies should be done to look at the government's influence on the performance of these projects.

REFERENCES

Akintoye, A. (2009). *Construction innovation and process improvement*.Wiley-Blackwell.

Alleman, G. B. (2014). *Performance-Based Project Management®: Increasing the Probability of Project Success*. New York: AMACOM.

Angerame, M., & Billows, D. (2002).*Engineering & construction project management*. Denver,   Colo: Hampton Group.

Armstrong G. and Kotter P. (1997) *Marketing and introduction*, 4th Edition, McGraw Hill   publishers Hall, New Jersey, United States of America

Armstrong G. and Kotter P. (1997) Marketing and introduction, 4th Edition, McGraw Hill publishers Hall, New Jersey, United States of America

Askov, E. N. (1995). *Literacy leader fellowship program reports part 1: Framework for   developing skill standards for workplace literacy*. University Park: The Pennsylvania State University.

Axson, D. A. J. (2013). *Best practices in planning and performance management: Radically   rethinking management for a volatile world*. Hoboken, N.J: Wiley.

Basheka, B.C. &Tumutugyereize, M. (2012).Measuring the performance of contractors in   government construction projects in developing countries: Uganda's context**.** *International Journal of Project management* 30(2) 188-198

Berman, J. (2007). *Maximizing project value: Defining, managing, and measuring for optimal   return*. New York: Amacom, American Management Association.

Blessing, L. T. M., Chakrabarti, A., & Blessing, L. T. M. (2009). *DRM, a design research methodology*. Dordrecht: Springer.

Bonham, S. S. (2008). *Actionable strategies through integrated performance, process, project,   and risk management*. Boston: Artech House.

Borman, W. C., Ilgen, D. R., &Klimoski, R. J. (2002).*Handbook of Psychology, Volume 12, Industrial   and Organizational Psychology*. Hoboken, NJ: John Wiley & Sons.

Brown, J. T. (2008). *The handbook of program management: How to facilitate project success   with optimal program management*. New York: McGraw-Hill.

Brown, J. T. (2008). *The handbook of program management: How to facilitate project success with optimal program management*. New York: McGraw-Hill.

Bryman, A. (2012). *Social research methods*. Oxford University Press

Bryman, A., & Bell, E. (2011). Business Resaerch Methods, (3[rd] ed.)New York:Oxford,University press

Building sustainable urban settlements: Approaches and case studies in the developing world. (2002). London: ITDG Publishing.

Building sustainable urban settlements: Approaches and case studies in the developing world. (2002). London: ITDG Publishing.

Buono, A. F. (2001). *Current trends in management consulting*. Greenwich, Conn: Information   Age Publ.

Cargan, L. (2007). *Doing social research*. Lanham: Rowman& Littlefield.

Chan, P.C., Scott, D. & Chan, P. L. (2004).Factors Affecting the Success of a Construction   Project*. Journal of Construction Engineering and Management*, 130 (1), 153-155.

Chinyio, E., &Olomolaiye, P. O. (2010).*Construction stakeholder management*.Chichester,   U.K: Wiley-Blackwell.

Chinyio, E., &Olomolaiye, P. O. (2010).*Construction stakeholder management*.Chichester,   U.K: Wiley-Blackwell.

Chinyio, E., &Olomolaiye, P. O. (2010).*Construction stakeholder management*.Chichester, U.K: Wiley-Blackwell.

Choudhury, S. (1988).*Project management*. New Delhi: Tata McGraw-Hill.

Cleland, D. I. (1996). *Strategic management of teams*. New York ; Toronto: J. Wiley.

Cooke-Davies, T., & Leeds Metropolitan University. (2000). *Towards improved project   management practice: Uncovering the evidence for effective practices through empirical   research*.   Leeds, England: Leeds Metropolitan University.

Cooper, D. R., & Schindler, P. S. (2008). *Business Research Methods* (10th Ed.). New York: McGraw-Hill.

Cooper, D. R., & Schindler, P. S. (2011). *Business Research Methods* (10th ed). New York: McGraw-Hill

Cornick, T. C., & Mather, J. (1999).*Construction project teams: Making them work profitably*. London: Thomas Telford.

Costello, A. (2008). *Getting results: The six disciplines for performance-based project   management*.Riverwoods, Ill: CCH.

D. D., Riemer, C., National Research Council (U.S.)., National Cooperative Highway Research Program., American Association of State Highway and Transportation Officials., & United States. (2009). *Performance-based construction contractor prequalification*. Washington, D.C: Transportation Research Board.

Delmon, J., &Delmon, J. (2009).*Private sector investment in infrastructure: Project finance, PPP projects and risks*. Alphen Aan Den Rijn, The Netherlands: Kluwer Law International.

Dia, M. (1996).*Africa's management in the 1990s and beyond: Reconciling indigenous and   transplanted institutions*. Washington, DC: World Bank.

Dia, M. (1996).*Africa's management in the 1990s and beyond: Reconciling indigenous and transplanted institutions*. Washington, DC: World Bank.

Enshassi, A. ,Mohamed, S. &Abushan, S. (2009). Factors Affetcing the Performance of   Construction Projects in the Gaza Strip.*Journal of Civil Engineering and Management*, 15(3), 269-280.

 Field, A. P. (2005). Discovering Statistical using SPSS:London:Sage

Gibson, E. G., & Pappas, M. P. (2003). *Starting smart: Key practices for developing scopes of   work for facility projects*. Washington, D.C: National Academies Press.

Grant, R. (2009). *Globalizing city: The urban and economic transformation of Accra, Ghana*. Syracuse, N.Y: Syracuse University Press.

Gravetter, F. J., & Forzano, L. B. (2006). *Research Methods for the Behavioural Sciences* (2nd Ed.). USA: Thomson Wadsworth.

Gray, C. F., & Larson, E. W. (2008).*Project management: The managerial process*. Boston: McGraw-Hill/Irwin.

Griffin, J. A. (2010). *Residential construction management: Managing according to the project   lifecycle*. Ft. Lauderdale, FL: J. Ross Pub.

Happy, R. (2010).*Microsoft Project 2010 project management: Real world skills for   certification and beyond*. Indianapolis, Ind: Wiley.

Harrington, H. J., &McNellis, T. (2006).*Project management excellence: The art of excelling in   project management*. Chico, CA: Paton Press LLC.

Harris, C. (2003). *Building innovative teams: Strategies and tools for developing and integrating   high performance innovative groups*.Houndmills, Basingstoke, Hampshire: Palgrave   Macmillan.

Harris, R., & Short, T. (2014).*Workforce Development: Perspectives and Issues*. Singapore: Imprint: Springer.

Hass, K. B. (2009). *Managing complex projects: A new model*. Vienna, VA: Management   Concepts.

Heldman, K. (2006). *PMP: Project Management Professional Study Guide*. Hoboken: John   Wiley & Sons.

Hermans, L. M. (n.d.). *Stakeholder-oriented valuation to support water resources management   processes: Confronting concepts with local practice*. Rome: Food and Agriculture   Organization of the United Nations.

Idoro, G. (2012). Evaluating Levels of Project Planning and their Effects on Performance in the Nigerian   Construction Industry. *Australasian Journal Of Construction Economics And Building, 9*(2), 39-   50.

Juliet, M.E & Ruth, O.E. (2014).An Evaluation of Factors Affecting the Performance of   Construction Projects in Niger State.*Journal of Environmental Sciences and Resources Mnagement,* 6(1), 34-43.

Kamara, J. M., Anumba, C. J., &Evbuomwan, N. F. O. (2002).*Capturing client requirements in construction projects*. London: Telford.

Kerzner, H. (2006). *Project management best practices: Achieving global excellence*. Hoboken,   NJ: Wiley.

Khan, J. A. (2011).*Research methodology*. New Delhi: APH Publishing Corporation.

 Kombo, K., & Tromp, D. (2006). *Proposal and Thesis Writing: An Introduction.* Nairobi,   Kenya: Paulines Publications Africa

 Kothari, C. R. (2004). .*Research Methodology*,New Delhi:New Age International Publisher

Kothari, C. R. (2007). Research Methodology: Methods and Techniques, New age international publisher.New Delhi.

Kothari, C. R. (2005). *Research methodology: Methods & techniques*. New Delhi: New Age International (P) Ltd.

Kotler .P. (2001) Principles of Economics Simplified 11th Edition, Washington DC: Pittsburson Education

Kotler .P. (2001) Principles of Economics Simplified 11th Edition, Washington DC: Pittsburson Education

Krishnaswamy, K. N., Appa, L. S., &Mathirajan, M. (2006).*Management research methodology: Integration of principles, methods and techniques*. New Delhi: Pearson Education.

 Leedy, P. D., & Ormrod, J. E. (2010). *Practical research-Planning and design* (9th Ed.). Upper   Saddle River, New Jersey: Pearson Education.

Lester, A., & Lester, A. (2007).*Project management, planning and control: Managing   engineering, construction and manufacturing projects to PMI, APM and BSI standards*.   Amsterdam: Elsevier/Butterworth-Heinemann.

Maree, K. (2010). *First steps in research* (First edit.). Pretoria: Van Schaik.

Martin, P. K., & Tate, K. (2001).*Getting started in project management*. New York: Wiley.

Martin, P. K., & Tate, K. (2001).*Getting started in project management*. New York: Wiley.

Melton, T. (2008).*Real project planning: Developing a project delivery strategy*. Amsterdam: Butterworth-Heinemann.

Meredith, J. R., & Mantel, S. J. (2012).*Project management: A managerial approach*. Hoboken, NJ: Wiley.

Morris.E.   (2014).Sampling   from   Small   Populations.accessed   online   at: http://uregina.ca/~morrisev/Sociology/Sampling%20from%20small%20populations.htm   on   24/01/2014

Mugenda, A. &Mugenda,O. (2012). *Research Methods: Dictionary.* Nairobi, Arts Press.

Mugenda,O., & Mugenda, A. (2003). Research Methods- Quantitative and Qualitative Approaches.Nairobi: ACTs press

Mugenda,O., & Mugenda, A. (2008).Social Science Research,Nairobi:ARTS..

Mwaura, M. F., Tiagha, E., &Waiguchu, J. M. (1999).*Management of organizations in Africa: A handbook and reference*. Westport, Conn. [u.a.: Quorum Books.

Mwaura, M. F., Tiagha, E., &Waiguchu, J. M. (1999).*Management of organizations in Africa: A handbook and reference*. Westport, Conn. [u.a.: Quorum Books.

Pallant,J,(2010).SPSS *Survival Manual:A Step by Step Guide to Data Analysis Usingspss. (*4th ed.).New York:Open University Press.

Pinto, J. K., &Venkataraman, R. R. (2013).*Cost and value management in projects*. Hoboken,   N.J: Wiley.

Project, M. I. (2013).*Guide to the project management body of knowledge: Pmbok guide*. S.l.: Project Management Inst.

Rojas, E. M. (2009). *Construction project management: A practical guide for building and electrical contractors*. Fort Lauderdale, FL: J. Ross Pub.

Saunders, M., Lewis, P., & Thornhill, A. (2009). *Research methods for business students* (5th Edit.). Harlow, England: Pearson education.

Schwalbe, K. (2009). *Introduction to project management*. Boston, Mass: Course Technology.

Sekaran, U., & Bougie, R. (2009).Research Methods for Business:A skill building Approach.London:Wiley &Sons.

Sekaran, U., & Bougie, R. (2010). *Research methods for business: A skill building approach* (5th Edit.). Chichester, West Sussex: John Wiley & Sons, Inc

Sushil,S.,& Verma,N.(2010)."Questionnaire Validation Made Easy",.European Journal of Scientific Research ,46(2), 172-178.

Takim, R, & Akintoye, A. (2002). Performance Indicators for Successful Construction Project Performance. *Association of Researchers in Construction Management*, 2(2), 545-555

Tustin, D. H., Ligthelm, A. A., Martins, J. H., & Van Wyk, H. (2005). *Marketing Research in Practice* (1st Ed.). University of South Africa: University Press.

UN-Habitat (Nairobi). (1996). *Policies and measures for small-contractor development in the construction industry*. Nairobi: UNCHS.Project, M. I. (2013).*Guide to the project   management body of knowledge: Pmbok guide*. S.l.: Project Management Ins

UN-Habitat (Nairobi). (1996). *Policies and measures for small-contractor development in the construction industry*. Nairobi: UNCHS.

Van, T. D. M., Moseley, J. L., Dessinger, J. C., Van, T. D. M., & Van, T. D. M. (2012). *Fundamentals of performance improvement: Optimizing results through people, process, and organizations : interventions, performance support tools, case studies*. San Francisco, CA: Pfeiffer, a Wiley imprint.

Vater, S. (2012).*Project Planning as Key to Success in Project Management*.München: GRIN Verlag GmbH.

Wang, J., & IGI Global.(2013). *Perspectives and techniques for improving information technology project management*. Hershey, Pa: IGI Global (701 E. Chocolate Avenue, Hershey, Pennsylvania, 17033, USA.

Welman, J. C., Kruger, S. . J., & Mitchell, B. (2008). *Research Methodology* (3 Ed.). Cape Town, South Africa; Oxford University Press.

Winch, G. (2010).*Managing construction projects: An information processing approach*. Chichester: Blackwell Pub.

Woodward, J. F. (1997). *Construction project management: Getting it right first time*. London: T. Telford.

Wysocki, R. K. (2012). *Effective project management: Traditional, agile, extreme*. Indianapolis, IN: Wiley.

Zikmund, W. G., Babin, B. J., Carr, J. C., & Griffin, M. (2010). *Business Research Methods* (8th Ed.). New York: South-Western/Cengage Learning.