INFLUENCE OF MANAGEMENT PRACTICES ON PERFORMANCE OF BUILDING PROJECTS. A CASE OF PRIVATE BUILDING COMPANIES IN NAKURU TOWN – KENYA.

BY

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DECLARATION

This research project proposal is my original work and has not been presented for the award of a degree in any other university.

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L50/78856/2015

This research project proposal has been submitted with my approval as the University of Nairobi Supervisor.

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DEDICATION

This research project proposal is dedicated to my beloved wife Lilian Wambui; my cherished daughter Angel Wambui; and my treasured mother Mrs. Miriam Maina, for their unwavering support during my studies. To my dear brothers Stephen Maina, James Macharia and my entire family for their timeless efforts, continuous support and encouragement in my academic endeavor.

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LIST OF ABBREVIATIONS AND ACRONYMS

Sig. : Significance

M&E : Monitoring and Evaluation

SPSS : Statistical Package for the Social Sciences

ABSTRACT

The study sought to examine the influence of Management Practices on performance of building projects in Kenya; focus was on private building companies in Nakuru town, Nakuru County. Even though Management Practices used by different companies are similar theoretically; they are applied differently that is why we have differences in performance of projects. Because of such differences, this research therefore seeked to address the influence of Management Practices on building projects in this country. There is need to transform building projects' performance, geared towards improving customer satisfaction and unquestionable quality projects. This research was based on the following objectives: to establishing if planning as a management practice influences performance of building projects in Nakuru town; to examine if control measures influences performance of building projects in Nakuru town; and to assess if management skills influences performance of building projects in Nakuru town. Descriptive research design was used in this study. Stratified random sampling and purposive sampling method was applied in arriving at the sample size of 88 personnel in the building industry ranging from company managers to building support staff. Semi-structured personal interviews were carried out within the selected organizations for identification of practices undertaken in the management of building projects. Other significant project management practices were also captured in relevant literature. A structured questionnaire was developed to gather information for measurement of the project performance and determination of project management practices significantly relating to project performance. Performance indices were developed for measurement of the time, cost, managerial skills and quality performance. To test for significant differences between the performances of the categories of projects, each belonging to one organization, a pair-wise analysis, using independent t-tests, will be applied. Multiple Regression Analysis was adopted to determine the influence of project management practices on project performance. After the findings, it was proven that planning, control measures and management skills in building projects highly affects the performance of building projects, the study also determined that the function of analyzing projects performance through systematic procedures should be encouraged on every individual building project. Statistical Package for Social Sciences (SPSS) was used to analyze data and presentation of the study. The research findings were shared for academic purposes. Further research has also been recommended to assess the challenge affecting building projects by construction companies in the country with reference to Wellsprings Construction Company, Nakuru County. A linkage between personnel e.g. managers, Project managers county officials and the support staff should be emphasized and always made to function in order to facilitate effective monitoring of projects. Failure of involvement of all the stakeholders in all the stages of the project will lead to poor project performance/ sustainability. Therefore there is need for increased participation. There is also need to strengthen monitoring and evaluation of projects. This can be done through evaluation initiatives and systems; provision of trainings and budgetary allocation to assist in continuous monitoring and evaluation; including post implementation review which should be a continuous and never ending process; this determines the project success rate. For further studies, it is recommended that more performance metrics be developed in other research works (like: benefit to end users, benefit to national infrastructure etc.) be included for measurement. With this, the projects should not necessarily be client-based. This should lead to the development of a predictive model for determining management practices that promote increased project performance as well as those that contribute to poor project performance.

CHAPTER ONE

INTRODUCTION

1.1 Background of the study

Execution of building projects is undertaken through management practices carried out by various project managers daily. Specific project objectives are set to be achieved at the end of the project. The objectives may vary from one project to the other. Time, cost and quality objectives are however basic and common to almost all projects; they are discussed in the success subject matter of most projects. [Belassi and Tukel, 1996; Walker, 1995, 1996].

Building in developing countries is characterized by poor quality, lack of standards and low productivity; moreover, management practices do not adequately resolve building challenges [Bawane, 2017]. In developed countries like the United Kingdom, more than 80% of project leaders/ management, communicates customer's needs and expectations to middle level management as well as subordinate staff to avoid deviations from the set deliverables. Approximately 50% of stakeholders in building projects experience problems in performance, mainly due to: ineffective communication, inadequate technical expertise, increase in cost and time, and contractor's inadequacies'/ substandard work [Keng & Abdul-Rahman, 2011].

In order to achieve set project objectives, specific practices are carried out daily by project managers. It has been argued that the management practices may vary from organization to organization. Other project managers however argue that since professional practice within the building industry is required to follow set down guidelines and ethics, management practices may not necessarily vary from organization to organization; the purpose of adopting a particular practice may therefore be due to peculiar environmental and social demands of the project at hand. Highly satisfactory performance

cannot be compromised on and so is the need for optimum practices. As asserted by [Ramabadron *et al*., 1997], the high performance achieved by a project is what makes a practice adopted optimum.
The factors that affect the individual set project objectives are the ones that confront or promote the project success, outcome or performance. Although project performance is influenced by several factors [Blismas *et al.*, 2004], this study focuses on the relationship that exists between project management practices and project performance. Performance of a project therefore needs to be measured to pave way for knowing the optimum practices among the lot.

To address quality in building projects, Rwelamila [1995] noted that South African Development Community – countries should pursue Quality Management Systems in projects. For instance in South Africa building contractors failed to undertake training on management practices leading to high cost of non-conformance [Smallwood & Rwelamila, 1999]. In Ghana, project management faced challenges in project performance and building deadlines since management practices/ systems were not prioritized as compared to driving more business in terms of getting new jobs [Agbenyega, 2014]. A study by Mashwama, Aigbavboa, & Thwala, [2017] in Swaziland, found out that, management practices and Quality Management factors in building projects can eliminate poor building project quality.

Two organizations in Nakuru County were therefore selected for the study. They were regarded as management practices organizations in the direction of their having a set of personnel involved in the management of building projects. Each organization is distinguished from each other by the kind of funding sourced for their development programmes and certain peculiar organizational goals. However, the mission of executing building projects was common amongst them. They specifically include: Engiplus Infrastructures Company Limited and Sunflower Company Limited

Building projects as explained by Githenya & Ngug [2014], are a mix of complex processes; they further advocate the notion that, building projects are considered implemented if the work is done on schedule, on budget and achieve the set goals; as well as accepted by the client. There are certain main organizational goals that are peculiar to these companies; Engiplus Infrastructures Company Limited was set to improve housing schemes and sanitation management. The Sunflower Company also has the main objective of reducing rural and urban poverty by decentralizing its associated companies to the rural settings and employing many youths in the rural areas. Annually, building projects are undertaken to facilitate achievement of these and other objectives.

In-spite of slight disparity in the specific organizational goals, supplementing and improving facilities is common amongst the organizations. This common feature is capitalized upon to pursue

the research objectives. The focus is therefore not in the distinguishing features. According to Ali & Rahmat [2010], having an integrated management system ensures consistency and better performance of building projects.

Globally, according to a report published by PricewaterhouseCoopers (2013), world building markets are at a tipping point already with 52% of all building activity in emerging markets today. This is expected to increase to 63% by 2025, with China and India contributing most to growth in emerging markets. China overtook the US to become the world's largest building market in 2010, and is expected to increase its global share from 18% today to 26% in 2025, despite an expected slowdown. A report published by EC Harris Research (2013), states that the UK building industry has turned around to become one of the fastest growing sectors in the economy. It further elaborates that the changes in the international economy are creating new opportunities for Britain. To help boost the economic recovery, the government is doing all it can to help British businesses grow and have the aspiration, confidence and drive to compete in the global race. This includes reforming the planning system, and developing proper management practices. This industry had the third largest employment and its share of Alberta's total employment increased from 8.4% in 2002 to 10.5% in 2012. The U.S. Department of Labor perceives that the demand for residential buildings is expected to continue to grow. The demand for larger homes with more amenities, as well as for second homes, will continue to rise, especially as the baby boomers reach their peak earning years and can afford to spend more on housing.

From a regional forefront, a report published by Deloitte, titled 'African Construction Trends Report 2013' states that East Africa is fast becoming a leading African region and a strategic hub of continental growth. Though historically one of the world's poorest and least developed regions, it is fast tracking infrastructure development with countries such as Ethiopia having shown annual growth of over 10% per annum in recent years (Deloitte, 2013). The report further expounds the East African region is turning the heads of investors, construction firms and multi-national corporations. As aggressive development gains momentum, investors will rely on local governments to develop basic infrastructure such as rail, roads, healthcare facilities, housing, real estate and retail space.

Closer to home, data from the Kenya National Bureau of Statistics shows that the building industry in Kenya emerged among the top performing sectors in the period alongside financial services and transport and communication. The sector grew by 10.7% compared to the dismal performance of 0.3% in the same period in 2010 and contributed Sh12.6 billion to the GDP in the

period supported by massive road infrastructure projects currently in progress across the country (KNBS, 2011)

1.2 Statement of the problem

A report titled, 'The Kenyan Construction Industry 2011', published by Moramati Foundation in conjunction with Proinvest, cited a number of problems and challenges that plague the building planning namely; poor staffing and management competencies at all levels, access to finance and poor planning of monies, absence of a unified quality framework for all contractors, inadequate supervision within the technical and managerial level, improper project designs by consultants, and poor engagement with regulatory authorities (Moramati Foundation, 2011). Developers and building firms are grappling with inefficiencies both internal and external that have a massive impact on building projects. Some of the major concerns within an internal perspective is the deployment and use of technology platforms to improve efficiency levels, cohesion and fluidity of various teams and professionals and the adoption of management strategies that focus on the core pillars of management namely; planning, strategic choice and implementation. The problem that this study seeked to address was the influence of management practices on the performances of building projects in Kenya. It took into account various management practices applied in the building industry including planning, control measures, management skills applied and the managing system of the building project. The National Transition Authority released a report in 2016 revealing inefficiencies in key projects being implemented. They are badly implemented, abandoned or duplicated; meaning they do not meet stakeholders' expectations [Jamah, 2016]. The investigation of these influences can lead to proper project performances and create awareness on effective practices that can sustain the presence of building entities that deliver quality and resonate with international practices now and in the long run.

A sample of previous studies done within this area include Kagioglou, Cooper and Aouad (2001), who highlighted Performance Management in Construction: A Conceptual Framework, which focused on performance measurement approaches within construction firms. Although a valiant effort was made in drawing a link between the philosophies of organizational performance and modern tools of measure it was highly subjective to the implementation of the balanced scorecard as performance measurement tool within a construction framework and fell short on the holistic influence of strategic management practices within private construction firms and their consequent impact on performance.

Another study carried out by Kamuiru (2013) shed light on the Elements of management practices applied by Home Builders in the building of Single Family House; A Case of Ngoingwa Estate-Kiambu County. The study placed emphasis on the project management techniques and methods in the building of family houses by the contractors. Again, this study fell short of identifying the management practices that can be employed to strengthen the objectives of cost, time and quality that can complement the delivery of good homes

Finally, a third study by Mungeria (2005), focused on professional teamwork and project performance in the building industry in Kenya but did not capture a holistic approach of using strategy and proper management practices. The researcher has identified this area as deserving attention in exposing the management practices employed within private building firms and the influences that these practices have on the performance of a building project. The researcher will seek to find that this area has received little attention in literature in response to the problems show-cased in the public domain that plague the building projects and the impact on performance of a project. This study therefore sought to investigate the influence of management practices on performance of building projects in Kenya.

1.3 Purpose of the study

The purpose of this research was to assess the influence of project management practices on performance of building projects in Kenya.

1.4 Objectives of the study

The study was guided by the following objectives:

1. To assess how planning influences management practices on performance of building projects.
2. To examine the extent to which control measures influences the performance of building projects.
3. To assess how management skills influence performance of building projects.
4. To determine how the managing organization influences the performance of building projects.

1.5 Research questions

The study was guided by the following research questions:

1. How does planning influence performance of building projects?

2. How does control measures influence performance of building projects?
3. How does management skills influence performance of building projects?
4. How does managing organizations influence performance of building projects?

1.6 Significance of the study

It was hoped that the findings of the study will be significant to the development of Project Management in the Country according to the following expected outcomes:

The study was significant to the private building companies as well as the Government agencies. It informed project implementers on the best management practices to attain quality standards during project implementation. The study aimed at finding out the relationship between management practices and Project Performance; by having this knowledge Project team members would accordingly extricate themselves from management practices that have negative relationship with Performance while engaging more in those that exhibit positive relationship. This will contribute to realizing improved performance of building projects in the country.

Additionally, the study will inform policy makers and development planners, on the importance of ideal management practices, where if applied correctly, yield transformative results. Academically, the study will build on, or add value to the already existing body of knowledge, especially related to issues of management and performance of building projects.

Furthermore, with the information that projects managed by one organization differs significantly from similar ones managed by another organization, and that this is influenced by variation in the management practices carried out, one organization would be prompted to benchmark relevant practices that would improve the performance of the projects it manages. In the long run, organizations involved in project management in the country would have enhanced quality of management practices.

1.7 Limitations of the study

The study was limited by time available for completing the study; and the resources that were required to travel within the locations of the companies and their building sites in Nakuru County. Respondents were reluctant to provide valuable information. Both the interviewing and the questionnaire distribution stages were characterized by initial unwillingness on the part of interviewees and respondents. The plan to overcome these was through persistency and giving assurance that confidentiality would be maintained. The researcher requested the companies' management to assist with accessing respondents' which was a challenge as they were on different

sites working. Understanding of the research questionnaire was a challenge to the respondents, as such the researcher utilized face to face interaction with the respondents to clarify queries and ensure questions were well understood.

1.8 Delimitation of the study

This study focused on establishing the influences of management practices on performances of private building projects in Nakuru town, Nakuru County. The target population was project managers of selected companies; support staff and selected stakeholders in the building industry (for instance, NCA and County government ofiicials); with a sample size of 88 individuals.

Of the two main sub-sectors in the Kenyans building industry (piping and building) the concentration was on the building sub-sector. Of the building projects, too, the focus was on those executed under the Engiplus Construction Company Limited and Sunflower Company Limited which are within Nakuru town, Nakuru County. The research was projected to take approximately 3 months.

1.9 Basic assumptions of the study

This study was based on the assumption that the companies aforementioned are the main stray of building projects in Nakuru County. Implementation of management practices, influence performance of building projects. The respondents were well aware of the concept of building projects and their implications. Respondents provided impartial answers to the questions contained in the research proposal instrument and the sample represents the population. It is upon this assumption that this study was aimed at determining the influence of management practices on building projects' performance.

1.10 Definitions of Significant Terms

Project: - any undertaking that is meant to impact either positively or negatively to the livelihoods of people or the environment.

Project management practices: - Refers to the working methods and innovations that managers use to improve the effectiveness of work systems. It is the ways of carrying out the day to day project management practices and decisions.

Project performance: - the totality of time, cost and quality performance of a given project. It is sustainably achieving multiple, often conflicting, objectives under changing conditions.

Building time: - the number of days from the commencement of work on site to the practical completion.

Planning: - the art of organizing resources that may be required to achieve a set objective.

Control measures: - actions taken to regulate a certain development. They are activities taken to prevent, eliminate or reduce the occurrence of a hazard that has been identified.

Building projects: - this is the art of undertaking a work of building or developing an infrastructure. It is the process of adding structure to real property.

Management skills: - the practice of developing, deploying people and their skills to work on a given project to achieve a set objective.

1.11 Organization of the study

This study is organized in five chapters. Chapter one covers the introduction, background of the study, statement of the problem, purpose of the study, objectives of the study, research questions, limitations of the study, delimitations of the study, the assumptions of the study and definitions of significant terms used in the study.

The chapter two section discusses the literature review of the study and it includes planning and performance of building projects; control measures and performance of building projects; management skills and performance of building projects finally, managing organization and performance of building projects. The chapter also covers the theoretical review, empirical review, conceptual framework, knowledge/ research gaps in relation to the study and summary of the chapter.

Chapter three stipulates the research methodology of the study. It entails research design, target population, sample size and procedures, data collection procedures, validity and reliability of instruments, data analysis as well as operationalization of variables discussed and ethical considerations.

Chapter four entails data analysis, presentation and interpretation of findings; while chapter five presents the summary of findings, discussions, conclusions and the recommendations comprehensively.

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

This chapter reviews literature work of various scholars; what they have contributed in the development of management practices applied in projects' implementation with regard to optimum performance. It will be guided by the objectives of the study. The variables to be covered under the study are: Planning, influence of control measures on building projects; management skills in building projects; management practices in building projects as well as project performance. This section will discuss the sources of literature about the influence of management practices on building projects in order to broaden the understanding of the research problem. The chapter will review Crosby's management theory as well as the Principal – Agent theory. This chapter in addition will explain the relationship between the variables in the conceptual frame work and show the knowledge gap from the literature reviewed.

2.2 Planning and performance of building projects

According to the ASCE Quality Manual [1987], the discipline of project management can be defined as the art of directing and coordinating human and material resources throughout the life of a project by using modern management techniques to achieve predetermined objectives of scope, cost, time, and quality and participation satisfaction.

The Project Manager, central to the project management process is a qualified individual or a firm authorized by the owner to be responsible for the day-to-day management and administration and for coordinating time, equipment, money tasks and people for all or specified portions of a specific project.

Although quality management is a portion of the management of a whole project, the idea in the work of Das *et al.* [2000] describing quality management practices, is worth noting:

Quality management practices are described as the decisions and actions involving quality planning and leadership, quality training etc. The emphasis in this definition is the concept of management practices involving decisions and actions.

The Oxford Advanced Learner's Dictionary gives a relevant definition of Practices as Ways of doing something that is the usual or expected way in a particular organization or situation.

An articulation of the above concepts facilitates defining management practices, in this study, as the day-to-day ways of carrying out management and administrative activities and decisions that is the usual or expected ways of directing and coordinating projects resources by authorized firm or an

individual building professional for the purpose of achieving set project performance in terms of the time, cost and quality objectives.

Building professionals within project management teams usually find themselves being part of one of the parties to a building project. The three main parties to a building contract are the client, contractor and consultant who form an integral part of the project management team in the building industry. They all come together to take decisions and carry out activities for the purpose of achieving satisfactory project performance.

Sharma and Gadenne [2002], in their investigation into an inter industry comparison of quality management practices and performance found out that there is a strong association between quality management practices and performance. This finding provides strong evidence concerning the effect that project management practices have on project performance. An investigation into this relationship is therefore necessary.

2.3 Control measures and performance of building projects

Several research works have identified certain practices and attributes within an organization, specifically project management firm or team. These practices are carried out for the purpose of successfully managing projects. In a research conducted into the organizational learning practices in project management environment, it was concluded that project organizations should focus on building knowledge because increased knowledge is associated with increased project performance [Kotnour, 2000]. Increased knowledge implies not encountering the same problems over and over again and not reinventing solutions to problems. This knowledge helps the organization to better plan a project and meet cost, schedule, and performance requirements. The learning process must be made to include the practice of taking feed backs for executed projects. In support of this practice Loo [2003] stresses that taking feedbacks from projects and learning from experiences have a significant influence on project performance. How important therefore do project managers take knowledge building as an important practice in the management of projects? The presence of encountering the same problems over and over again is an indication of how often low significance is placed on knowledge building, which should include organizational learning and taking feedbacks from projects.

Having certain identified best project management practices within a particular project management organization enhances successful project management. What therefore are some of these best practices identified? Jawaharnesan and Price [1997] studied project management best practices

in the UK building industry and found that “preparing and organizing” and “developing project definition” were among the highest ranked tasks or activities. However, taking a look at Bryde’s [2003] assertion, that: “it is the performance that makes a practices optimum”, measurement of project performance is required for determination of optimum practices within a given organization.

2.4 Management skills and performance of building projects

Rowlinson [1988] found out that a high level of administrative ability in the project team leads to reduced time overruns, which in turn leads to increased satisfaction of client. The ability of managers to have managerial control may also be a key element in achieving project success.
Certain administrative processes adopted, especially in the clients’ organizations, become established or are changed based on not only the goals to be achieved but also the administrative abilities of personnel. Certainly, adopted administrative processes have relation with the administrative abilities of administrators. In the administration of contracts, certain administrative processes may have influence on project performance. For instance the effect of process or procedure for payment of contractors for works executed cannot be neglected as far as project success is concerned.

Since administrative ability has been determined to be very essential in the execution of projects the kind of a project management team leader or contract administrator for a particular project also becomes crucial to project success. Smith and Morris [1992] argues that in modern trends of management of building contracts certain management systems incorporated in project management have led to establishment of distinct profession, resulting in further fragmentation of the building process. [Pawley, 1990], following this point, asserts that there is further loss of control of the building process by architectural firms. Such modern systems assure that there is competence in the management of the projects since project management specialists are usually leaders. In contrary instances where solely architectural firm, with no specialized training and experience in project management, becomes the leader of the project team, the project management competence or ability remains questionable. Certain crucial management practices may be ignored or irrelevant ones may be emphasized and subsequently project success may be affected.

2.4.1 Project Management Structure and Project Success

The organizational structure adopted for management of building projects is an important area to consider for the success of projects. Weaknesses in this area of project management lead to poor project performance regardless of organizational facilitators such as senior management commitment and leadership style [Cooper, 1998]. Bryde [2003] in his investigation into the formalization of project management activities included the structuring of the project, among four broad areas, that define the success of projects. Loo [2003] also grouped project management activities that facilitate project success under two main areas, which require the establishment of organizations structure for their effectiveness. The areas cover technical (e.g. planning, controlling, and procedures) and people (e.g. leadership, communication, and conflict management). Sidwell [1982] in his investigation into the impact of client decision-making upon building process and project success concluded that project organizational structurehas influence on the project performance from inception to completion.

Getting an organization structure alone is not enough. As much as having an organization structure is important for the achievement of project success as emphasized by Bryde [2003], Loo [2003], Cooper [1998] and Sidwell [1982], the effect of the size of the management structure adopted for management of a project needs to be also given special thought. Also the relevance of the presence of an organization structure to a building project of a particular size should not the given less attention. Another aspect that requires consideration in the project management process is about which of the parties to a building contract should always operate not without project organization structure.

2.4.2 Decision-making making on project success

Sidwell [1982] in his investigation into the impact of client decision-making upon building process and project success conclude that there is an influence from the decisions that clients make on the project performance from inception to completion. He added that the experience of the client with project management process have a lot to do with the kind of decisions that are taken during the lifetime of the project. Some of the decisions made by the project client include insisting on design changes irrespective of the stage of a project. Lack of adequate experience on the part of the client is likely to lead him into ignoring the cost implications of such decisions, especially at the latter stages of the project. Decisions regarding *how much* and *when* allocated funds should be released for payment of executed works or works yet to be executed all may have relevance to the project success.

An indication is given by Choudhurry & Phatak [2004] who contends that delayed progress payment causes delayed completion of projects.

However, it it is not only the client's decisions that are relevant to project success; the decisions of other parties too are important. In a study of 69 projects, Naoum [1994] concludes that the designer's experience is among the major factors that affect cost and time overruns. The impact of decisions of the contractor too cannot be ignored as far as project success is concerned. Since Sidwell [1982] establishes a relation between experience and decision-making, the experience of the contractor also counts. A Highlight is given by Tam and Harris [1995] concerning the likely impact of experience of the contractor's project manager on time, cost and quality. A look at the point made by Kashiwagi & Parmar [2004] and Xiao & Proverbs [2003] that, consideration of contractors past performance in the project procurement process is necessary for achievement of project success, buttresses the point that placing high importance on the decision-making and experience of all parties to a building project may be highly significant to project success.

2.4.3 Building Time and the Effect on management practices

Building time refers to the duration for completing a building project. Projects often experience delays. In an RICS research paper [Morledge et al., 1996] in which data was collected in relation to 215 completed projects of commercial and industrial nature, it was found out that 136 (63%) were delivered late. It was contended that the lateness was mainly due to unrealistic expectation of clients about the project duration during the pre-construction stage. One major client in the building industry is the government. The government usually takes decisions under economic and political considerations. Such considerations may come with directives specifying time periods within which completion of projects are expected. In their bid to comply, members of the project team may be trying to accomplish an unrealistic task. Such situations reflect what Kumaraswamy and Chan [1995] found out in their investigations into determinants of building duration. They concluded that the overall timescales of many projects appear to be established as a consequence of commercial and/or political considerations. They argued that subsequent planning and programming methodologies are then designed to meet these time targets, rather than any objective assessment of durations. Contractors are therefore made to face increased pressure. Ward *et al*. [1991] also identified that client time expectations are frequently based upon either their own experience of similar works or on advice from *'specialist advisors*'. This behaviour of clients may be an indication

of the adherence to or rejection of advice of project consultants, who have been formally employed to lead management of building projects.

In situations where project consultants, considered to be project management experts, play the major role in the establishment of building time, the effect on project performance may be different. The actions of all parties are therefore important to the project performance. It should however be noted that other factors too bring immense pressure on contractors to complete project on time. Austin *et al*. [1994] identified that increased pressure are brought to bear on contractors to complete projects on time as the result of a highly competitive market place; and that in these circumstances contractors will try their best but that the goals are simply unrealistic. On the other hand when the time is realistic, poor time performance would prompt looking into the level of importance that contractors attach to time goal of projects.

2.4.4 Project Cost and the Effect on management practices

Cost has been defined as the degree to which the general conditions promote the completion of a project within the estimated budget [Bubashit and Almohawis, 1994]. It covers overall costs incurred from project inception to completion. This highlights the importance that has to be attached to every project management activity carried out through every stage of the project development up to completion. Chan and Chan [2004] also argues that cost is not only confined to the tender sum and that it is the overall cost that a project incurs form inception to completion, which includes any cost arising from variations, modifications during building period. These cost variables give indication of certain additional practices that when engaged in during the project management process would have both direct and indirect implications for the project cost performance. The number and manner in which variation orders are issued by consultants during building is an important practice to look at. Clients who often engage in the habit of agitating for numerous design changes before practical completion also play great role in the influences on project cost. The way contractors respond to variation orders may also have implications for the project performance.

In predicting the performance of design-build and design-bid-build projects, Ling et al. [2002] identified certain variables that affect cost performance. These include: the number of repetitive elements contained in a project, the extent of design completion when bids are invited, and the level of paid up capital of contractors engaged.

These variables bring to bear certain related practices that may affect the performance of project cost. For instance the kind of procurement method usually adopted by clients; traditional

procurement or design and build will determine the extent of completion of designs to be used for bidding. Moreover the kind of project consultants selected by clients for design of a particular kind of project will also have influence on the way the design will be made (i. e. whether repetitive elements will be brought into the design or not). The attitude of client towards the project cost will also determine whether he or she will adhere to the advice given by designers concerning the cost advantage of having repetitive elements in designs. How contractors are usually selected (i. e. always selecting through competitive tendering or negotiated tendering) will also determine the kind of contractors that are employed to execute the projects.

2.4.5 Building Quality and the Effect on management practices

Building quality is defined as "the totality of the features required to satisfy a given need; fitness for purpose [Parfit and Sanvido, 1993; CIRIA, 1985]. The extent to which projects are monitored, the experience of project consultants, quality and past performance record of contractors [Kashiwagi & Parmar, 2004] and the number of variation orders issued all have effect on quality. How all these factors can be competently coordinated would be relevant to achieving satisfactory quality performance. The project management team leader has the responsibility to ensure that these factors combine well to yield good quality performance.

Quality performance has been considered as a function of the procedures adopted during the building process [Serpell and Alarcon, 1998]. Those procedures comprise the concept of procurement form and the method of tendering. The fragmented nature of the building industry and the fact that every building project is unique places great responsibility on the project management team in setting up the building process that will bring the project to a successful conclusion.

The emphasis here is on process and procedures having influence on quality of a building project. The subsequent issue that arises is how often project managers, having a sense of the uniqueness of every project, tailor certain PM practices to correspond with the uniqueness of a project in order to yield good quality performance. Some of the procedures to be given recognition may therefore include the selection procedure of organizations required to perform the design and supervision and those responsible for the building of the particular project too. Usually, the building team would be appointed under competition through competitive tendering process. Sometimes, a contractor may be appointed by negotiation on the basis of a fee. In cases where the design and building is done as a complete package, both may be let by competition.

2.5 Managing organization and performance of building projects

Management practices vary from organization to organization and the performance of the outcomes is what makes a practice optimum [Bryde, 2003]. The cause of variation in the management practices may not be only due to the kind of organization but also the type and purpose of project and most importantly the level of performance desired. This observation falls in line with the finding made by Sharma and Gadenne [2002], in an investigation into the effect of quality management practices on performance. They identified through an inter-industry survey of 140 respondents, comprising 58 from the service sector, 62 from the manufacturing sector and 20 from the building sector, that quality management practices differed somewhat from industry to industry and organization to organization. The focus, though, was on quality performance and not overall project performance. Also, Gowan and Mathieu [2005] in the empirical study of 449 system managers found out that the good Information Systems (IS) project performance depends to a greater degree on the intervention of specific project management practices (formal project methodologies and outsourcing). The project performance was however in the context of meeting project target dates only. These findings give an indication that the kind of project management practices engaged in for the management of a project depends on the kind of organization. This will hence have a subsequent relation to the project management team composition too.

The practices present within different organizations therefore require identification and further examination. Subsequently, the influence of such practices on the performance of the corresponding projects executed becomes highly necessary to determine. The performance must also not be looked at with a highlight on time only or quality only. The effect will have to incorporate both time and quality not leaving out cost too. These three basic project objectives are fundamental to the totality of project performance.

When practices vary from organization to organization or from project team to project team the question of which practices are the best subsequently arises. Ramabadron *et al*. [1997] describes best practices in project management as optimum ways of performing works to achieve higher performance. The goal of every project manager is to achieve satisfactory performance and it is for this purpose that certain practices are undertaken. In determining whether certain practices are best or not, the need to measure the performance of the projects executed under such set of practices is highly imperative.

2.6 Project Performance

The concept of project performance has been a subject of utmost concern to most stake holders in the building industry. Projects are expected to perform to achieve set objectives. Satisfactory achievement of the set objectives makes a project successful. Management has scientific, technical and social processes that function to plan, control organize, direct, and staff in a project [Gakuu & Kidombo, 2011]. This qualifies management practices (geared towards performance of projects) as both a social and scientific mechanism in project administration.

Performance can be enhanced through a formalized system, a document with information of the organization in order to achieve quality policies and objectives [American Society of Quality, 2017]. British Standard Institution [BSI 2016] explains Quality Management System as a complete operational tool designed to improve performance; it is flexible and agile to organization needs. The need for Quality management acts as a corrective and preventive actions paradigm [Haefner, Gallager & Rogers, 2017]. Utilization of management systems for quality performance brings about greater effectiveness in an organization / project, leading to greater productivity, which enhances stakeholders' satisfaction [Okwiri & Mbeche, 2014].

2.6.1 Dimensions of Project Performance

Project performance has been considered to be tied to project success and this is also tied to project objectives [Chan & Chan, 2004]. Project success has been measured based on different dimensions. Sadeh *et al.* [2000] measured project success based on the following five dimensions: Meeting Design Goals, Benefit to End Users, Benefit to the developing organization, Benefit to the defense and national infrastructure and Overall success (a combined measure for project success). Shenhar *et al.* [1997] also proposed that project success is divided into four dimensions: Project Efficiency, Impact on Customer, Business success and the Preparing for the future. Chan & Chan [2004] developed a consolidated framework for measuring project success. The framework is comprised of the following eight project success dimensions: Cost, Environmental performance, Quality, User expectation/satisfaction, Time, Commercial/Profitable Value, Health and Safety and Participants' Satisfaction.

There are three basic objectives of building projects; time, cost and quality. These objectives are the adopted dimensions for measurement of project performance in this study. Measuring the success based on these objectives is considered to yield effective results since project participants are more familiar with the three basic project objectives. Researchers like [Walker, 1999; Hatush and

Skitmore, 1997] have discussed project success around these objectives. The overall performance of any project is invariably an aggregation of the performances of its individual objectives. Based on the widely-known and widely-understood nature of these objectives project performance is measured in terms of time performance, cost performance and quality performance. Nonetheless, building project success has also been discussed, in few cases, around other project objectives; health, safety and environmental friendliness [Kumaraswamy & Thorpe, 1996], scope [Best & Valence, 1999].

An overriding factor for measuring project performance based on the three basic objectives emanates from the qualitative finding by Phua & Rowlinson [2004] out of their research into how important cooperation is to building project success. They identified three factors – adherence to project budget, time and quality requirements – as being consistently indicated by interviewees to be the overarching criteria of assessing building project success. Hence it is highly useful to adopt these objectives to form the basis for the measurement of the building projects performance in subsequent analysis.

2.6.2 The Problem of Poor Project Performance

In Kenya, projects have had performance problems. Some of the factors that have contributed to this include irregular release of funds for building projects by the Client [Baiden-Amissah, 1999]. Amoah-Mensah (2005) in his study into the role of African Quantity Surveyors in the Achievement of NEPAD agenda mentioned delayed payment by client, inadequate contract information and performance appraisal as some of the bottlenecks of optimal realization of the success of building projects.

Other literatures also abound with indication of projects in the building industry having performance problems. The industry is characterized by repeated delays, cost overruns and collapse of buildings [Mansfield et al., 1994]. Best & Valence [1999] contends that the problem of building projects frequently taking longer and costing more than originally anticipated is often due to poor planning at the pre-design phase of the building procurement process. Post [2001] also attributes the problem of poor project performance to the dominance of the low-bid system of procurement. He argues that this system gives less attention to the quality and performance of the winning contractor.

In light of these Kashiwagi & Parmar [2004] suggested that past performance information should stand as a key indicator for predicting future performance in the building industry. Xiao & Proverbs [2003] also contends that contractor performance is critical to the success of any building project as it is contractors who convert designs into practical reality. The problem of poor project

performance is being attributed to a number of factors here and their effect on project performance has to be ascertained.

Project managers have been called upon to be critical about the contractor selection process since it is important to project success. Clients in the building industry also select project consultants through a process, thus, based on certain criteria. Ignoring the crucial nature of the project consultant selection procedure may also affect project success. The attributes of project consultants therefore surely has something to do with the problem of project performance. Poor performers produce poor performance whilst good performers produce good performance. Building professional advisors must therefore know the performers to maintain and the ones to eliminate.

2.7 Theoretical framework of the study

Performance in project implementation is guided by certain preconceived theories. Management practices as an approach are used to operationalize quality n projects. In order to further understand the general application of the approach; there are various theories that support this study. The study will be guided by Crosby's management theory and the Principal – Agent theory.

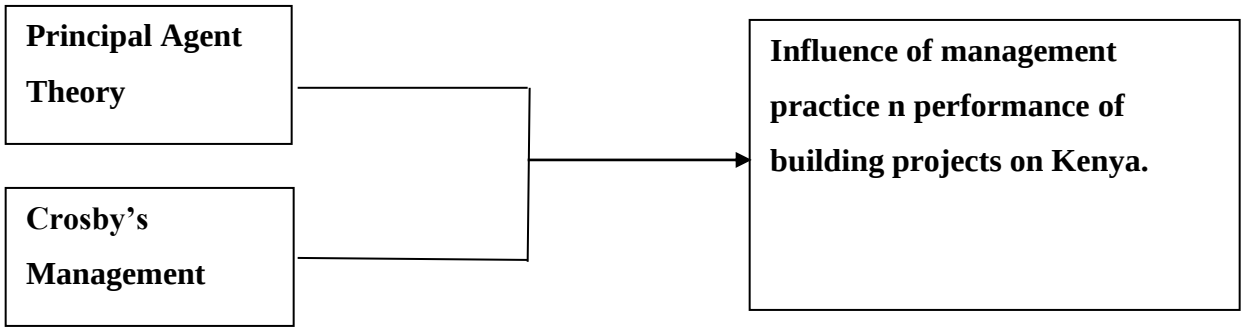

Figure 2.1

Figure 2.1 Theoretical framework

2.7.1 Philip B. Crosby's Management Theory

This management theory was developed by Phillip Bayard Crosby. He defines quality as the conformity to specification or requirements set by project managers; this is the notion behind the Crosby's concepts like 'zero defects'; 'getting it right first time'; and 'conformance to requirements'. According to Suarez [1992], 'zero defects' concept paved way for quality improvement of products

and services. According to [Mark S. [2017], the benefits of application of Crosby's concepts, is reduction in wastage of resources and time spent; in addition of quality improvement benefits; in which the concepts should uphold the importance of project performance in project activities.

The Crosby theory of quality Management involves various elements that expound on the journey of project quality improvement. Quality management ensures that an organization, product or service is consistent. It has four main components: quality planning, quality assurance, quality control and quality improvement. Quality management is focused not only on product and service quality, but also on the means to achieve it. Quality management, therefore, uses quality assurance and control of processes as well as products to achieve more consistent quality. Prevention process is an element in the Crosby theory that acts as a control proactive style of ensuring continuous improvement. The prevention process involves: Planning, analyzing and taking action; represented by the following Crosby (1987) Diagram:

Prevention Process Model

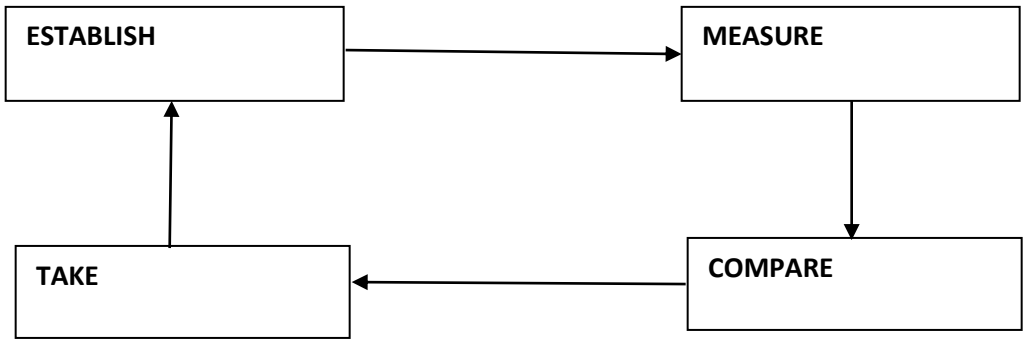

Figure 2.2: Crosby's (1987) prevention process model

2.7.2 Principal Agent Theory

The principal and agent theory emerged in the 1970s from the combined disciplines of economics and institutional theory. Its proponents are theorists Stephen Ross and Barry Mitnick. The theory unpacks a situation in which one of the parties in a building project is better informed than the other; this is recognized as the *principal-agent problem* (*e.g.*, Jäger, 2008). It is also known as agency dilemma, occurs when one person or entity (the "agent") is able to make decisions on behalf of, or that impact, another person or entity (the "principal"). An example is a relationship that includes a project team (agent) and shareholders or client (principal). The literature review shows that the

application of the principal-agent theory in building is extensive. It covers all three issues of project performance, namely: cost, quality and time concerning the relationship between the company and other agents: County officials, Supervisors, managers and support staff. According to Mitnick B. [2006], the principal – agent problem is also known as agency dilemma or the agency problem. It occurs when one entity or person (the 'agent'), is able to make decisions and/or take actions on behalf of, or that impact another person or entity (the 'principal').

This dilemma exists in circumstances where agents are motivated to act in their own best interests, which are contrary to those of their principals, and is an example of moral hazard. Analyzing papers that have been published so far, it can be concluded that most authors have researched on performances of building projects and quality. Several authors have discussed the adverse selection problem and its impact on performance of building projects (Holt *et al.*, 1995; Corvellec and Macheridis, 2010).

However, the literature does not cover the relationship between project managers in building projects, which is central to the research outlined in this paper.

The following diagram illustrates the principal-agent problem:

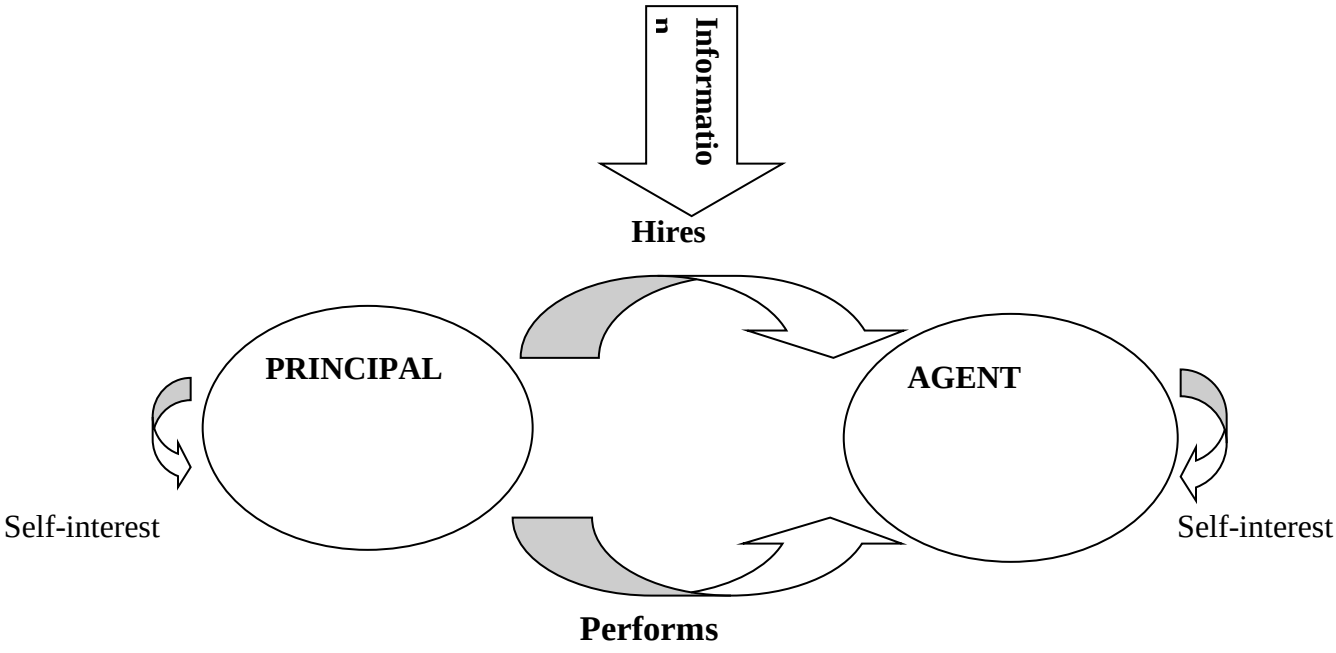

Figure 2.3: Principal-agent problem

2.8 Conceptual framework

A conceptual framework is an analytical tool with several variations and contexts. The conceptual framework of this study included following variables: Planning, control measures, and

management practices. The dependent variable in this study is performance of building projects; the independent variables are: planning, control measures, management skills and the managing organization. The relationship between the dependent and the independent variables is moderated by government policies; and the intervening variables are environmental and social challenges. The following figure 2.4 shows the diagrammatic representation of the relationship between the various variables:

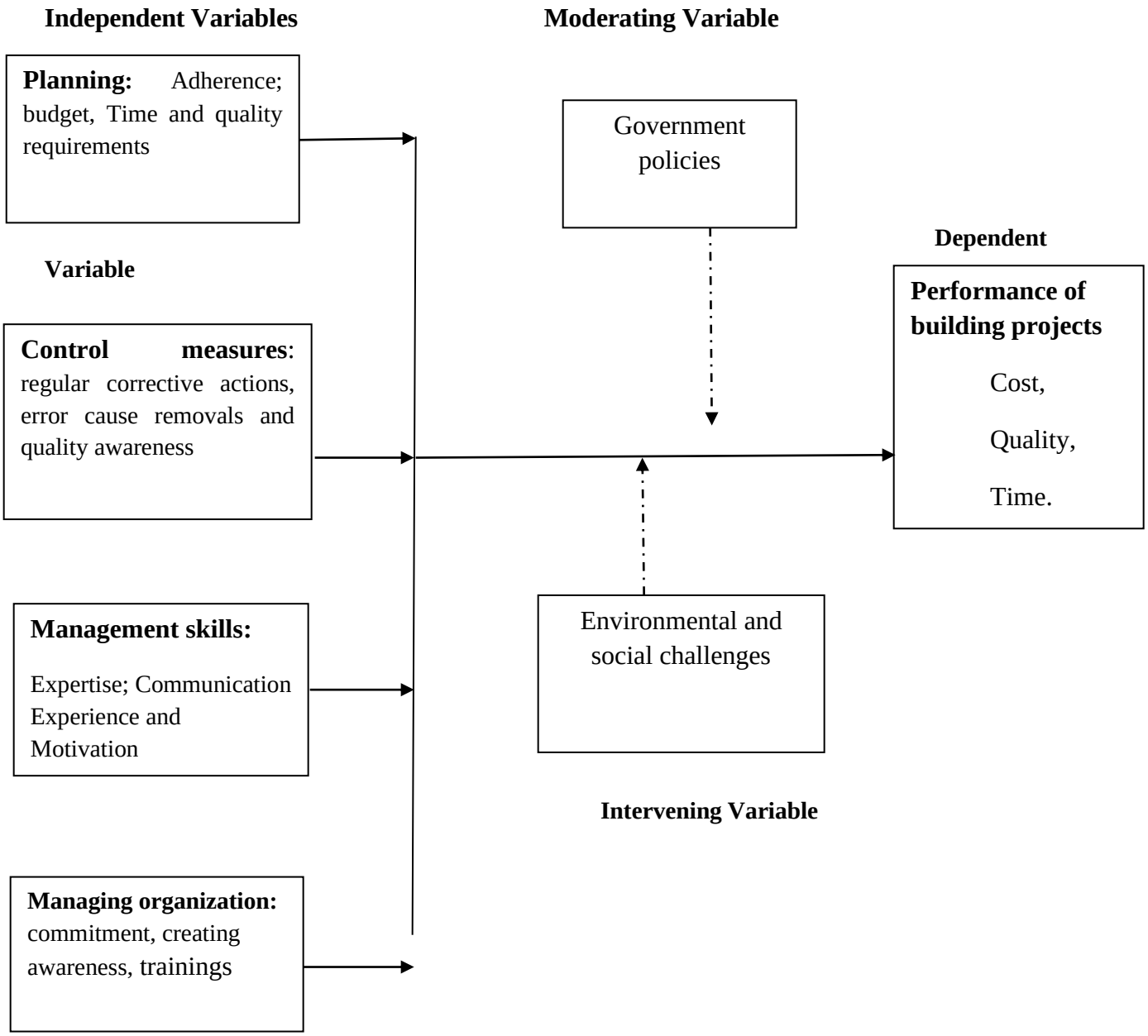

Figure 2.4: Conceptual Framework model showing the interrelationship between the variables

The conceptual framework in Figure 2.4 above demonstrates the relationships that exist between the dependent and independent variables under investigation. The dependent variable is the performance of building projects whose main indicator is the cost of the project, quality of the project after completion and the time taken by the organization to complete the project.

The independent variables that will be investigated to establish their level of influence on the dependent variable are: planning, control measures, management practices, and managing organization and how they influence the performance of building projects. Also shown are the two moderating variables.

2.9 Knowledge gaps

The future characteristics of quality project performance will be determined by customer/client satisfaction, good leadership, quality management, cost effectiveness ad total commitment, Goetsch & Davis [2015]. These factors will prescribe scholars to want to generate new management based knowledge in understanding of the practices. The current management practices' general application varies from one organization to the other. Total quality management provides a new dimension to start viewing quality application in projects. There is a gap that exists in the application management practices in the various building companies.

In most developing nations/ economies, there is less scholarly work done with regard to investigating/ interrogating materials on management practices as well as readiness to adopt quality management models for ultimate performance of building projects. Much of what these nations are doing, is copying the developed nations quality management system based models and applying them without interrogating the readiness, training needs, and capacities' of the implementers; both at individual and organization levels. This can explain the challenges experienced in implementation of projects, having applied similar management practices and hatching different results.

Project performance is considered to be tied to project success and this also is associated with project objectives. Project performance is therefore measured using certain criteria developed based on the project objectives. Project performance has been measured with several dimensions such as: Cost, time, quality, benefit to end users, benefit to national infrastructure, Environmental impact, health and safety requirements etc. However, time, cost and quality have been selected as the criteria for measuring project performance. These are considered to be the overarching criteria for assessing project performance. Most of the management practices' scholarly materials are on the managing

organizations and management skills. This justifies the need to focus on application of these practices through: training, influence, motivation and increase of control measures to boost quality awareness and ensure quality assurance levels remain relevant in the future.

2.10 Summary of Literature Review

The literature reviewed revealed that, instances where management practices have been utilized, the performance of projects being implemented has improved with regard to cost, time and quality. This gives a perspective on how projects implementation can be improved in the private building companies. Organization context is a factor that determines the environment which the project is implemented. The internal and external factors of the building organization, coupled with interested groups/ stakeholders, determines implementation of quality building projects, by either reducing or escalating barriers of quality improvement. Main findings from the literature include the fact that project management practices involve carrying out the day-to-day management activities and decisions to meet set project objectives. These practices may vary from organization to organization. Optimum practices depend on the level of performance of the outcomes realized. This necessitates finding out of the relationship between management practices and project performance.

Moreover, to ensure that all the variables are understood by employees/ project implementers and the building companies/ organizations; we require training. Training positively impacts both the theoretical and practical understanding of management practices.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This study aims to examine the influence of management practices on building projects in Kenya with a focus on Nakuru County. This chapter discusses the method used to carry out research study. It entails the research design used in the study; the target population of the study; sample size and sampling technique; research instruments; methods of data collection; data analysis techniques and ethical considerations.

3.2 Research Design

The study adopted a descriptive survey research design. According to Cooper and Schindler (2003), a descriptive study tries to discover answers to who, what, when, where and sometimes how questions. According to Sigmund (2003) research design is a master plan/framework or blue print specifying the methods and procedures for collecting and analyzing the needed information. This research falls in the influences of management practices on the building projects in Kenya. The study aimed at describing in details the various instruments used to analyze dependent and independent variables.

The reason as to why descriptive survey design was used in the study is because it involves facts findings and solutions to significant problems. Descriptive study was also applied for the literature reviews and case studies in order to depict a clear picture of the related theories about influences of management practices on building projects. According to Orotho [2005] descriptive survey designs are very useful in preliminary and explanatory studies to allow researchers gather facts and interpret them for clarification.

3.3 Target Population

Cooper and Schindler (2003) define population as the total collection of elements about which the researcher intends to make inferences. Inferential research allows us to make inferences or predictions from the sample data gathered and analyzed [Stephanie, 2018]. The target population was 85 persons who comprised of 3 the managers of selected companies, 15 Project Managers, 10 County Officials, 7 NCA officials and 53 support staff of the selected companies in the building projects. Mugenda & Mugenda [2008] refers to population as any given group of individuals who have one or more characteristics in common that are of interest to all researchers.

3.4 Sampling Procedure and Sample Size

Stratified Random Sampling and Purposive sampling method was applied in arriving at the sample size. A sample is a representative part of a larger group. A sample according to Mugenga and Mugenda [1999] is a smaller group obtained from the accessible population. The purpose of sampling is to secure a representative group which will enable the researcher gain information about a population. Under stratified random sampling the total population was divided into subgroups or strata each of which were then treated like a simple random sample. This ensured that any staff that qualified to be selected and was available at the time of data collection stood an equal chance of being selected. Stratified sampling was used because the population had heterogeneous groups namely: project managers, County officials, National Construction Authority, and Support staff. Gay [1976] observes that a sample size of 10% is considered minimum for large populations and 20% for small populations. The sample size was 15 Project Managers, 10 County Officials, 7 NCA officials and 53 support staff of the selected companies

3.5 Data collection instruments

Both primary and secondary sources were captured during the study. The primary data was captured using the self-administered questionnaires to all the respondents while the secondary sources was captured using the documented data in form of successful projects that has been completed.

Observation schedule was essential in order to obtain the observable data. The observation schedule was a coding sheet that was filled out by the researcher during a structured observation. Observations were coded into manageable pieces of information, which later were aggregated into usable, quantifiable data. The instrument was objective, in that the researcher observed the behavior than relying on the self-reported as a basis of data collection.

The researcher administered questionnaires in order to save on time when respondents were requested to fill them and this enabled data to be processed quicker and easier. Questions were used to guide the respondent by providing a focused feedback to boost the success of study. Both structured and non-structured questions were used in the questionnaire. The use of questionnaires reduced the researcher's biases which would have resulted from personal characteristics of interviews (Kothari, 2004). The respondents had adequate time to fill the questions, and also it was not necessary for the respondents to indicate their names, they were most likely to give honest answers. The findings of the questionnaires complimented interpretation of data from the observation schedule.

Interview schedules were used; this is the face to face conversation between the researcher and interviewers. Qualitative data was obtained by conducting in-depth oral interviews to identified informants. The researcher got the chance to ask questions and receive feedback immediately. This supplemented the quantitative data that was gathered and strengthened its interpretation. An in-depth interview guide was developed using unstructured questions to get information from the respondents. The interview guide was based on the specific objectives as set out in the study. The key informants were purposively selected based on their personal and professional knowledge of building projects.

3.5.1 Piloting of the Study

Piloting was applied in this study. Piloting involves the presenting of research instruments. The researcher came up with a sample of a questionnaire that was used to collect the data, gave them to his friends to have a check on it so that they would give opinion about its validity. This was done before actual research to test on the data collection instrument; these ensured the instruments were suitable to record research information.

3.5.2 Validity of the instruments

Mugenda &Mugenda (1999) says that validity is the degree to which results obtained from the analysis of the data actually represents the phenomenon under study. He further says that validity is the accuracy and meaningfulness of influences which are based on research. Validity according to Gakuu & Kidombo [2011] is the degree to which the research instrument measure what it claims to measure; how truthful the research results are. The researcher used a wide-range of research for the secondary data and content validity of the instrument was improved by use of expert judgement. The researcher believed that with the help of individuals who have a lot of experience in building industry was considered as validation. A comprehensive analysis was made with the help of both practical and theoretical knowledge. With the guidance of the supervisor; who is an expert in research; the instrument will valid.

3.5.3 Reliability of the instruments

Reliability is a way of assessing quality of the research instrument used in data collection to find out if it produces stable and consistent results, [Phelan & Wren 2006]. An example given is the use of the split-half reliability technique. A standardized questionnaire about the influences of management practices on building projects would be prepared in order to avoid the threat of observer bias. When conducting the semi-structured interviews with the respondent from the building industry and considering the complexity of the propositions, the researcher explained to them to make sure

each respondent understood what was meant by each preposition. The researcher explained the prepositions based on their understanding from the contemporary literature and their own experience. However the researcher did not guarantee that all respondents will understand the variables in the same way. Furthermore, the research assumed that the respondents had different levels of professional/industrial knowledge and may have different levels of ability to understand English. The researcher believed that this would be a crucial factor for understanding the variables in the same way as the researcher.

3.6 Data Collection Procedures

Both quantitative and qualitative techniques were used in the study consisting of group observations, interviews, and surveys to gather information. The collection was carried out by self-administered structured questionnaires by the researcher to the various strata. These generated primary data that was used in this study. The researcher seeked to acquire relevant permits from the companies'; agencies and relevant bodies. After acquiring the permits and authorization letter from the University, the researcher proceeded to administer the questionnaires'.

3.7 Data analysis Techniques

The data that was gathered on the sampled respondents was thoroughly examined and analyzed with the help of Microsoft Excel and Statistical Package for Social Scientists (SPSS) software. Tables, charts and descriptive explanations were employed to illustrate the data that was collected from the field to make the research findings more meaningful. . The data collected by the various instruments was thoroughly reviewed and checked for completeness and comprehensibility. This involved descriptive statistics to describe or summarize the information and transform raw data to understandable and interpretable information. The findings were then interpreted, and presented, in line with the objectives of the study.

3.8 Operationalization of variables

Mugenda and Mugenda [2003] say that operationalization is defining concepts, making them measurable by looking at their behavioral dimensions, indicators and properties denoted by their same concepts to make it measurable and observable.

The table below lists the definition of variable as will be used in the research.

Table 3.1

Objective	Variable (IV)	Indicator(s)	Measurement scale	Data Collection	Data Analysis
Influence of management practices on performance of building projects	planning	Adherences ,budget, time and quality requirements	Nominal/ Ordinal Likert scale	Questionnaire	Descriptive statistics.
Influence of control measures on building projects	Control measures	Error cause removals, quality awareness, corrective actions	Ordinal Nominal	Questionnaire	Descriptive statistics.
Influence of management skills on building project	Management practices	Commitment, creating awareness	Nominal/ Ordinal	Questionnaire	Descriptive
establish whether performance of project differ in relation to the managing organization of building projects	Managing organization	Skills, Expertise, experience	Nominal/ Ordinal	Questionnaire	Descriptive
Correlation of the research objectives			Inf.Statistics		

3.9 Ethical considerations

To ensure that high ethical and integrity standards are upheld the researcher obtained a research permit to carry the research from the relevant authorities. When dealing with respondents the researcher ensured confidentiality. This means the information given by the respondents was kept confidential. In addition voluntary and informed consent from the respondents was sought to ensure that they willingly participated in the research. After completion of research, findings will be disseminated without cancelling or changing them. The researcher also acknowledges all literature cited in the study to avoid cases of plagiarism.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.1. Introduction

This chapter focused on the data presentation, analysis and discussion and the four groups of respondent who were the managers, project managers, county officials and support staff .This chapter also seeks to present the discussions on the analysis of the data generated from the study. This is to establish if the results support an existing knowledge on the subject matter of the study or provide a new knowledge and ways of improving upon the already existing influence of management practices on performance of building projects in Kenya and specifically Nakuru County.

4.2. Response Rate

The general distribution pattern of the questionnaires was as follows: 3 questionnaires were distributed to the managers, 15 were given to the project managers, 10 were given to the County officials and 60 questionnaires were given to the support staff of the selected company. Of the 3 questionnaires given to the company managers 2 were retrieved; out of 15 given to the project managers 10 were retrieved while out of the 10 questionnaires to the county officials 8 were retrieved, whereas of the 60 given to the support staff 46 were retrieved. In all, 66 questionnaires were retrieved from respondents. The retrieval rate for the questionnaires used in the study was 75% and this could be seen as worthwhile given the reluctance of some respondents to respond to questionnaire on a study like this. From the retrieved questionnaires 20 were picked for data analysis

4.3. Demographic Characteristics of the Respondents

The researcher sought to obtain information on the characteristics of the respondents, with regards to gender, age, work experience, education level and position/ specialization.

4.3.1 Respondents Gender

According to the analysis it was evident that the number of male preceded the number of female. Acker, (2006) observed that gender equality was very important as a trait as it can be used to influence decision making in the company. A gender sensitive institution provides conducive

working environment where the management is supposed to interact with other colleagues of the opposite gender in pursuit of excellence and achievement of set targets.

Table 4.1 Respondents Gender

		Frequency	Percent
Valid	Male	13	**65.0**
	Female	7	**35.0**
	Total	**20**	**100.0**

4.3.2 Respondents Age

The respondents were required to indicate their age where the study findings indicated that majority (34.6%) indicated that their age bracket was between 31 and 40 years. Analysis of findings also indicated that 23.1 % of the respondents were between 41 and 50 years of age. 23.1% indicated that respondents were between 21 and 30 years of age while 19.2% were between 51 and 60 years of age. Jenster & Hussey (2001) in a study of Determining Strategic Capability in organizations associated age with employee efficiency in service delivery where they indicated that there is a positive correlation between age and employee performance. The study postulated that older an employee performance well to a certain age where performance would start declining. The finding therefore implies that the respondents were old enough to provide valuable responses that pertain to influence of management practices on performance of building projects in Kenya and specifically Wellsprings Construction Company in Nakuru County. This fact is further reinforced by the fact that some of the respondents had stayed in the building and construction industry for long hence conversant with performances of building projects

Table 4.2: Respondents Age

		Frequency	Percent
Valid	21-30	5	**23.1**
	31-40	7	**34.6**
	41-50	5	**23.1**
	51-60	3	**19.2**
	Total	**20**	**100.0**

4.3.3 Work experience

From the analyzed data, 3.85 % of the respondents had more than 10 years of working experience as compared to 57.7 % who indicated they had less than 10 years working experience in building projects however 38.5% had a an experience of between 1 and 10 years

Table 4:3 work experiences

		Frequency	Percent
Valid	Less 1	11	57.7
	1-10	8	38.5
	Above 10	1	3.85
	Total	**20**	**100.0**

4.3.4 Level of education

From the analyzed data, 20 % of the respondents had Diploma qualifications, 15 % were under graduates, and 15.4% of the respondents had Masters Degree while a significant 23.1% had no academic qualifications.

Table 4.4 Level of education

		Frequency	Percent
Valid	Diploma	4	20.0
	Under graduate	3	15.0
	Masters	1	5.0
	Others	12	60.0
	Total	20	100.0

4.3.5 Respondent's position

From the analyzed data, 5 % of the respondents were Managers, 5% were the project managers, and 15% were county officials while 75% were support staff of the company. This implied that most of the respondents despite their positions had much influence on the performance of a building project.

Table 4.5: Respondent's Position

Position

		Frequency	Percent
Valid	Manager	1	5.0
	Project Manager	1	5.0
	County Officials	3	15.0
	Support staff	15	75.0
	Total	20	100.0

4.4 Influence of planning on management practices

The study sought to establish the influences of planning on management practices, the findings revealed that 50% of the respondents agreed that planning is key in building projects, it influences the outcomes and impacts positively towards management practices.

Table 4.6: Influence of Planning

Frequencies

		Frequency	Percent
Valid	1.20	2	10.0
	1.80	1	5.0
	2.20	10	50.0
	2.40	4	20.0
	2.60	3	15.0
	Total	**20**	**100.0**

4.5 Influence of control measures on project performances

From the research, 20% of the respondents strongly agreed that control measures has the ability of contributing to project success, the study also reveals that control measures eases the implementation of a management practice as shown by 10% of the respondents. In addition, the respondents agreed that control measures paves way for winning subsequent jobs from client as shown by 45%. Finally 25% respondents strongly disagreed control practice used accelerates achievement of client's goals. This implied that most of the respondents agreed with the statements about the control measures used are relevant towards influencing the performance of a building project.

Table 4.7 Control measures

		Frequency	Percent
Valid		4	20.0
	1.75	2	10.0
	2.00	9	45.0
	2.25	5	25.0
	Total	**20**	**100.0**

4.6 Influence of management skills on a building project

The obtained performance differences between some paired organizations as well as the lack of difference in performance of some paired organization have all been observed to have influences from certain management practices. A regression analysis was performed, using the stepwise method, to determine the management practices that significantly affect performance of the building projects within the selected companies. Table 4.7 the regression has been run at a α-significance level of 0.05.

The Beta coefficients give an indication of the contribution of each of the significant management practices, the significant independent variables, in a model. A model is developed for the organization. The significance values denoted by (Sig.) are all less than 0.05, the significance level at which the regression was run. And this is what indicates that they have significant effect on the individual dependent variables. The adjusted R-square value also shows the percentage of variation of a dependent variable that the model explains.

Table 4.8 Regression Analysis of management practice (Y_1) on building project:

Variable	***Management skill***	***Beta***	***Sig.***	***Adjusted R-square of model***
X_{41}	Ability to accelerate achievement of set project objective	0.843094	1.87E-05	0.847

X_{45}	Consultants ease to carry out management practices	0.287525	0.003805
X_{10}	Consultant and contractor being familiar with management practices	-0.17349	0.0191
X_{23}	Ability of the management practice to facilitate clients own goal.	0.141051	0.041205

4.7 Quality performance of a project

The performance of the building projects, as already indicated, is measured in light of the 3 criteria; time cost and quality. Quality performance of a building projects were measured by indices respectively on an 11-point scale ranging from 0.5 to 1.5. The performance was subjectively measured by each respondent indicating; in his or her own estimation, the extent to which the quality of the project deviated from what was expected; the margin of deviation being in percentage. The formula and indices are as indicated below

Table 4.9– Quality Performance (Y_3) Index project performance

Status Achieved	**Below expectation by margin of**					**As expected**	**Above expectation by margin of**				
Margin	50% and above	40%	30%	20%	10%		10%	20%	30%	40%	50% and above
Index	0.5 And below	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.3	1.4	1.5 and above

Table 4.10 Quality performance trend of projects

Quality performance index	Number of projects obtained	Percentage	Overall trend performances
0.9			Below expectation
1.0	10	41.67%	As expected
1.1	4	16.7%	Above expectations
1.2	10	41.67%	
1.5			
Total	**24**	**100**	
Mean index	**1.10**		

From the data analyzed quality performance of most the projects is above expectations. This may be due to the inclination of clients towards attaining projects of satisfactory quality. This is an indication that whilst time and cost objective can be compromised on, quality is difficult to sacrifice. The mean indices obtained play significant role in the determination of the quality performance of a project.

4.8 Project performance

From the research, most of the respondents agreed that planning, control measures, management skills and quality performance influences the performance of a building project within the selected companies in Nakuru County.

Table 4.11 Descriptive analysis

		Planning	Control measures	Management skills	quality
Pearson Correlation	Planning	1.000			
	Control measures	.070	1.000		
	Management skills	.147	.454	1.000	
	Quality	.226	.046	-.246	1.000
Sig. (1-tailed)	Planning	.	.367	.237	.134
	Control Measures	.367	.	.010	.411
	Management skills	.237	.010	.	.112
	Quality	.134	.411	.112	.
N	Planning	20	20	20	20
	Control Measures	20	20	20	20
	Management skills	20	20	20	20
	Quality	20	20	20	20

CHAPTER FIVE

SUMMARY OF FINDINGS, DISCUSSIONS, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary of the study, the discussions, conclusions and the recommendations comprehensively. The main objective of the study was to study the influence of management practices on performance of building projects in Kenya within Nakuru County. The chapter offers suggestions for further research.

5.2 Summary of Findings

This research was guided by the following objectives: to establish if planning influences management practices on performance of building projects; to examine if control measures influences management practices on performance of building projects; and to assess if management skills influences performance of a building projects undertaken by selected companies in Nakuru county. From the data analyzed its evident that the performance of building projects is highly affected by planning, control measures undertaken and levels of management skills used. Majority of the projects undertaken achieved a rate mean index of 1.10 as shown in table 4.10 most of them having being completed as expected.

The study established that the retrieval rate for the questionnaires used in the study was 75%. 65% of the respondents were male, while 35% were female; the number of male preceded the number of female. Acker, (2006) observed that gender equality was very important as a trait as it can be used to influence decision making in the company. Majority of the respondents (34.6%) indicated that their age bracket was between 31 and 40 years. Analysis of findings also indicated that 23.1 % of the respondents were between 41 and 50 years of age. 23.1% indicated that respondents were between 21 and 30 years of age while 19.2% were between 51 and 60 years of age. Jenster & Hussey (2001) in a study of Determining Strategic Capability in organizations associated age with employee efficiency in service delivery where they indicated that there is a positive correlation between age and employee performance.

From the analyzed data, 3.85 % of the respondents had more than 10 years of working experience as compared to 57.7 % who indicated they had less than 10 years working experience in building projects however 38.5% had a an experience of between 1 and 10 years. 5 % of the respondents were Managers, 5% were the project managers, and 15% were senior officials while 75% were support staff. This implied that most of the respondents despite their positions had much influence on the performance of a building project. The study revealed that 50% of the respondents agreed that planning is key in building projects; it influences the outcomes and impacts positively towards management practices.

The study revealed that 20% of the respondents strongly agreed that control measures has the ability of contributing to project success, the study also reveals that control measures eases the implementation of a management practice as shown by 10% of the respondents. In addition, the respondents agreed that control measures paves way for winning subsequent jobs from client as shown by 45%. A regression analysis was performed, using the stepwise method, to determine the management practices that significantly affect performance of the building projects within the selected companies; the regression has been run at a α-significance level of 0.05. The Beta coefficients gave an indication of the contribution of each of the significant management practices. The significance values were all less than 0.05.

Table 4.7 indicates the identified project management practices prevailing in the organization. Management practices such as: Contractor pre-financing works with money either than advance mobilizations provided by the client; obtaining project funds quarterly; and monitoring progress of works jointly between project consultant and local clients in conformance with specially developed project monitoring progress reporting format were peculiar to the organizations respectively..
From the interview, all the practices possessed some amount of potential effect on project time, cost and quality objectives.

A trend of project performance was obtained from analyzing the quality performance of the projects in the organization. Satisfaction with the general quality of the projects was found to be high.

Not all the significant control measures have positive relationship with the performance of the projects within the organization. However all the significant controls were found to exhibit positive relationship towards the performance of the building projects. A control measure of selecting

contractors through pre-qualification largely based on previous working experience with client was observed to have significant influence on the outcome of the project.

5.3 Conclusions

Based on the findings, it can be concluded that planning, control measures, and management skills/ organization influence the performance of building projects.

Based on the findings, it can be concluded that in building projects; management skill applied is one of the factors influencing project performance. Tyson and York (1996) have noted the diversity of skills in which corporate control measures has been featured, including high trust work relations, empowerment and employee involvement, innovative team working organizational learning and transformational leadership.

In addition, the respondents strongly agreed that quality is a factors affecting project performance. Mullins (2007) states that the philosophy of extrinsic rewards and self satisfaction when a set objective has been achieved. This boosts the innovation and creativity of the workers and the profile of the company once a set objective has been achieved.

Most of respondents strongly agreed that control measures were a factor affecting project performances. According to Yeung (2008), control measures can be measured using three dimensional settings: goal orientation, relationship dimensions and system maintenance.

5.4 Recommendations

The study was to determine influence of management practices on performance of building projects in Nakuru County. Based on the findings, recommendations made were: The function of identifying projects through systematic procedures should be encouraged on every individual project. This should not be left in the hands of only the end users of a project.

A linkage between personnel e.g. managers, Project managers county officials and the support staff should be emphasized and always made to function in order to facilitate effective monitoring of projects. Failure of involvement of all the stakeholders in all the stages of the project will lead to poor project performance/ sustainability. Therefore there is need for increased participation.

There is also need to strengthen monitoring and evaluation of projects. This can be done through evaluation initiatives and systems; provision of trainings and budgetary allocation to assist in

continuous monitoring and evaluation; including post implementation review which should be a continuous and never ending process; this determines the project success rate.

5.5 Suggestions for further studies

1. The objective of the study was to study the influence of management practices on performance of building projects in Kenya. Further research should also be conducted to assess the challenge affecting building projects by construction companies in the country with reference to Wellsprings Construction Company, Nakuru County.

2. For further studies, it is recommended that more performance metrics be developed in other research works (like: benefit to end users, benefit to national infrastructure etc.) be included for measurement. With this, the projects should not necessarily be client-based. This should lead to the development of a predictive model for determining management practices that promote increased project performance as well as those that contribute to poor project performance.

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APPENDICES

APPENDIX I : Letter of Transmittal

DANIEL KIGAI MUIGAI

P. O. BOX 1640-20100

NAKURU

Dear Sir/ Madam

I trust you are well.

I am a student at the University of Nairobi pursuing Masters of Arts Degree in Project Planning and Management. As a requirement, I am undertaking my research project work to satisfy the University requirements. The research project is titled : 'Influence of Management Practices on Performance of Building Projects. A case of Private Building Companies in Nakuru Town.'

I am writing to request permission to conduct research among project managers and support staff within the selected companies. The survey will utilize research questionnaires for data gathering. After completion of the study, I commit to sharing the findings with your office.

I look forward to your response and support.

Yours sincerely

Daniel Kigai Muigai.

APPENDIX II : Research questionnaire

Dear Sir/ Madam,

I am Daniel M. Kigai a Master's Degree student at the University of Nairobi collecting data on a research topic titled 'Influence of management practices on building projects.' You have been identified as a resourceful person in regard to my attainment of the Award of a Master's degree in Project Planning and Management of the University of Nairobi. The data provided will be treated with utmost confidentiality and will only serve as an input to my research topic. Please spare approximately five minutes to fill the questionnaire. Information obtained from you will be used for academic purposes only.

Signature……

Daniel Kigai

SECTION 1: Demographic information

This section is intended to collect data on your personality as a respondent. This data will assist in ensuring that intended respondents are incorporated in my research. Do not write your name.

Kindly put a tick (√) where applicable.

1. What is your gender:
   Male ( ) Female ( )
2. What is your age:
   21-30 ( ) 31-40 ( ) 41-50( ) 51-60 ( ) Above 60 ( )
3. What is your working experience in the building industry:
   Less than 1 year ( ) 1 year -10 years ( ) above 10 years ( )
4. What is the level of education attained:
   Diploma ( ) Under graduate ( ) Masters Graduate ( ) others ( )

5. What is the approximate age of this Organization?

   Below 5 years ( ) between 5 – 10 years ( ) above 10 years ( )

6. What is your position:

   Manager ( ) Supervisor ( ) County official ( ) Support staff ( )

SECTION 2: Influence of planning on management practices

In this section kindly consider the statements that follow regarding the impact of planning on a building project. Tick (√) the box which indicates how much you agree or disagree with them. The scale is of 1 – 5 (5 being strongly agree…….1 being strongly disagree). This section has 5 statements.

KEY: 5= Strongly Agree (SA), 4= Agree (A), 3= Not Sure (NS), 2= Disagree (D), 1= Strongly Disagree (SD)

	STATEMENT	**5 SA**	**4 A**	**3 NS**	**2 D**	**1 SD**
1	Planning is key in the building industry					
2	Planning influences the outcome of a project					
3	Planning impacts positively towards management practices					
4	Planning informs the day to day practice					
5	All stakeholders are involved in the planning process					
6	Plans made are adhered to the letter					

SECTION 3: Influence of control measures on management practices

This section contains five questions. This information will be important in determining whether managements' controls put in influences projects' outcome.

In your understanding what do you think are the influences of control measures on management practices (*Please tick* (√) *as applicable)*

1. It has the ability of contributing to project success ( )
2. Policies put in place when practiced ensure projects are implemented with ease ( )
3. Carrying out a control measure paves way for winning subsequent jobs from clients ( )
4. The control practice used accelerates achievement of client's goals ( )
5. Please state if other reason ……

SECTION 4: Influence of a management skills on a building project

This section entails four questions. This information will assist to gauge performance of projects with regard to practices employed. (*Please tick* (√) *as many as are applicable)*

Why does the performance of a project differ in relation to the policies applied?

(a) Due to ability of the applied skill to accelerate achievement of set project objectives ( )

(b) Due to the ease of applying the skill on the management practices ( )

(c) Due to consultant and contractor being commonly familiar with the skill applied ( )

(d) Kindly state if other reason ……...

SECTION 5: Performance of projects.

This section contains one question to be answered in prose. It will be significant in assessing application of management practices on various projects.

Why would you recommend that the management practice carried out in a given project executed within your organization be generally adopted for management of projects of similar nature within other organizations?

Please state

.....

.....

.....

.....

.....

.....

.....

Questionnaire for senior managers:

SECTION 6: Quality performance of a project

This section is for project managers. It contains a table to be ticked (√) agreeably. This information will be helpful in determining success rate of projects.

From the table below, kindly indicate the quality performance of the selected project by ticking its corresponding quality performance margin given.

The quality performance margin is, in your own estimation, the extent to which the quality of the project deviated from what was expected.

Status achieved	Below expectation by margin of					As expected	Above expectation by margin of				
Margin	50% and above	40%	30%	20%	10%		10%	20%	30%	40%	50% and above
Tick											

Thank you very much.

APPENDIX III: UNIVERSITY RESEARCH AUTHORIZATION LETTER

UNIVERSITY OF NAIROBI

Open, Distance & e-Learning Campus
SCHOOL OF OPEN AND DISTANCE LEARNING
DEPARTMENT OF OPEN AND DISTANCE LEARNING
NAKURU LEARNING CENTRE

Tel 051 – 2210863
Our Ref: *UoN/ODeL/NKRLC/1/12*

P. O Box 1120, Nakuru
19 May 2017

To whom it may concern:

RE: DANIEL KIGAI MUIGAI L50/78856/2015

The above named is a student of the University of Nairobi at Nakuru Extra-Mural Centre Pursuing Masters of Arts Project Planning and Management.

Part of the course requirement is that students must undertake a research project during their course of study. He has now been released to undertake the same and has identified your institution for the purpose of data collection on "Influence Of Management Practices On Performance Of Building Projects In Kenya, A Case Of Private Building Companies In Nakuru Town ,Nakuru County".

The information obtained will strictly be used for the purpose of the study.

For that reason, I am writing this, requesting you to assist him.

NAKURU EXTRA-MURAL CENTRE
RESIDENT LECTURER
P.O. Box 1120
NAKURU
UNIVERSITY OF NAIROBI

Yours Faithfully,

Muino Mneke
Centre Coordinator
Nakuru Learning Centre

APPENDIX IV: RESEARCH PERMIT

REPUBLIC OF KENYA

National Commission for Science, Technology and Innovation

RESEARCH CLEARANCE PERMIT

Serial No.A 14775

CONDITIONS: see back page

CONDITIONS

1. The Licence is valid for the proposed research, research site specified period.
2. Both the Licence and any rights thereunder are non-transferable.
3. Upon request of the Commission, the Licensee shall submit a progress report.
4. The Licensee shall report to the County Director of Education and County Governor in the area of research before commencement of the research.
5. Excavation, filming and collection of specimens are subject to further permissions from relevant Government agencies.
6. This Licence does not give authority to transfer research materials.
7. The Licensee shall submit two (2) hard copies and upload a soft copy of their final report.
8. The Commission reserves the right to modify the conditions of this Licence including its cancellation without prior notice.

Permit No : NACOSTI/P/17/82509/17900

Date Of Issue : 7th July,2017

Fee Recieved :Ksh 1000

THIS IS TO CERTIFY THAT:

MR. *DANIEL KIGAI MUIGAI*

of UNIVERSITY OF NAIROBI, 1640-20100

Nakuru,has been permitted to conduct

research in *Nakuru County*

on the topic: *INFLUENCE OF MANAGEMENT PRACTICES ON PERFORMANCE OF BUILDING PROJECTS IN KENYA. A CASE OF PRIVATE BUILDING COMPANIES IN NAKURU TOWN, NAKURU COUNTY.*

for the period ending:

6th July,2018

.....

Applicant's Signature

.....

Director General

National Commission for Science, Technology & Innovation

APPENDIX V: TURN IT IN REPORT

Turnitin Originality Report

INFLUENCE OF MANAGEMENT PRACTICES ON PERFORMANCE OF BUILDING PROJECTS IN KENYA. A CASE OF WELLSPRING PRIVATE CONSTRUCTION COMPANY IN NAKURU TOWN, NAKURU COUNTY by Daniel Muigai

From Project Management (Arts)

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6

< 1% match (student papers from 28-Nov-2012)

Submitted to University of Greenwich on 2012-11-28
7

APPENDIX VI: NACOSTI RESEARCH AUTHORIZATION LETTER

NATIONAL COMMISSION FORSCIENCE, TECHNOLOGY ANDINNOVATION

Telephone:+254-20-2213471, 2241349,3310571,2219420
Fax: +254-20-318245,318249
Email: dg@nacosti.go.ke
Website: www.nacosti.go.ke
When replying please quote

9th Floor, Utalii House
Uhuru Highway
P.O. Box 30623-00100
NAIROBI-KENYA

Ref. No. **NACOSTI/P/17/82509/17900**

Date: **7th July, 2017**

Daniel Kigai Muigai
University of Nairobi
P.O. Box 30197-00100
NAIROBI.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on ***"Influence of management practices on performance of building projects in Kenya. A case of private building companies in Nakuru Town, Nakuru County,"*** I am pleased to inform you that you have been authorized to undertake research in **Nakuru County** for the period ending **6th July, 2018.**

You are advised to report to **the County Commissioner and the County Director of Education, Nakuru County** before embarking on the research project.

On completion of the research, you are expected to submit **two hard copies and one soft copy in pdf** of the research report/thesis to our office.

GODFREY P. KALERWA MSc., MBA, MKIM
FOR: DIRECTOR-GENERAL/CEO

Copy to:

The County Commissioner
Nakuru County.

The County Director of Education
Nakuru County.