ORGANIZATIONAL PROJECT TECHNIQUES AND PERFORMANCE OF REAL ESTATE DEVELOPMENT PROJECTS IN NAIROBI CITY COUNTY, KENYA

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A Research Project Submitted to the School of Business, Economics and Tourism in Partial Fulfilment of the Requirements for the Award of Degree of Master of Business Administration (Project Management), Kenyatta University

NOVEMBER 2022
DECLARATION

I certify that this study is my unique and personal work and it has not been submitted or presented in any other institution for an award of an academic certificate. There is no single section or part that should be copied without permission from the school of graduate of Kenyatta University.

Signature -------------------------- Date------------------------

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I have supervised the writing of this research and approve it for submission as a student’s Master’s project.

Signature-------------------------- Date------------------------

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DEDICATION

This project is dedicated to my spouse Dennis Munene, my children, Ellyse and Ian, my siblings and my parents for their support and inspiration to further my studies.
ACKNOWLEDGEMENT

Working on a first-time Master's project is usually a tough learning process for most people. For this reason, I wish first to appreciate God's grace and favor for bringing me this far.

I acknowledge the wise counsel that I have received from my supervisor, MS. Gladys Kimutai. She has been very patient with me and critiqued my work to make it better. Her fruitful remarks and ideas aided me in clarifying lots of my original opinions and create a successful conclusion of this project a reality. Nevertheless, I am accountable for the ultimate format of this research project as well as any errors omissions, and interpretations of faults.

I will not forget to appreciate the great assistance that I have received from my family. This includes Dennis Munene, my loving husband, and greatest supporter, as well as my child Ellyse Munene. May God's love and kindness, be upon you always.

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The research has also been made successful by the efforts of dedicated and humble respondents from Nairobi County government who participated in answering the research questionnaires. May Almighty God bless and open more prosperous opportunities for you.

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May God sanctify you all.
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LIST OF ABBREVIATIONS

APM  Association for Project Management.

CBD  Central Business District.

EVM  Earned Value Management.

FFC  Financial and Fiscal Commission.

GDP  Gross Domestic Product.

KPDA Kenya Property Developers Association.

KPI  Key Performance Indicators.

NACOSTI National Commission for Science, Technology, and Innovation

OGC  Office of Government Commerce.

PLC  Project Life Cycle.

PM  Project Management.

PMBOK Project Management Body of Knowledge.

PMI  Project Management Institute.

SPSS Statistical Package for Social Sciences.

SWOT Strengths, Weaknesses, Opportunities, and Threats.

UNEP United Nations Environmental Programme.
OPERATIONAL DEFINITION OF TERMS

Organizational Project Techniques Strategies such as communication techniques, risk techniques, procurement techniques, quality techniques and human resource techniques that enable organizations to reach excellence in project management.

Project Performance Ongoing assessment of the efficiency and importance of a given project. This entails assessment of project cost, turnaround time and customer satisfaction.

Communication Techniques Mandatory procedures for ensuring prompt and effective production, distribution, storage, assortment, recovery, and disposition of project data ultimately.

Risk Techniques It refers to risk identification, analysing and implementing risk associated factors that may affect an entity.

Quality Techniques Processes and activities are responsible for determining quality procedures and necessary activities that may maintain quality thus leading to project satisfaction.

Procurement Techniques Procedures of identifying needs of a project which can be met to their best by the use of procuring products or services which are outside the organization of the project. Accomplishment should be at the scope definition effort. It weighs between procuring, what to procure, procurement method, and the time to procure.

Human Resource Techniques Practices that plan, staff, organize and manage the project team.
ABSTRACT

The interest of project stakeholders is to have a favourable performance that benefits each individual. Most project managers aim to achieve higher performance in each project with a combination of diverse knowledge and skills that they have acquired from different areas. Most construction projects in Nairobi City County have performed poorly in relation to time and cost, this is according to most reports on the critique of unsuccessful construction projects. At least 70% of the projects in Nairobi have been noted to have been completed late and also affected by other challenges that hamper their performance. However, it is believed that higher performance in a project cannot be achieved without consideration of various organisational techniques such as communication, risk, procurement, human resource and project quality techniques. The purpose of this research was to learn more about the techniques used in real estate development projects and the rates of success associated with those methods. One of the main aims of this research was to analyse the impact of project management practices such project communication, risk management, quality management, procurement, and human resource management on the outcome of a real estate development in Nairobi County. The systems theory, the lean six sigma theory, and Hertzberg's two-factor theory are some of the key concepts that are explored in this article. Each of these hypotheses indicates how the efficiency of a project can be enhanced by paying close attention to the management of both the quality and the human resources at its disposal. The 67 real estate development enterprises that had already begun operations in Nairobi County by the time this study was conducted were included in the population of interest for the analysis. Participants originated from a variety of real estate enterprises situated within Nairobi County, and census sampling was used to recruit them for the study. 67 real estate project specialists in Nairobi City County provided responses to a predefined questionnaire for this descriptive quantitative study. It was a quantitative and descriptive in nature. Throughout data collection and analysis, the researcher was cognizant of a variety of ethical considerations. These considerations included those relating to the protection of the participants' right to privacy as well as the information they gave. As a result of the fact that its reliability, as judged by Cronbach's alpha, was established to be 0.70, the questionnaire was determined to be an appropriate instrument for this inquiry. The investigator was able to determine the mean, the standard deviation, and a variety of other inferential statistics that can explain the data with the assistance of the statistical software SPSS. Tables, graphs, and figures are what we used to lay out the information for everyone to see. It was found out that the strategies that were implemented for communication, risk management, project quality, procurement, and human resource management all had a substantial influence on the level of success that was witnessed in real estate development in Nairobi County. The various communication techniques, risk management, procurement, project quality, and human resource management all showed evidence of having favourable links with one another. Because of this, the success of real estate developments in Nairobi County is relied on a number of aspects, all of which are interconnected with one another in some way. It was suggested that the managers of real estate development projects in Nairobi County put into practise all five of the techniques that were uncovered during the course of the study in order to accomplish the most favourable outcomes.
CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Project performance is defined as the process of creation and implementation of a project as well as managing core aspects of a project and lead to intended results. According to Anantatmula (2015), a project management is concerned with a larger project and each aspect in order to arrive at a quality and increased results as per the stakeholders interests. Therefore, this concept majors entirely with the bigger picture instead of looking a particular issue of a project implementation. The study of Gruden & Stare (2018) states that project performance links a project with the general strategy by identifying key project benefits that would move the company forward. However, Ahmed & Anantatmula (2017) argues that project performance may be achieved through continuous track of the entire project activities and review of completed areas to advance the overall performance.

However, it is essential to differentiate between projects and natural organizational processes. According to Pinto, Dawood & Pinto (2014), a process is defined as unending daily activities, which help organizations operation to produce goods and services. It involves using current methods to integrate efforts repetitively. Therefore, a project is a combination of tasks and activities that work concurrently to accomplish a certain mission within a specified time scope.

Globally, project performance has been viewed differently and in different sectors. According to the study of Sunindijo (2015) in Australia on factors contributing to increased project performance found that the main benefits of having an intention and efforts on increasing the project performance is that it leads to increased knowledge sharing that increases general performance through increased delivery. The study also found that project performance can be achieved through organised team work which relies on similar and unique objectives to achieve the performance of each project. A study carried out by Szatmari et al. (2021) in Netherlands found that attainment of increased performance in a project initiatives competitive advantage thus making an organisation projects to perform well over its competitors thus increased profit margins of the a company. The
study recommended on various techniques such as close management of team and proper stakeholder management in order to achieve an increased performance in a project.

In regional arena, a study steered by Abubakar et al. (2014) in Nigeria established that, a good performance in projects can be achieved through thorough management of employees. The study found that project managers should embark on factors that motivate employees in order to achieve increased performance in their tasks. Furthermore, both intrinsic and extrinsic types of motivation were found to be paramount factors that motivate employees to take up their duties and greatly offer extra efforts to attain maximum benefits. As a result, the study discovered a substantial link between human resource management and project success. Furthermore, Bitamba & An (2020) carried out in Congo discovered that project performance is inclined by factors such as safety management, employee concerns and claims management, quality management, and good communication. According to the study, quality management aids in meeting project criteria, resulting in quality performance.

Steils et al. (2021) study carried out in Morocco stated that a project is a one-off, it has a specific start and completion. It is generally quantified concerning the schedule, estimated costs, and performance necessities. Projects require diverse abilities and skills from all levels of the organization. According to Sobieraj, Metelski & Nowak (2021) study in Poland, a standard definition, a plan is a ‘short-term activity undertaken to achieve unique objectives.’ Project performance, therefore, is the method of meeting organizational objectives by planning, scheduling, and controlling a project. It is crystal clear from these definitions that project management is an aggregation of well-organized processes and activities that result in changes in management (Sobieraj, Metelski and Nowak, 2021).

Projects usually pass through several distinct phases or stages which are collectively known as the project life cycle (PLC). According to Sobieraj, Metelski & Nowak (2021), major phases in the project life-cycle commence at project establishment, preparation, actual implementation, and completion phase. The PLC serves as a guide to developing the plans, deciding on resource allocation, as well as project evaluation (Pinto, Dawood and Pinto, 2014). With the practice of project management, the construction segment has been a key actor in the progression of the Kenyan economy. There is an increasing need to ensure successful completion of the construction
project as was noted by Bryde, Broquetas & Volm (2013). A previous investigation shows that the industry of construction contributes about 18% of the Gross Domestic Product (Banawi and Bilec, 2014).

From a report by the Kenya National Bureau of Statistics in 2013, the building industry grew by 5.5% (Juma, 2014). Macharia & Ngugi (2014) in a study involving Kenyan project noted that this growth came about because of the increase in the price of the building plans which were given a go-ahead. The author further highlights the growth rose to 34.2% to Sh 243.1 billion from Sh 181.1 billion in 2012.

1.1.1 Project Performance

Different project performance scholars advance different perspectives on the evaluation of the project accomplishment as well as influencing factors towards project objectives. Currently, there is little literature on incorporated handling and management of these ideas. However, there is a substantial consensus about the importance to study this in the discipline of project performance practice. Mir & Pinnington (2014) claim that successful project execution may be measured using three constraints: time, cost, and quality (performance). These three factors, also acknowledged as Key Performance Indicators (KPIs), aid in determining whether a development has been successful and executed properly. These three elements, time, cost, and quality, which form the project's primary goals are measured separately to be able to know the extent of their success. The principle of the interdependency model is applied, whereby the performance of one constraint affects the performance of the other. For example, a higher quality project will prime to an escalation in its costs, consequently accumulating the project completion time. Serrador & Turner (2015) in a study, adds to this agreement by noting that successful real estate projects must be timely, within budget, and provide quality (features and functions). If they are not completed on time, they are way above the budget and produce poor quality; these are either failed or challenged projects.

Demirkesen & Ozorhon (2017), performance measurement in any real estate project helps organizations to clearly understand the impact of some decisions/policies towards the success or failure in the past performance and what measures should be applied for future perfections. The following components form an effective performance measurement system: goals that are well-defined and measurable are part of the organizational assignment in the administration and project
levels; various performance actions that can be used in measuring how to achieve a mission well, supervising, and goals of the project; baselines that are established after which proceed to the achievement of goals can be evaluated; data that is perfect, relied upon, and verified; and feedback structures for supporting unremitting growth of the progress, practices, and outcomes of the organization (Radujkovic and Sjekavica, 2017). In addition, the previous studies measured the success of project performance involved the quality, the cost, project scope and customer satisfaction. However, the current study adopted measures such as organisational communication techniques, human resource techniques, procurement techniques, risk techniques and project quality techniques to estimate their impact on projects performance.

1.1.2 Organizational Project Techniques

According to Davies & Brady (2016), an organisation project techniques refers to ways in which managers in a project use to achieve project performance. As per Ihuah et al (2014), the main project techniques involves project communication techniques, quality techniques, human resource techniques, project procurement techniques and risk techniques.

According to Lu et al. (2019), quality project performance can be attained through good communication. In each project, project managers needs to delegate duties, train each person on specific roles and responsibilities and coordinate activities to achieve the best performance of each part of the project. As per Baker (2018), without a communication, its difficult for an organisation account for its milestones and involve its team in day to day operations which require clear guidance. Therefore, since communication is a great ingredient for communication, Kabirifar and Mojtabahadi (2019) suggests that project managers should aim to understand its importance in deciding the performance of a project for desired goals.

Risk technique is the process that entails identification and analysis of factors that may interfere with successful implementation of a project and therefore responding to the factor in the right way (Khameneh, Taheri and Ershadi, 2016). According to Willumsen et al. (2019) risk technique is a part of planning process which includes figuring out what might happen and therefore suggesting possible control and mitigation factors. Furthermore, anything that can impact a project is identified since most of risks become realities thus affecting the performance of a project. As per Jung, Lee and Han (2017), after risk identification, a project manager is able to perform risk
analysis through either qualitative or quantitative and therefore implement a risk monitoring to ensure all identified risks are controlled. However, as per, most of project managers lack considerable and necessary knowledge to manage issues that are associated with risks hence a need to explore the influence of risk techniques on project performance.

De Araujo, Alencar & Miranda's (2017) research says that procurement techniques are the steps that are taken to get the resources needed to finish a project. The study suggests that these partnerships should be actively managed so that the organisation can get the most out of the outside vendors it hires to help it run its business. Cost and time can both make it hard for you to work with vendors. Procurement techniques is a method associated with finding, requisitioning, ordering, advancing, scrutinising, and reconciling goods and services in the most efficient and time-saving way possible (De Araujo, Alencar and Miranda, 2017). But before forming a partnership or buying something, it's important to find out if the goods and services can be gotten from somewhere else. According to the research, the procurement process for a project is mostly based on the raw materials being bought, how long it takes to buy them, and how much it costs. Subsequently, it's the obligation of the procurement supervisor to ascertain a guarantee that the project's methods for getting things done actually help the procurement sector do better.

The research conducted by Ferraris, Erhardt, and Bresciani (2019) indicates that human resource management for projects involves both the planning of and the management of the workforce for a certain project. The majority of the time, individuals are selected to join a team based on the specific skills and responsibilities they bring to the table. From the very beginning of the project, the people working on the assignment, who are commonly mentioned to as the project team, should be included in the making of plans and decisions. Everyone on the team needs to have some emotional investment in the end result. When this is done, there will be an increase in dedication and loyalty to the assignment's objectives. The frequency of individuals on the team and the tasks they are responsible for might change as the project moves forward. During the phases of planning, controlling, and wrapping up the project, the team in charge of project management, which may also be referred to as the core, executive, or leadership team, is answerable to the group in charge of the project and follows the guidance that is provided by that group. In the event that the project is on the more manageable side, the associates of the squad and the assignment manager will be able to distribute the tasks between themselves. The project management team and the project
sponsor work together on a variety of issues, including financial concerns, concerns about the project's scope, and efforts to persuade team members. The staffing strategy, personnel acquisition, staff training, and administration of employees are all tasks that fall under the purview of human resource management for a project.

According to Muszynska (2016), efforts that are plagued by communication issues frequently result in frustration, delays, and conflict in the workplace. Because of this, it is absolutely necessary to make use of effective means of communication in mandate to assure the success of the project. Tools for effective mission performance and administration of communication, as well as communication techniques, are crucial to the achievement of any goal. It is a systematic procedure that is used to facilitate the exchange of numerous data elements between all of the individuals who are participating in a project. This instrument's mission is to confirm that all communications have been delivered to and understood by the individuals who are expected to receive them.

In addition, the study found that communication techniques necessitate the input of stakeholders, both in terms of action and reaction. There are a variety of modes of communication that are utilised in project performance. These modes of communication include interactive modes of communication in addition to push and pull modes of communication. A project manager can effectively communicate information and request feedback from all stakeholders engaged in a given endeavour by utilising any of these channels (Muszynska, 2016). The research also demonstrates that it will be very difficult for the project to even progress without good communication methods. This is because a lack of them (methods) will result in misunderstanding of the project goals and even disagreement among the stakeholders if there isn't enough communication.

1.1.3 Real estate development projects in Nairobi City County, Kenya

Real estate development, serves as an important contributor to a Nation’s economic growth. It also supports the attainment of society’s essential needs. This sector is projected to grow in tandem with the larger building and construction industry, as the global population grows larger, and demand for homes and commercial spaces grows. According to a report by the UNEP in 2014, the
building industry is estimated to subsidize to 10% of the global GDP of USD7.5 trillion (Jadhav, 2016). The report further points out that the industry has provided jobs to over 111 million people.

PwC’s Global Construction 2030 report (2017), projects that by 2030, the output size of the construction structures will rise by 18% (Goubran, 2019). This rise is equivalent to $15.5 trillion. China, United States, and India are at the forefront enjoying a pie of 57% of the total universal growth (Goubran, 2019). However, some report indicates that construction growth in China will slow with a housing fall and the initial housing deterioration output for China ought to be experienced in 2017. Its change over customer services provides chances for advance in recent construction types in social setup, education, and healthcare, not forgetting retail and other consumer end-markets (Goubran, 2019). The construction industry in Kenya has recorded exponential growth over the last couple of years. There is a continuous trend since governments and private developers are increasing their investment in infrastructure and housing (Goubran, 2019).

National Construction Authority highlighted that there were 30,000 contractors registered to operate in Kenya in 2015, and licensed construction projects valued at Ksh.450 billion (Muiruri, 2016). Individual contracts have increased in size and value, necessitating more sophisticated project techniques and increased mechanization of the construction process. All this has increased the demand for professional project performance services, and more so, the need to embrace replicable project performance models that provide a predictable path and framework that can enable the developers to achieve successful implementation of the projects.

In contrast to this background, this analysis concentrates on the impact of organizational project techniques and project aftermath of estate development assignments in Nairobi city County. It explores the impact of project communication techniques, risk mitigation/assessment techniques, quality control/assurance techniques, project procurement techniques and human resource techniques. The entire list of factors will be assessed against the level of project performance. This helps the study to establish applicable models that can be used to enhance operational efficiency within the development companies. The model is also estimated to help reduce cost and project turnaround time, thus improving the quality of real estate developments, and enhance the usability of the development’s projects.
1.2 Statement of the Problem

The progression of the property market in Kenya slowed to 6.1% during the first three months of 2022, from 6.7% during the same time period the previous year (Cytonnreport.com, 2022). As a result of the sluggishness of the market, the Kenya National Bureau of Statistics (KNBS) found that less business deals were made. This was the conclusion drawn from the data. The expansion of the construction industry, on the other hand, fell to 6.4% from 6.8% in the first quarter of 2021 (Cytonnreport.com, 2022). The primary factor that contributed to the decline in performance was the rising cost of construction materials, which in turn compelled developers to streamline their activities. Despite this, the industry grew at a faster rate from one quarter to the next than the 6% growth rate that was reported in the fourth quarter of 2021 (Njugunah, 2022). This was caused by the completion of big projects such as the Nairobi highway and the Western Bypass, amongst others.

Project performance assessment, as well as management capabilities, have become part of the modern business world. This is with respect to the construction industry where huge investments are usually at stake in case of project failure. Construction projects undergo the following major phases; project scheduling, designing, acquisition of construction materials, actual project execution, and project completion (Kwatsima, 2017). However, successful implementation of these phases is in most times hampered by complexities arising from interactions between the various actors involved, including clients, contractors, consultants, stakeholders, and regulators among others. Kwatsima (2017) argues several delayed projects have been reported in Kenya due to inefficient organizational structures and unqualified leadership.

Most construction projects in Kenya have performed poorly in relation to time and cost, this is according to most reports on the critique of unsuccessful construction projects. At least 70% of the projects commenced will probably be completed late. Additionally, 50% of the projects apt to escalate in expense whose amount will be more than 20% (Kwatsima, 2017). As per Githenya & Ngugi (2014), even though there is a regulation of construction industry in both urban and rural areas and quality training of professionals in the building department in Kenya, construction projects do not always achieve their set goals. Uncountable projects have demonstrated delayed completion time, cost overrun, and poor quality, thus leading to building collapse in different parts
of the nation, high cost of maintenance, disappointed clients, and even un-useful buildings. Such developments often lead to undesirable effects on the estimated time, budgeted amount, and consumer satisfaction (Sanchez and Terlizzi, 2017).

However, as Mateen (2015) postulates, the majority of these problems can be avoided and even solved (when they occur) by cultivating project techniques. It has been demonstrated that these techniques partake a unswerving power on the enactment of the project, and they also provide a framework for businesses to follow in to accomplish attainment in project management. As a result, the detached purpose of this research is to evaluate the connection between organisational project approaches and the level of success experienced by real estate development projects in Nairobi City County, Kenya.

In the field of real estate, there is a dearth of information gleaned from previous enquiries on the stimulus of certain variables on the total victory of assignments. During the course of our inquiry, we focused in on a number of factors that, when taken collectively, guarantee a job well done. However, what makes this research unique is that it focuses on the aspects that are most important for a project’s success in the real estate sector. This is what makes it so remarkable. On the basis of these essential ones, additional studies on factors that led to the efficacious accomplishment of the project were conducted.

1.3 Research Objectives

1.3.1 General objective

The general objective of this study was to investigate the effect of organizational project techniques on the performance of real estate projects in Nairobi County, Kenya.

1.3.2. Specific Objectives

The specific objectives were

i. To establish the extent to which project communication techniques impacts performance of real estate development projects in Nairobi County, Kenya
ii. To examine the extent to which project risk techniques impact performances of real estate development projects in Nairobi County, Kenya

iii. To evaluate the results of project quality techniques on performance of real estate development projects in Nairobi County, Kenya.

iv. Determining the extent to which project procurement techniques influences performance of real estate development projects in Nairobi County, Kenya

v. Determining the extent to which project human resource techniques impacts performance of real estate development projects in Nairobi County, Kenya

1.4. Research questions

This research study answered the below questions:

i. How does project communication techniques impact performance of real estate development projects in Nairobi County, Kenya?

ii. How does project risk techniques influence to performance of real estate development projects in Nairobi County, Kenya?

iii. To what extent does project quality techniques affect performance of real estate development projects in Nairobi County, Kenya?

iv. How does project procurement techniques influence performance of real estate development projects in Nairobi County, Kenya?

v. How does project human resource techniques impacts performance of real estate development projects in Nairobi County, Kenya?

1.5 Significance of the Study

Real estate development in Kenya being a multi-billion-dollar industry and an important contributor to the country's GDP, findings from this study point out the major challenges faced by real estate developers with regard to project management and suggest ways on how to avoid the
problems. More specifically, the study helps the developers create the all-important bond among the various facets of project management exercise on the independent factors. Independent factors include communication technique, risk techniques, quality technique, human resource technique and acquisition of construction technique and successful achievement of projects in the set timelines, budgets, and value canons. For investors in real estate, the findings from this study are crucial in pointing out possible causes of delay and failures that could impact their investments and thus work out important mitigations in good time. The study is also beneficial to policy makers and researchers in the field because they will be able to use the information in decision making and in gaining knowledge on project management techniques and performance in the field. The study is also useful to the academic fraternity in the country and beyond, as it provides important details and case studies for use in the training of project managers for deployment in the construction department.

1.6 Scope of the study

The study was based on the organizational project techniques on the performance of 67 registered real estate development projects that are members of the real estate developers who operate within Nairobi City County, Kenya as of December 2020. Areas of interest include communication management practices, risk management strategies, human resource management practices, procurement management, as well as quality control/assurance practices. Nairobi City County was selected for this study given its high concentration of large and high-value real estate development projects, the majority of which are financed by local and international commercial banks, private equity funds, and pension funds. The development projects must thus be completed to specification within set budgets and time frames and lent out, without which the investors could suffer great financial risks. Such real estate development projects would thus require higher levels of sophistication in project management compared to owner-developed properties found in most urban centers in the country. The study was steered out during the time of study of the Masters degree and its purpose will be purely for academic drives.

1.7 Limitations of the Study

Majorly, the enquiry engrossed on real estate developers operating in Nairobi City County, Kenya, which excludes those operating elsewhere. According to Kibowen (2018), Nairobi County has
diverse construction sites with the largest share of big building projects amounting to over 70% of the national output. This reduced the sample size and for that reason, the final outcome was slightly different. Moreover, research was based on the results of real estate contractors in the county of Nairobi. The researcher also used questionnaires to collect data instead of interviews and therefore there was no direct feedback from respondents on the information obtained.

1.8 Organization of the Study

The paper trail can be broken down into five unique pieces that all directly relate to the study. The first chapter presents an inclusive investigation of the aspects that led to the decision to carry out this investigation. Who stands to profit the most, why this study is so important, the problem that needs to be solved, the aims that will be pursued, the questions that will be asked, the expected outcomes, and any limitations that need to be taken into account. In the second chapter, we study how various project approaches and practises influenced the final results of earlier real estate endeavours and projects. Specifically, we look at how these factors had a role in residential and commercial real estate transactions. The third chapter of the report devotes a significant amount of space to an analysis and discussion of the study's methodology. These procedures were carried out so that the investigation could be concluded successfully. In keeping with the goals that were set for the research project, the outcomes of the study as well as a discussion of the data are presented in the fourth chapter of the report. In the fifth chapter, we provide a swift of the findings of the study, draw some conclusions from those findings, and then offer some propositions for further research.
CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter provides an analysis of the fundamental concepts as well as the studies that came before about organisational project methodologies and the level of achievement achieved by real estate development projects in Nairobi County, Kenya. The theoretical underpinnings, such as systems theory, Hertsberg's two-factor theory, and lean six sigma, are discussed in this chapter as well.

2.2 Theoretical Review

2.2.1 Systems Theory

The systems approach is often characterised as a methodical technique of looking at the environment, and it is used with the goals of finding solutions to problems and capitalising on possibilities (Cristobal, 2017). The systems method has been described by a few authors as expanding the problem up to its biggest dimensions, followed by reframing the problem, performing analysis and synthesis, incorporating feedback to further refine the analysis, and finally verifying the potential outcomes of the various courses of action. Others look at the world through the lens of a system, where everything is connected to everything else, while some perceive the world and all of its problems and potential as being interconnected. The definition of system describes it as an organisation or complex total; an assemblage or mixture of items or elements constituting a complex or unitary whole, is a helpful starting point for making the connection between the concept of system and project performance (Kapsali, 2011).

Ludwing Von Bertalanffy (1973) pioneered system theory in relation to an organization’s growth. According to the author, any company must interact with its external environment in order to fulfill its strategic priorities (Brown & Harvey, 2021). The author sees a system as a set of different parts that form a complete body, its boundaries are well defined and it is more of the sum of its parts (subsystem). The system is such that if one of the functionalities of the whole is altered, then the operation of the other parts changes with respect to the initial changes. Growth is the outcome of
the system’s adjustment to its environment and the presence of the system to reach a common aim. The study of system science has discovered some dynamics forces, system constraints, environment, and some values (purpose, measures, methods, and tools) that can be determined and applied to systems in every field/level to achieve optimized equal finality.

Chikere & Nwoka (2015) in their study perceive an organization as a system because it entails many parts of related and interlinked components that must work collectively as one. They further point out that as the organization grows, all subsystems in the organization must be aligned together to achieve the organization’s strategic goals. Chow & Cao (2008) argued that there is no organization that exists in a vacuum, thereby implying that they depend on either external or internal environment. This study proposes that the fruitful accomplishment of a construction project will be perceived as an open system subject to a combination of varying factors.

Mok, Shen & Yang (2015) noted down the core areas of knowledge that affect the successful completion of construction projects. The author starts by stating that a project exhibits integration and interdependence among the following core areas of knowledge: communication, risk, procurement, quality, human resource, scope, cost, time, and integration. Moreover, a change in one area of these affects the efficiency of the whole system, and hence the need for effective coordination of the whole system to ensure project success. Project managers must be system geniuses and they should allocate sufficient consideration to every part of the project management. System theory identifies the relationship of personnel, the effect of the organizational structure and function on the environment, and the influence of stakeholders on the organization.

Examining the project performance from the standpoint of systems, it might refer to something called a project performance system, which would be comprised of a number of more specific subsystems (Floricel et al., 2014). Its performance as a whole is contingent on the synergy of its component parts, which in turn is determined by the efficacy with which those parts contribute to the total performance of the system. When it comes down to it, the achievement or catastrophe of a company's project performance is reliant on how well its PM system functions in the context in which it operates (Floricel et al., 2014).
2.2.2 Lean Six Sigma Theory

Six Sigma is a set of tools, which was developed by Motorola in 1986, for process improvement. It aims at minimizing product weaknesses for good quality (McFadden, Lee & Gowen, 2015). Lean Six Sigma is a combination of managerial, which is informed by the concept of Lean and Six Sigma. Originally, Lean stresses eradicating the seven categories of faults, overproduction, shipping, waiting, inventory, motion, and over-processing. Six sigma helps improve the output quality while it tries to minimize the product wastes for greater results (Lim et al., 2015). Lean and Six Sigma have generally the same purpose for providing end product users with the best quality, cost, and service delivery. Both require strong management support as a standard way of doing business (Lu, Laux & Antony, 2017).

Projects based on the six sigma methodology are typically implemented by companies when an existing product or process is not performing up to standards (Sreedharan & Sunder, 2018). The Six Sigma methodology is sufficiently adaptable that it can be practical in a diversity of various sets, such as the establishment of brand-new products or services. Develop your ideas while keeping six sigma in mind. Projects using the methodology are frequently carried out in stages. Six Sigma projects are often constructed using the DMAIC approach (Sreedharan & Sunder, 2018). The acronym DMAIC, which stances for "define, measure, analyse, improve, and control," describes the five phases that make up a six sigma project (Antony et al., 2021). During the DEFINE phase of the project, a team is formed, and its leader and the customer develop the framework for the project and its goals. The project charter, essential success criteria, and business process models are the primary deliverables of this effort. In the MEASURE segment of the project, following the phase in which the team expresses the latitude of the project and the demands of the client, the team decides on a set of metrics to track and then puts those measurements into action (Antony et al., 2021). The information that has been acquired is analysed when you get to the stage called "ANALYZE." Statistical methods are put into play at this point in the process.

During the IMPROVE phase, the discoveries that were discovered during the Analyze phase are presented to the appropriate stakeholders in order to collect their advice on how the process might be enhanced to be more operative (Sunder, 2016). Here, the team and the stakeholder collaborate to generate new ideas and try them out in a brainstorming session. The team will build routines..
and procedures in the final stage, which is referred to as "CONTROL," in order to ensure that the progress will continue (Krueger et al., 2014). Within all aspects of Six Sigma, effective communication is considered to be of the utmost importance. A strong communication strategy is important if one is to achieve the goal of clearly outlining roles and the procedures for escalation. It is necessary for the Team Leader, who is typically a Six Sigma Black Belt or Six Sigma Green Belt, to be familiar with the multiple stages of team development and to be able to make strategic decisions regarding how to best optimise performance at each of those stages (Sunder, 2016). Therefore, this theory links the project performance of the real estate projects to link with various techniques that are widely used since they can influence the overall performance.

This research study assesses the extent to which construction projects have adopted the lean six sigma as a quality assurance tool in the implementation of the project. The study also wants to examine if there's a link between using these tools and finishing a job.

2.2.3 Hertzberg’s Two-Factor Theory

A psychologist by the name of Fredrick Herzberg invented the Two-Factor Theory of staff enticement in the 1950s (Zamuee, 2017). The theory is similarly denoted to as the motivation-hygiene theory/dual-factor theory. Herzberg found that two factors influence the motivation and satisfaction of employees: motivator factors, and hygiene factors (Alshmemri, Shahwan-Akl & Maude, 2017). This was from an analysis of 200 accountants and engineers who responded on their positive and negative approaches to their work. Motivator factors are factors that lead to satisfaction and encourage employees to be productive, such as staff appreciating their work, feeling recognized, and having growth in their vocations (Ali & Anwar, 2021). Hygiene issues, otherwise, if not applied, can lead to discontent in employees thus less production. Examples include proper working conditions for employees, company policies outlining employees’ duties and performances, employees’ benefits, and good working relationships with managers and co-workers (Ali & Anwar, 2021). Both motivation and hygiene appear to work independently of each other. They have both increased employee satisfaction and their absence has caused dissatisfaction.

Inexperienced or unqualified project managers are to blame for the failure of more than thirty percent of all initiatives (Band et al., 2016). When the organisation is under density to deliver assignments on schedule and within reasonable, having a team that is both enthusiastic and
committed to its work is vital. In order to succeed as a project manager, it is essential to have the capacity to motivate one's team members. The completion of projects on time, the maintenance of satisfied and motivated team members, and the growth of a pleasant place to work are all direct results of successful project management, which is dependent on harmonious cooperation (Khalid, 2013). The two-factor theory that Herzberg created sheds insight on what genuinely motivates workers and why they do the task they do (Singh & Alhamad, 2021). Project managers will be better able to motivate the group as a whole if they can find out what motivates each individual through the use of this information. It is possible to boost the likelihood that a project will be successful by creating a work environment that is more upbeat and inspiring for teams that are working on minor tasks together (Alfayad & Arif, 2017).

The primary advantages of the Hertzberg theory lie in its capacity to identify the specific causes of team members' satisfaction (or dissatisfaction) with their current assignment, to reveal the existing motivators and hygiene factors that should be maintained, and to assist in the identification of the desired motivators and hygiene factors among the workforce of the organisation (Yusoff et al., 2013). Furthermore, it encourages employees to take initiative in reaching project goals and reduces disruptions by pointing out areas of concern within the project and the business that need to be addressed promptly (Chen et al., 2022). This is accomplished by identifying problem areas that need to be addressed as soon as possible.

This theory suggests that for you to have a happy and most productive project team, the employer needs to improve both motivator and hygiene factors. To help satisfy the employees, the employer should ensure that they feel appreciated and supported. This can be achieved by providing sufficient information about the organization so that the teams can know what is anticipated of them to grow the organization and to achieve the goals set (Haider et al., 2015).

2.3 Empirical Review

2.3.1 Project Performance

Milimu (2016) while reviewing the factors that impact effective accomplishment of construction projects in Kenya, highlighted there was a need to be keen on the rate at which buildings are rising in Nairobi's Central Business District (CBD). The author discovered, there is proof that the
The construction industry in Kenya is poor in terms of time and cost management. Many projects performed are likely to run out of time to an extent of over 50% and over 50% of the projects are likely to go beyond their estimated costs by 20%. These discoveries are related to those of Kabacia (2018), who concluded that though there is a lot of training of consultants in the construction and regulations of the industries in Kenya, construction assignments do not constantly stand a chance to meet their set objectives. The research found that uncountable numbers of projects have demonstrated this by having budget overrun, prolonged projects, and collapsing buildings due to poor quality in various parts of the country. The research brings a considerable information to the current study on how project performance can be achieved through time and cost management which are essential factors of investigation in this research.

Tabassi et al. (2016) carried out research to assess the bond between the structure of a construction organization and the leadership competence on the genuine completion of a construction project by the use of 70 project managers in Malaysia. The study determined that inappropriate organizational structures, poor project management systems, and incompetent leadership resulted in poor project performance. The study of Tabassi et al., (2016) provides a critical information on the importance of organisational management which aligns the systems to be used in a project and competence of employees as an important factor for increased project performance. However, this research will investigate more factors such as project human resource techniques, procurement techniques, quality techniques and communication techniques to ascertain their impact on project performance.

Alaloul, Liew & Zawawi (2016) in a similar context of construction project performance assessed factors that influencing efficient and timely completion of large building projects. Kamau & Mohamed (2015) observed that most of the studies done in Kenya did not put into consideration the three key performance pointers of construction projects that is time, budget, and quality assurance aspects of a project. The researchers explained that there was a developing trend in Kenya where the administration time and budget of a project were being overrun by power projects. This particular study comes out clearly to incorporate the missing gaps in the actual research work that has been done for the successful implementation of construction schemes. Thus, this research project seeks to analyze the impacts of organizational project practices on project enactment of real estate development projects in Nairobi City County, Kenya.
Project Cost and Turnaround Time, Kibuchi (2012) found out that in Nigeria, poor project estimations and unpreparedness of project facts was a major cause of overspending in construction projects. Economic policies like inflation, customers’ tastes, and preferences were also major causes of cost overrun. Generally, overspending in the construction industries were related to poor project choice, poor preparations, and underestimation of risks. Other factors like undervaluing the project expenses rise in project choice, erroneous estimation of project materials, and high cost of project materials among others also caused overspending in projects. Derakhshanavijeh & Teixeira (2017) found out that factors like untrained contractor’s, poor forecasting’s, poor economy, continuous different commands, and frequent alterations of project plan resulted in increased spending of project costs, while complicated projects, decreasing the time allocated for projects and fraudulent practices also contributed to cost overrun in Nigeria.

According to Yong & Mustaffa (2012) carried out in Malaysia found that a success in a construction project can be measured on the basis of Schedule and Effort against Cost Variance, which measures the routine and progress of the project against the agreed initial cost as well as time. This metric forms the base for the productivity of projects and utilizes the EVM (Earned Value Management) concept. The approach helps project manager to access and measure project progress and performances by incorporating project scope, cost, and schedule measures. Nowadays, project performance is used to draw a conclusion on the expected time for completion of the project and the cost projections under the above method.

2.3.2 Project Communication Techniques

In order to provide additional insight into efficient communication methods for use inside projects, Zulch (2016) conducted research in the South African construction sector on a model that was presented as the optimum model for construction management communication. In the course of this investigation, primary data was gathered in the shape of questionnaires, which made it possible for the researchers to make use of quantitative approaches. In respect to the outcomes of the enquiry, efficient project communication is essential since it raises the level of quality achieved by the project, enhances the morale of employees, and makes it easier for people to work together at meetings and on the job. As a consequence of this, the outcomes of this exploration add essential data to the ongoing investigation's focus on communication as a strategy for efficiently finishing
a project. Sadly, the study places a heavy emphasis on a model in which the significance of communication as a method is not investigated. This is a limitation of the study. This gap in knowledge is filled by the current study, which examines the connection between communication method and successful completion of a project in order to provide an essential recommendation to real estate project managers.

The research by Rezende, Prado & Grotta (2021) on communication channels used in project implementation for increased performance found that interactive communication, push communication and pull communication strategies are all combined to achieve improved performance. The study found that most of project managers use in-person meetings, video conferences and phone calls to deliver important communication needed in the project implementation such as how activities should be conducted. The study proved that body languages are essential in any project since it helps to communicate inner feelings and emotions towards a project hence giving more clear information required for higher performance. Project stakeholders were found to be a more critical team that require continuous flow of information where emails, newsletters, management softwares are all good communication techniques to ensure the project deliverables are achieved effectively. The study of Rezende, Prado & Grotta (2021) provides a key information regarding the current study on different communication strategies used in different project implementation areas and its importance in project implementation. However, the current study acts as a gap builder between the communication techniques and its use in project implementation through giving the effect of such communication techniques in project implementation.

According to the findings of the research that was conducted by Pirju (2018), successful project communication is essential to accomplishing one's goals. According to the findings, the quality of a message's delivery and reception, the contentment of the audience to whom it is directed, and the medium through which it is communicated are all critical factors in determining whether or not the message is successful. In addition, the researchers emanated to the decision that in order to ensure that critical updates are sent at the appropriate time, project managers need to keep command of all kinds of communication that are used on the task. The outcomes reveals that the leadership styles of project leaders are a role in the communication challenges that unavoidably develop throughout the path of the execution of any project. According to the findings of the study,
project managers should use transformational leadership to achieve and support that most effective behaviour is impacted inside the project and that assignment team are engaged and motivated through the communication strategy that is being employed. The availability of a variety of communication abilities, such as empathy and important negotiation skills, was found to be dependent on the presence of positive feelings and a constructive outlook on the project, which in turn led to improved performance. This was found to be the case after research was conducted. This study will determine whether or not there is a correlation between the successful completion of real estate developments in Nairobi City and the manner in which project stakeholders communicate with one another.

2.3.3 Project Risk Techniques

According to the study by Marcelino-Sadaba et al. (2014) carried out in Spain on risk management techniques employed by managers in projects, various techniques were found to be essential in any project. Brainstorming, root cause analysis, reserve analysis, and risk data quality assessment were some of techniques that the study found essential in avoiding and managing risks during project implementation. According to the findings of the study, brainstorming is associated with information sharing between the project individuals prior to the commencement of the work in order to identify risks and threats that may be associated with the project where review of the project documents, understanding of the organisational processes as well as assets, and reading articles in order to attain necessary information on risk management and mitigation during the execution of the activities. It was shown that the key risk management techniques have a substantial sway on the actual execution of the project assignment. This is due to the fact that these strategies help in detecting and mitigating risks. The research that Marcelino-Sadaba et al2014 conducted is an essential resource for comprehending the significance of utilising risk management tactics all the way through the execution of a project. However, the scope of the study differs with the present study since the current study was based in real estate projects.

The study by Serpella et al. (2014) investigated risks associated with various construction projects in Chile. The inquiry utilised a mixed methods to assemble essential facts pertaining project risks. The research found that main risks as associated with human errors, material being used and time constraints of the project. Project team was identified as the main stakeholders in any project and
therefore training on risks that can affect a project was found to be a paramount technique that should be carried before commencement of any project. The article suggests that managers of large projects use SWOT analysis to ascertain the prospects, pressures, strengths, and weaknesses associated with a certain endeavour. Risk registers, risk assessment tools, and root-cause investigations can help construction managers systematically identify hazards early on and establish important risk management to ensure a project's success. One of the gaps in the present research is a lack of information on risk management and procedures, both of which are addressed by this study. This research fills a need by providing a critical analysis of the connection between risk administration strategies and the achievement of real estate projects, which was not previously possible due to the study's emphasis on the influence of project implementation.

The study of Saminu, Prasad & Thamilarasu (2015) was conducted in India revealed that risk management techniques are essential since they help project managers to identify opportunities, weaknesses, strengths and threats associated with each project hence helping in preparation process in an assignment. The easy identification of an assignment risk was also found to provide clear way on how the project should be implemented as well as the mitigation ways to ensure the project is conducted with minimal risks that can affect the consequence of the project negatively. The project found that clear planning comes hand in hand with solid preparation which is driven by risk identification, hence making a project to be conducted towards the project goals and objectives. In addition, the study found that risk management and proper techniques helps in early communication of risks to project stakeholders hence helping in mitigation of risks. As per the research by Saminu, Prasad & Thamilarasu (2015), risk management is important in a project since it helps to attain higher performance. However, the research does not provide the extent to which risk techniques used in project implementation affect the overall project performance, a gap that the current study provides.

2.3.4 Project Quality Techniques

The subject of project quality procedures has been the focus of an extensive amount of research throughout the years. According to the findings of the research, some of the approaches for ensuring the quality of a project include quality scheduling tools, quality auditing tools, quality control tools, and process analysis tools (Neyestani, 2017). Conferring to the discoveries of the
research, quality project tools provide assistance in maintaining all aspects of a project and achieving the desired level of quality. In light of the findings, it is absolutely necessary to have both a well-defined set of guidelines and an executable implementation strategy in place so that an assignment can be directed in the precise route. The outcomes of the research steered the researchers to the assumption that successful project managers have a formal education as well as training in quality assurance methodologies. It is the obligation of the project’s leaders to guarantee that any recommended repairs and corrective actions are carried out concurrently with the implementation of the project. In addition, methods of quality assurance such as quality metrics, quality checklists, quality baselines, and improvement plans can be incorporated into a project to ensure that the deliverables will be of a satisfactory standard. During this discussion, more ideas that can assist project managers in ensuring better outcomes during implementation are presented. Within the context of Nairobi’s commercial real estate market, the drive of this enquiry is to investigate the dynamic connection amongst project quality criteria and project performance.

The issue of quality is discussed by Basu (2017) in a study carried out in London, quality is a special aspect of project implementation due to its importance. The study discusses various techniques that should be ensured in a project implementation to attain project goals with quality assurance maintained. The basic quality technique tools discussed by the research include flow chart, pareto diagram and root and effect plan among other tools that are essential in ensuring project quality. The study shows that a flow chart is used to connect the paths of the project activities thus showing the relationship of each part with the other. This creates the flow of the activities, how they should be conducted and areas that need more weight for quality performance. However, the method of quality controlling as well as the use of the project quality techniques are discussed by the study as areas and processes that require more knowledge and expertise, and therefore the research recommends continuous training for project managers in the field to ensure proper utilisation of the quality methods and increased performance. Basu (2017)’s research is significant since it offers details on critical quality methodologies that may be employed in project implementation, which the current study aims to create. However, the report does not include any information addressing the connection between the quality methods used in the project assignment and the outcomes of an assignment.
As per the inquiry of Olateju (2017) carried in Lagos, quality management techniques are important in any project because they help to control project costs, maintain and determine the standards needed and help to confirm to the standard policies, regulations and quality in generation of client fulfilment. The investigation concentrated on three major aspects of quality methods: quality planning, quality reassurance, and quality governance. According to the findings, in order for project managers to have any sense of purpose or direction while the project is in progress, it is obligatory for them to first categorise the purposes of an assignment and then link those ideas to the deliverables of the project. This is also supported by the study of Heravi, Coffey & Trigunarsyah (2015) that project planning requires sober management of the project expected results to attain the best upshot of a project. The research of Olateju (2017) also adds that project quality planning is essential since it helps in provision of standards, risks, prediction of the project performance, verification of the results and easy management of employees. However, the study does not discuss more on quality management techniques as well as their effect on project performance, where the current study seeks to discuss more on project quality techniques as well as their effect on project performance.

2.3.5 Project Procurement Techniques

The research carried out by Bohari et al. (2017) underlines the repercussion of procurement to the performance of a project. Procurement ensures that all necessary components arrive on time, which is essential to the project's success. The research conducted by Barasa (2014) centred on the primary aspects of an assignment procurement that involves potential to inspiration the victory of a scheme. These aspects include the specifications, standards of goods, and contracting. The research also shows that procurement process in project is dominated by tender process, a step where the project managers should ensure product specifications, qualifications and experience of the contractor as well as the knowledge towards the project is quite enough. However, if the procurement selection and tendering process fails to ensure the maximum care while choosing a contractor to work with, the quality of the outcome and the project performance may be compromised. The study of Barasa (2014) shows the needed project procurement process such as contacting and vendor selection where the research recommends that the process should be primary among other processes to ensure quality and increased performance. However, the current study
will add more knowledge on procurement techniques in project implementation and especially project performance as well as their effects in real estate projects.

The research of Hueskes, Verhoest & Block (2017) on procurement processes in project implementation found discusses various processes that are important in any procurement process. Initiation of a request, establishment of standards, request for permission, buying authorization, bidding and proposal evaluation, contract management responsibilities, contract closing requirements, and strategic sourcing flowchart are the first steps discussed in the study. The aim of the procurement process in any project, according to the research, is to guarantee that the essential materials are delivered at the appropriate interval in order to achieve project quality and timely delivery of the intended results. However, the study shows that for an increased performance, procurement department should ensure the roles and responsibilities of each team are well selected to ensure various roles are being steered and done by the right person. In addition, the research states that project assignment leaders should be able to identify procurement needs and align them with the right personnel at the right timing to ensure there is steady supply of materials. Vendor processes and approval process are also discussed as the important processes where contact negotiation should be steered to certify the right materials are available for the project. The study discusses some procurement activities such as specification, vendor selection and management and contracting thus providing an essential information to the current study.

According to the study of De Araujo, Alencar & De Miranda (2017), there are diverse procurement factors that govern the method of procurement used in a project. As per the study, the speed or the time of a project affects a specific procurement method used in a project hence the overall project performance. Furthermore, the research states that the budget, quality expected and specific project constraints also affect the overall procurement method or technique used in a project. The study also found that if one or more procurement constraints increase in a project, then the performance of a procurement is affected hence effect on the overall project performance. As a consequence of this discovery, the enquiry proposes that a project manager neet to provide continuous measurement of project procurement processes in edict to appreciate the full probable of the project assignment. In contrast to the previous research, which was largely concerned with procurement methods and how to ensure their success in a project, the current study is primarily concerned with the interaction that exists between the two.
2.3.6 Project Human Resource Techniques

Ashiru & Ashiru (2019) looked on the long-term viability of human resource planning for building projects as they were being implemented. The research discovered that the main human resource functions in a project include planning, organising, managing, and leading the entire project team in accomplishing their duties. The study stated that it is the role of managers to ensure all personnel are assigned duties according to their qualifications in order to achieve project performance. This investigation also led to outcome that to achieve the greatest possible level of success with a project, HR managers need to ensure that their teams remain passionate about the process and are actively engaged in it from the very beginning to the very end. According to the findings, project human resource managers should make an effort to cultivate positive team dynamics and build a long-term strategy in order to improve the aftermaths of the project assignment. This research is essential to the ongoing investigation because it sheds light on a variability of human resource practices—such as the selection and assembly of a project team—that form the foundation of the actions that are mandatory to put a project into action. As a consequence of this, the current investigation subsidises to the prevailing body of information concerning the part that human resource management plays in the actual execution of projects and the effect that this has on the outcomes of such projects.

The research of Ngangu (2018) states that a project implementation needs a clear and well guided human resources and project team. The study discusses main human HR roles and responsibilities which rotate around human resource management, selection of a assignment team, development of the team and motivation of the team. Team building is associated with team training, provision of feedback of the project activity, motivation and welfare management. The study also states a well motivated and managed team is able to deliver improved performance hence increased success rate of a project. The study also states that human resource managers should ensure the project team competencies are in relation to their responsibilities and roles assigned where a team competencies can be improved through continuous training and seminar discussion of project performance. Although the research provides key information on project human resource management in a project and techniques on how to increase them, there is little information from the study on how such human resource techniques affect the overall project performance, where
the prevailing study aims to investigate the effect of various human resource techniques on project performance thus filling the gap.

The research of Khan & Rasheed (2015) identifies various roles of a project HR leaders. The research found that human resource managers in a project helps in provision of a unique project team through team building and team skills development. Team building as per Aga, Noorderhaven & Vallejo (2016) is concerned with decision making and communication of the project activities to make sure everything aligns with the project objectives and goals. In this way, a project human resource is expected to train the project team and gather necessary information that stakeholders need for the project to achieve consensus hence increased performance for the project. Creation of a formal project documents and execution of duties is another role of human resource managers in a project as the study of Khan & Rasheed (2015). Confering to the outcomes, in order for HR managers to ensure the greatest possible level of success with a given project, they must meticulously document all data that is pertinent to the endeavour, keep accurate team rosters, and accept full responsibility for all activities that are associated with the project. In addition, research indicates that the performance of the project is dependent on human resource managers interacting with and maintaining an up-to-date budget and schedule for the project. This study is primarily reliant on the information that was discovered through an analysis of the HR function and the project roles that an HR manager should communicate with prior to, during, and after the execution of a project. As a consequence of this, this research helps bridge a gap in our understanding by delivering fresh information regarding the ways in which HR practises inspire the accomplishment of construction projects in Nairobi, Kenya.

2.4. Summary of Literature Gaps research gaps should be included in the literature

Various scholars have studied the dynamics of real estate development projects in Kenya. Table 1 below shows different authors (year), study’s focus, major findings, and research opportunities;
<table>
<thead>
<tr>
<th>Author (year)</th>
<th>The focus of the study</th>
<th>Key findings</th>
<th>Research gap</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rezende, Prado &amp; Grotta, (2021)</td>
<td>Communication Channels in Brazilian Software Projects</td>
<td>The research used a qualitatitive method where 10 software development project managers were interviewed from Brazilian companies. The research found that communication channels used in a project impacts customer and efficiency in a project implementation.</td>
<td>The research does not involve use of communication in real estate projects in Kenya. The current research uses quantitative methods through the use of structured questionnaires to collect data on effect of communication techniques on the project performance in real estate projects in Nairobi City in Kenya.</td>
</tr>
<tr>
<td>Pirju (2018)</td>
<td>The Importance on Communication in Project Management Strategy</td>
<td>The project found that communication is important in a project implementation because it helps in decision making among the project stakeholders</td>
<td>The research used an empirical review to investigate the importance of communication in a project. The current study creates more knowledge through obtaining information through quantitative research methods by use of a questionnaire</td>
</tr>
<tr>
<td>Basu, (2017)</td>
<td>Essential infrastructure initiatives, quality assurance methods and procedures are used.</td>
<td>The study found that use of Six sigma, balanced scorecared, EFQM based PMPA and OGC are common quality management tools used in a project management</td>
<td>The study did not investigate on the impact of such project tools and techniques on project performance and therefore the current study will aim to fill the gap by investigating on the effect of procurement techniques in project performance in Nairobi City real estate projects.</td>
</tr>
<tr>
<td>De Araujo, Alencar &amp; De Miranda Mota (2017)</td>
<td>Project procurement management</td>
<td>The study found that procurement processes in a project are important since they enable supplier relations, partnerships and relationship with stakeholders.</td>
<td>The research used an empirical review of past researches to investigate the procurement processeses. The current study uses quantitative means through the use of a questionnaire to explore the influence of procurement processes.</td>
</tr>
<tr>
<td>Zulch, (2016)</td>
<td>A proposed model for construction project management communication</td>
<td>The article identifies the vital communication skills that effective managers should have</td>
<td>The research does not discuss various ways on how communication techniques such as skills affect the project</td>
</tr>
<tr>
<td>Study</td>
<td>Title / Description</td>
<td>Methodology</td>
<td>Findings / Implications</td>
</tr>
<tr>
<td>-------</td>
<td>---------------------</td>
<td>-------------</td>
<td>-------------------------</td>
</tr>
<tr>
<td>Saminu, Prasad &amp; Thamilarasu (2015)</td>
<td>A study of the effects of several factors on risk management approaches in an Indian construction project.</td>
<td>The study used structured questionnaires where the results revealed that risk management techniques in a project are affected by inadequate planning, use of defective materials in a project, site safety and poor resource planning.</td>
<td>The current research fills that gap of effect of the risk management techniques on a project performance in real estate projects in Nairobi City in Kenya.</td>
</tr>
<tr>
<td>Kimani et al. (2015)</td>
<td>The factors influencing project delays in Kenya, with a special focus on the National Housing Corporation of Kenya.</td>
<td>The study analyses the influence of organization structure, management, finances, and labor on project delays.</td>
<td>The commitment of the government in delivering decent housing in Kenya's effective and efficient enactment of these projects is still a major challenge. Also, there is a need to use different research methodologies to assess factors leading to project success e.g., System Theory.</td>
</tr>
<tr>
<td>Kihoro &amp; Waiganjo (2015)</td>
<td>The factors affecting the performance of projects in the construction industry in Kenya, with specific emphasis on gated communities in Nairobi County.</td>
<td>The impact of project planning, stakeholder management, as well as competence of project teams on the performance of gated developments in Nairobi.</td>
<td>They recommended that further studies should be directed to identifying key performance indicators so that the casual relationship between key success factors as well as performance indicators can be identified. This implies that there is a need to carry out studies that consider contributing factors as a whole so as to single out significant factors.</td>
</tr>
<tr>
<td>Marcelino-Sadaba et al. (2014)</td>
<td>Project risk management methodology for small firms</td>
<td>The research was conducted on 72 Spanish companies where risk tools such as simple tools, risk checklists and templates were found to be mostly used in risk management in a project.</td>
<td>The study investigated on tools that are used in a project implementation and it did not consider on the impact of such tools in project performance. The current study helps to investigate the effect of such project tools on the project performance.</td>
</tr>
<tr>
<td>Kibuchi and Muchungu (2012)</td>
<td>The influence of the project team in the success of construction projects in Kenya.</td>
<td>For effective construction projects, outstanding and practical goals, specific roles, and proper administration are required.</td>
<td>The study only concentrated on different elements of actual teamwork concerning the success of a project but not on other factors affecting project success.</td>
</tr>
</tbody>
</table>
While these studies have done an impressive job of highlighting the various challenges facing real estate projects in Kenya, the studies have left a clear and discernible need for further research and analysis of the impact of organizational project techniques and the performance of real estate development projects in Nairobi City County.
2.5 Conceptual Framework

Independent Variables

- Project Communication Techniques
  - Stakeholder’s Identification
  - Communication’s planning
  - Information Distribution
  - Management of Stakeholder Expectations

- Project Risk Techniques
  - Risk planning
  - Risks Identification
  - Performing Qualitative Risk Analysis
  - Performing Quantitative Risk Analysis
  - Planning Risk Responses
  - Risks Monitoring and

- Project Quality Techniques
  - Quality planning
  - Quality assurance
  - Quality control
  - Continual improvement.

- Project Procurement Techniques
  - Specification
  - Vendor Selection
  - Contracting
  - Control
  - Measurement

- Project Human Resource Techniques
  - Development of the human resource plan
  - Acquiring project team
  - Developing project team

Dependent Variables

- Project Performance in Real Estate projects
  - Project Cost
  - Turnaround Time
  - Customer Satisfaction

Figure 2.1 Conceptual Framework
CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter gives the methodology of the study a great deal of attention and lays out the procedures that will be followed in order to finish the investigation. The researcher intends to employ the methodology in order to accomplish the objectives that she outlined for herself in the initial chapter of the book. In addition to that, this section discusses the circumstances of the study, the target demographic, the sample participants, the data sources, and the analytical methodologies.

3.2 Research Design

When conducting descriptive research, it is common practice to collect data by conducting in-depth interviews or administering standardised questionnaires to a sample that is intended to be characteristic of a population. The investigator decided to conduct the research using a descriptive study design since it enabled the collection of both quantitative and descriptive data, which was then put to use to investigate how various elements interact with one another (Orngreen & Levinsen, 2017).

3.3 Target Population

A research demographic, per the Kothari (2004), is a well group of people, elements, activities, occurrences, goods, or a house that is being examined. A study population is a specific group of people from whom data is collected. All 67 registered real estate development projects, members of the Kenya Property Developers Association (KPDA), and those operating in Nairobi County were included in the study's target audience. Snyder (2019) highlighted that a target population for a study should have a noticeable features, which researchers anticipate to generate the study results. The conclusion is based on the premise that the population is heterogeneous.
3.4 Sampling Design

Given the fact that the target population comprised only 67 organizations, the research adopted the census method and sought responses from project managers from each organization. According to Burmeister & Aitken (2012), a sample size of more than 20% of the population under study is sufficient since it shows representation of the population in any inquiry.

3.5 Data Collection Instruments

This study was informed by using primary data gathered from the real estate market in Nairobi County. Questionnaires were the major instrument for eliciting responses and collecting data in this investigation. According to the recommendations made by the researcher, the questionnaire will comprise both structured and unstructured questions. The first component of each questionnaire is devoted to the collection of information about the demographic and operational aspects of the responder. The primary objective of this survey is to learn about the respondent's demographic traits and, as a result, determine the concerns that are of the utmost importance to them. The second kind focuses particularly on the particular aspects that can be singled out by a theoretical model and analyses them in great detail. The purpose of each question on the survey was to investigate a different aspect of the study's aims or to answer a different component of the research issue, respectively. We refer to inquiries that are not open-ended and have predetermined responses as "structured questions." It is predicted that the use of structured questions will lower the amount of time and effort necessary for data processing, in addition to the overall cost of the research. Because there was no predetermined framework for the questions in the study, the researcher had more flexibility. This format of the question prompted the respondent to answer using their own words, which was the intended effect. When assembling the responses, each respondent's knowledge of the current issue was considered together with any other relevant information (Snyder, 2019).

3.6 Data Collection Procedure

A research authorization from the National Commission for Science, Technology, and Innovation (NACOSTI) was obtained first. The data collection process then followed. This involved the researcher transferring questionnaires through email to respondents, then pursuit up with a phone
call to ensure questionnaire reception by the respondents. The questionnaires remained self-administered. Participants were asked to put out the surveys on their own and afterwards send their replies by mail.

3.7 Pilot Testing

Piloting refers to taking a smaller version of the larger inquiry to deliver a rationale for the design (Orngreen & Levinsen, 2017). The research involved a pilot test comprising five individuals organized to assess the effectiveness of the facts-finding instruments. The participants in the pilot test included two professional colleagues, two potential respondents who participated in instrument testing. The researcher sent the questionnaire to each one of the pilot analysis participants and follow up with a phone call to safeguard the commitment of the respondent. The respondents then transmit back the filled-in the questionnaire via email.

3.8 Validity of the Research Instruments

The authenticity of the research instrument relates to its capability to determine the concept as supposed. Construct validity is used to measure whether the working variable explanation reflects the true view. For this research paper, the questionnaire has been established founded on related prior analysis with adjustments designed at communicating the research goals. Content validity was reputed through the administration of the proficient view (Blumberg, Cooper & Schindler, 2014). It included the supervisors, who confirmed that the questionnaire covered all of the research factors through their examination and expert opinions. They also go over the paper to make sure the abstracted conceptual dimensions are included.

3.9 Reliability of the Research Instruments

The notch to which an investigation adds consistent outcomes or facts after repeated tests is known as reliability (Egan et al., 2016). Consequently, an instrument remains reliable to the degree that it consistently measures the characteristics of interest over time. The scholar used the internal consistency procedures to amount the level of reliability of the results presented and ensured that various items measuring different constructs deliver reliable scores. The Cronbach alpha was employed to determine the study instruments' credibility. Cronbach's Alpha is crucial to a
researcher as it allows them to determine whether the devices provided dependable replies even when similar questions were substituted.

If a variable produces a consistent response to a similar set of queries, it is said to be solid. Cronbach's Alpha is a real score of the 'base' or 'underlying' construct that reflects consistency (Orngreen and Levinsen, 2017). Kothari (2004) describe a framework as a large idea or research topic. The real score, often known as 'Alpha,' has a range of values from 0 to 1.

This can also convey dependability in questionnaires using rating scales and questions with two alternative answers (dichotomous questions). A high score suggests excellent dependability, with 0.7 being considered a satisfactory coefficient of consistency or Alpha value (Orngreen & Levinsen, 2017).

When the resulting variables are employed in predictive analyses, a researcher must undertake reliability checks on the instruments. Because of the low reliability of the scale, the researcher is forced to change or eliminate items or questions. Exploratory factor analysis helps identify inefficient components with low reliability. As per the findings below, the score for all variables is more than 0.7, which indicates that the variables are satisfactory in investigating organisational management techniques in real estate projects in Nairobi County.

Table 3.1 Reliability results

<table>
<thead>
<tr>
<th>Variable</th>
<th>Number of statements</th>
<th>$\alpha=$Alpha</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Communication Techniques</td>
<td>5</td>
<td>0.721</td>
<td>Reliable</td>
</tr>
<tr>
<td>Project Risk Techniques</td>
<td>6</td>
<td>0.776</td>
<td>Reliable</td>
</tr>
<tr>
<td>Project Quality Techniques</td>
<td>4</td>
<td>0.736</td>
<td>Reliable</td>
</tr>
<tr>
<td>Project Procurement Techniques</td>
<td>5</td>
<td>0.745</td>
<td>Reliable</td>
</tr>
<tr>
<td>Project Human Resource Techniques</td>
<td>4</td>
<td>0.778</td>
<td>Reliable</td>
</tr>
</tbody>
</table>

3.10 Data Analysis and Presentation

As a result of the complementary nature of the numerical and qualitative schools of thinking, the researcher for this study decided to mix the two distinct approaches to data collection and
interpretation. The data from the questionnaire had to be coded first. This was the first stage. Following this, labels were affixed to the data in order to make it clear to which group each individual data point belonged. The information was put into a computer system for storage. After that, an exhaustive quantitative investigation was carried out with the help of SPSS. An in-depth analysis of the data was carried out with the help of both descriptive and inferential statistical methods, such as mean, standard deviation (sd), regression analysis, and correlation analysis. Descriptive statistics included things like frequencies and percentages, while inferential statistical methods included things like those. During the presentation, many visual aids such as pie charts, frequency tables, and percentage breakdowns were utilised. During the process of generating qualitative data, frequent items were singled out and categorised after being compiled. The goal of this exercise is to identify differentiating traits that can stand in for more general classifications and divisions. The process of elucidating and translating the explicit reality of each subject led to the discovery of the topic's consequences.

3.11 Diagnostic Tests

Diagnostic tests were run in SPSS on the imported data in order to determine whether or not there was sufficient information to conduct an analysis of the connection between the explanatory variables and the observable variables. The Kaiser-Meyer-Olkin (KMO) test was supported out in order to ascertain whether or not the sample size was sufficient for drawing trustworthy results. According to Boyaci and Atalay (2016), the KMO test is carried out in order to establish whether or not the data may be incorporated into a factor analysis. The authors point out that factor analysis can be applied to a dataset in order to unearth the underlying factors that are responsible for its variation. As the number grows closer to one, the standard rule for the KMO statistic suggests that this indicates an increase in the sample's overall quality.

Another helpful diagnostic method would be to examine the statistics to define whether or not they are normal. This test is absolutely necessary before drawing any conclusions from a multiple regression model that bases its assumptions on the normality of the data. Checking to see if the data points follow a normal distribution is therefore an extremely important part of this inquiry. In order to conclude whether or not the data were normal, skewness and kurtosis were calculated. In a work that emphasises the importance of testing statistical assumptions, Ho and Yu (2015)
highlight the following approaches for evaluating normalcy. These methods are presented in the context of evaluating the necessity to test statistical assumptions. A histogram will be generated to represent continuous data, and if it looks like a bell curve, the study will consider the data to be normal. If the histogram does not look like a bell curve, the study will treat the data as abnormal. When the skewness of continuous data is significantly different from zero, this points to the presence of non-normal data. If, on the other hand, the kurtosis value is quite near to three, this suggests that the data follows a distribution that is statistically extremely similar to a normal distribution.

Another essential step was to investigate the ways in which the important independent variables are connected to one another. To determine whether or not the independent variables are comparable to one another, this metric is of the utmost importance. If the regressors in a regression model are related to one another in some way, it may be difficult to separate the individual components that contribute to the dependent variables. In order to accomplish this, we utilised the variance inflation factor to assign a numerical value to the amount of correlation that we were willing to tolerate across the different elements. For the purpose of establishing whether or not multicollinearity is present, a value of VIF between 1 and 10 is considered to be indicative of the lack of multicollinearity. This is the consensus among most researchers. If the VIF value is less than one or larger than ten, however, there is multicollinearity between the predictor variables (Ho & Yu, 2015).

Since this study involves sampling cases from a population, a test for the spread of data was also conceded out to check whether the data has a common variance. This measure was assessed using a scatter plot of the projected ideals and the residual values of the independent values. The conclusion of this test was signified by whether there are patterns in the intersection point of the predicted and residual values of the independent variables. Ho & Yu (2015) notes that the problem of heteroscedasticity is exhibited if the points show a certain pattern. Conversely, if there is no clear pattern on the intersection points, then there is no heteroscedasticity.

3.12 Regression Model Analysis

In determining the impacts of independent variables on the reliant factors, the researcher will use several multiple regression analysis techniques. These techniques were used also to determine the
pursuit of every independent variable established on its covariance-related variable convenient in forecasting. The technique is the best when mutually the dependent and independent variables are the intervals, even though various specialists use reversion on ordinal data. The regression scrutiny has the assumption that the link between variables is linear (Blumberg, Cooper & Schindler, 2014). Multiple regression analysis, in its simplest form, comes up with the perfect straight-line relationship in explaining the variation in an income variable. Y depends on the change in a predator variable, X. On estimating the relationship, the following equation was used:

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + E$$

Where:

Y = Project performance

a = Y Intercept

X1 = Project Communication Techniques

X2 = Project risk Techniques

X3 = Project quality Techniques

X4 = Project procurement Techniques

X5 = Project human resource Techniques

E= Error margin.

To assess the predictive power of the model and preciseness of the determinants, the ordinary least square method was applied. Pearson correlation was employed in testing the relation between the variables. The goodness of fit of the model using the R Squared ($R^2$) was utilized to indicate the percentage of related variables that was expounded by the independent variables. Finally, the probability values were used to single out the significant variables out of the combination of variables that were selected.
3.13 Ethical Considerations

First, in order to conduct the inquiry ethically, the inquirer attained preliminary letter from the School of Business, Kenyatta University. The researcher presented the introduction letter, and permission to carry out field research to the respondents prior to data collection. The respondent’s confidentiality in filling the questionnaire was maintained by ensuring that not all the research instruments contain respondent's names or any other form of individual identification.
CHAPTER FOUR

RESEARCH FINDINGS AND DISCUSSIONS

4.1 Introduction

This section elaborates the outcomes, evaluation of the research discoveries, and arguments as per the detached aim of the study. The study outcomes in this chapter are depicted in form of tables and graphs. The results are also supported by the close literature related to the research. The sections are presented as per the research questionnaire administered in the study.

4.2 Responses obtained from questionnaire

Table 4.1 Respondents responses

<table>
<thead>
<tr>
<th>Questionnaires</th>
<th>Number of questionnaires</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Returned</td>
<td>65</td>
<td>97.0%</td>
</tr>
<tr>
<td>Unreturned</td>
<td>2</td>
<td>3.0%</td>
</tr>
<tr>
<td>Overall</td>
<td>67</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Source: Research Data, (2020)

Conferring to the model of the study engaged, 67 questionnaires were successfully prepared and disseminated to 67 research respondents. The outcomes in table 4.1 present that out of 67 research questionnaires directed, 65 questionnaires which are equivalent to 97% of total questionnaires were successfully filed and returned while 2 questionnaires which are 3% were not returned. Therefore, as per Onuko et al. (2015), a response rate of more than 75% of administered questionnaires is accepted for final examination.
4.3 Respondents organisation’s background

4.3.1 Period of operation of organisation

![Age of the organisation in Kenya](image)

**Figure 4.1 Period of operation of project**

Source: Research Data, (2020)

Figure 4.1 presents results of project where respondents were found. The results indicate that 12.31% of projects were less than one year old, 35.38% of projects were between 5-10 years old, 30.77% of projects were between 10-20 years old while 21.54% were above 20 years old. This indicates that several projects had operated for more than one year and therefore they had good experience in the market.

4.3.2 Period of service in the company

Table 4.2 Period of service in the company
<table>
<thead>
<tr>
<th>Frequency</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 1 Year</td>
<td>4</td>
<td>6.2</td>
</tr>
<tr>
<td>1-5 Years</td>
<td>19</td>
<td>29.2</td>
</tr>
<tr>
<td>6-10 Years</td>
<td>29</td>
<td>44.6</td>
</tr>
<tr>
<td>Above 10 Years</td>
<td>13</td>
<td>20.0</td>
</tr>
<tr>
<td>Overall</td>
<td>65</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: Research Data, (2020)

Table 4.2 illustrates the results of respondents’ service in their different projects during the course of their careers. Confering to the outcomes, 6.2 percent of the 65 respondents who completed and returned the questionnaires had stayed in their companies for less than a year, 29.2% had stayed in their current projects for an occurrence of 1-5 years, 44.6% had stayed in their projects for 6-10 years while 20.0% had stayed for a period of 10 years and above. The results indicate that 93.8% which is the majority of respondents had settled in their relevant institutions for an episode of more than one year and therefore they had enough experience on organizational project techniques that they had come across and therefore they were able to respond to the questionnaires effectively.
4.3.3 Number of Projects completed

![Pie chart showing the distribution of projects completed by organizations.](image)

**Figure 4.2 Number of Projects completed**

Source: Research Data, (2020)

Figure 4.2 indicates results on the several assignments finalised by different projects where the respondents were working. The results indicate that 1.54% of respondents were from organizations that had completed less than one project, 7.69% of respondents were from organizations that had completed between 1-3 projects, 24.62% of organizations had completed 4-5 projects while 66.15% which is the majority of respondents had completed 5 projects and above. This shows that most the organisations had completed certain projects and therefore they suitable experience necessary in participating in this study.

4.4 Descriptive analysis

The goal of this fragment is to offer respondents' responses as per the research variables which include performance in Project communication techniques, project quality techniques, project
procurement techniques, and project human resource management techniques. (1 = Strongly Disagree (SD), 2 = Disagree (D), 3 = Neutral (N), 4 = Agree (A) and 5 = Strongly Agree (SA).

4.4.1 Project Communication Techniques

The researcher asked respondents to rate their agreement towards project communications techniques in their real estate development projects in Nairobi City County.

Table 4.3 Project Communication techniques

<table>
<thead>
<tr>
<th>No.</th>
<th>Project communication Aspects</th>
<th>Sample size</th>
<th>Mean</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Importance of stakeholder identification</td>
<td>65</td>
<td>4.3846</td>
<td>.70027</td>
</tr>
<tr>
<td>2.</td>
<td>Communication planning</td>
<td>65</td>
<td>4.5385</td>
<td>.70880</td>
</tr>
<tr>
<td>3.</td>
<td>Information distribution</td>
<td>65</td>
<td>4.2769</td>
<td>.76050</td>
</tr>
<tr>
<td>4.</td>
<td>Management of stakeholders</td>
<td>65</td>
<td>4.2308</td>
<td>.76586</td>
</tr>
<tr>
<td>5.</td>
<td>Performance reporting</td>
<td>65</td>
<td>4.4923</td>
<td>.50383</td>
</tr>
<tr>
<td></td>
<td><strong>Aggregate mean</strong></td>
<td></td>
<td><strong>4.3846</strong></td>
<td></td>
</tr>
</tbody>
</table>

Source: Research Data, (2020)

Stakeholder identification is vital in effective communication, according to respective respondents with an average of 4.3846 as well as a standard deviation of 0.70027. An overall mean of 4.5385 with .70880 as a standard deviation, the proportion of participants felt that communication planning is critical in selecting the message to express to various audiences. With a mean of 4.2769 and a standard deviation of 0.76050, the participants indicate that information distribution methods are critical for successful project communication. An average mean of 4.2308 which indicates agree with a mean of 0.76586 shows that management of stakeholder expectations is a critical role in project communication planning. The results prove that project managers should consider managing stakeholder expectations from table 4.3 above before they communicate their project results since various stakeholders have different interests with a project and they expect communication as per their interests. The findings show that an average of 4.4923 and a standard deviation of .50383 which indicates the majority, performance reporting is critical in calculating
project communication effectiveness. The overall mean of variable is 4.3846 which shows a strong agree reply that communication is a very important factor for increased performance in a project.

This is supported by the study of De Carvalho (2014) that stakeholder selection is important since it helps to understand key people who are interested in the project and the type of information, they need during project communication. This is backed by the research of Muszynska et al. (2015) that project planning enables project managers to decide what message to send to various stakeholders as per their interests in the project at the right time. This correlates to the findings of Rajablu et al. (2015) that successful project communication needs good information distribution channels to reach intended project stakeholders at the right time and with the accurate messages. This is reinforced by the study of Marlow et al. (2018) that various project has different stakeholders who have unique expectations and therefore they need different information to understand how the project is catering for their interests. This means that project managers should consider conducting performance assessment to determine the scope of the team's achievement and report specific results. Muszynska et al. (2015) found that performance reporting helps participants know the viability of the project as well as areas that require strong cooperation for enhanced efficiency.

4.4.2 Project Risk Management Techniques

The scholar enquired from respondents to rate their agreement towards project risk techniques in their real estate development projects in Nairobi City County.

Table 4. 4 Project Risk Techniques

<table>
<thead>
<tr>
<th>No</th>
<th>Risk management factors</th>
<th>Sample size</th>
<th>Mean</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Risk management planning</td>
<td>65</td>
<td>4.4462</td>
<td>.63813</td>
</tr>
<tr>
<td>2.</td>
<td>Risk identification</td>
<td>65</td>
<td>4.7077</td>
<td>.45836</td>
</tr>
<tr>
<td>3.</td>
<td>Qualitative risk analysis</td>
<td>65</td>
<td>3.9385</td>
<td>.89925</td>
</tr>
<tr>
<td>4.</td>
<td>Quantitative risk analysis</td>
<td>65</td>
<td>3.9231</td>
<td>1.05041</td>
</tr>
<tr>
<td>5.</td>
<td>Planning risk responses</td>
<td>65</td>
<td>4.4769</td>
<td>.61511</td>
</tr>
<tr>
<td>6.</td>
<td>Monitoring and controlling</td>
<td>65</td>
<td>4.7077</td>
<td>.45836</td>
</tr>
</tbody>
</table>
An average of 4.4462 with a sd of .63813, refer to table 4.4, shows that risk management planning is essential in ensuring the project is successful. This indicates that project managers should consider risk management planning to ensure successful project implementation. A mean of 4.7077 as well as a small standard deviation of .45836 confirms that risk identification is always an important factor in risk mitigation in project management. An typical of 3.9385 with a sd of .89925 shows that qualitative risk analysis is an important factor in risk management strategy. The results confirm that each project needs qualitative risk analysis in order to boost risk management strategies to achieve higher performance. An average of 3.9231 with a sd of 1.05041 presents a higher variation in responses since some respondents do not understand the importance of quantitative risk analysis while others think it’s not important in risk organisation strategies.

The outcomes show that the most of participants (4.4769) with a standard deviation of .61511 agreed that anticipating risks and establishing contingency measures was critical to successful project completion. The results show that all respondents with an average of 4.7077 and a sd of .45836 approved that monitoring and controlling is important in evaluating the effectiveness of a company’s risk management strategies in an organization. The overall mean of 4.3667 signposts that utmost of participants agreed that project risk management is an important technique in project management.

The results correlate with the study of Qazi et al. (2016) that risk management planning helps to address ways on how risks will be mitigated thus enabling project leaders to perform the process of project implementation effectively resulting in successful projects. This is reinforced by the findings of Marcelino-Sadaba et al. (2014) that risk identification helps in risk mitigation thus enabling a project to run with minimal risks and problems that affect the overall results. This correlates with the study of Carvalho & Rabechini (2015) that qualitative risk analysis creates effectiveness in risk management strategies of a company hence effective project implementation. Therefore, although the most of participants agreed that quantitative risk analysis is significant in risk management strategies, some organizations seem they do not consider using quantitative risk analysis in their risk management strategies. However, this dissociates with the study of Pan and
Tomlinson (2016) that quantitative risk analysis is commonly used by organizations to manage risks in their projects. Muriana & Vizzini (2017) state that planning risk responses enable an organization to understand risks that need quick responses and minimize failure of the project. The study correlates with the outcomes of the study of Kivila et al. (2017) that monitoring and controlling helps project managers to assess how effective the risk management strategies are to ensure the overall results are good.

4.4.3 Project Quality Control Techniques

The scholar inquired from participants to rate their agreement towards project quality techniques in their real estate development projects in Nairobi City County.

Table 4. 5 Project Quality Control Techniques

<table>
<thead>
<tr>
<th>No:</th>
<th>Project Quality Management Factors</th>
<th>Sample size</th>
<th>Mean</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Quality planning</td>
<td>65</td>
<td>4.5385</td>
<td>.61433</td>
</tr>
<tr>
<td>2.</td>
<td>Quality assurance processes</td>
<td>65</td>
<td>4.8154</td>
<td>.39100</td>
</tr>
<tr>
<td>3.</td>
<td>Quality control</td>
<td>65</td>
<td>4.5692</td>
<td>.55816</td>
</tr>
<tr>
<td>4.</td>
<td>Continual improvement</td>
<td>65</td>
<td>4.3692</td>
<td>.65118</td>
</tr>
<tr>
<td></td>
<td>Aggregate mean</td>
<td></td>
<td>4.5731</td>
<td></td>
</tr>
</tbody>
</table>

Source: Research Data, (2020)

An average of 4.5385 and a sd of.6133, the popular of participants established that quality planning is critical to ensuring successful project completion in an organisation. According to the findings, respondents agreed that quality assurance methods enable adherence to project quality criteria in a company, with an middling of 4.8154 and a sd of.39100. Several participants with an average of 4.5692 and a sd of .5516 established that quality control is important in attaining the safety and usability of real estate projects. The results with a mean of 4.3692 and a sd of .65118 reveal that project managers in real estate should consider using continual improvement in their construction projects to benefit through reduced waste, costs, and quick completion of projects. The average mean of 4.3667 reveals that all participants agreed that project quality control is an important factor in project management and it determines the overall performance.
The results are reinforced by the research of Silvius et al. (2017) that quality planning provides project managers with an ability to schedule activities appropriately thus completing their projects successfully. Quality assurance processes are necessary for project management since they provide an ability to adhere to quality specifications of a project which correlates with the endings of the research of Asberg et al. (2016) that quality assurance is critical for a successful project since it helps to show specifications of each project and its deliverables. The results enrich the study of Wandersman et al. (2012) on the significance of quality control in attaining the safety and usability of real estate projects. The outcomes are reinforced by the research of Banihashemi et al. (2017) that continual improvement is an important factor in reducing wastes and costs thus creating efficiency in the execution of projects.

4.4.4 Project Procurement Techniques

The investigator inquired respondents to indicate their responses on project procurement techniques practices in their real estate projects in Nairobi County.

Table 4.6 Project Procurement Techniques

<table>
<thead>
<tr>
<th>No:</th>
<th>Project procurement management factors</th>
<th>Sample size</th>
<th>Mean</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Material specification</td>
<td>65</td>
<td>4.6000</td>
<td>.49371</td>
</tr>
<tr>
<td>2.</td>
<td>Vendor selection</td>
<td>65</td>
<td>4.7077</td>
<td>.45836</td>
</tr>
<tr>
<td>3.</td>
<td>Contracting</td>
<td>65</td>
<td>4.6769</td>
<td>.47129</td>
</tr>
<tr>
<td>4.</td>
<td>Procurement control</td>
<td>65</td>
<td>4.4462</td>
<td>.66216</td>
</tr>
<tr>
<td>5.</td>
<td>Measurement of procurement performance</td>
<td>65</td>
<td>4.7231</td>
<td>.45096</td>
</tr>
<tr>
<td></td>
<td>Aggregate mean</td>
<td></td>
<td>4.6308</td>
<td></td>
</tr>
</tbody>
</table>

Source: Research Data, (2020)

An average of 4.600 with a sd of 0.49371 reveals how the specification of the quality and quantity of materials to be procured in real estate development is important in ensuring project success. The results with an average of 4.7077 of respondents and a sd of 0.45836 approved that vendor selection is an important process in guaranteeing the availability of supplies at the best cost in a real estate project. An average mean of 4.6769 and a standard deviation of .47129 agreed that
contracting is a crucial process in guaranteeing value for money and supplier’s reliability in a real estate project. An overall mean of 4.4462 with a standard deviation of .66216 confirms that procurement control helps real estate developers to manage procurement expenditure and help in setting appropriate priorities during project implementation. The results with a mean of 4.7231 and a sd of 0.45096 approved that measurement of procurement performance is essential in ensuring adherence to organizational strategy and project objectives in a real estate project. The overall mean of the project procurement variable is 4.6308 which shows a strong agreement that procurement technique is an imperative aspect in project implementation.

The results reveal that project managers and other relevant personnel should specify both the quality and quantity of materials needed in a real estate project before the procurement process. This is supported by the research of Fernandez-Aleman et al. (2015) that material specification is important in a project since it shows the nature of materials to be procured for a project. The results also correlate with the study of Liu & Yuliani (2016) that vendor selection is an important selection since it helps an organization to assess available vendors and select the best vendor who would ensure a stable supply of quality materials needed for a project. As per the results, project managers should consider contracting as an important process so as to ensure there is a guarantee of value for money and supplier’s reliability in their project. This is supported by the consequences of the study of Suprapto et al. (2016) that a process of contracting should be conducted in the best way to ensure all supplier’s reliability is ensured and there is organizational value for money. The results De Araujo et al. (2017) that procurement control helps real estate developers to manage procurement expenditure needed in a project and therefore set areas that need priorities in the whole project enactment. The study of Wibowo & Sholeh (2015) that measuring procurement performance helps an organization to adhere to its organizational strategies and project objectives thus ensuring successful implementation of projects.

**4.4.5 Project Human Resource Techniques**

The study asked respondents to rate how human resource techniques planning helps a real estate projects to identify current and future human resource needs for a project.

Table 4. 7 Project Human Resource Techniques
<table>
<thead>
<tr>
<th>No:</th>
<th>Project Human Resource Management Factors</th>
<th>Sample size</th>
<th>Mean</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Human resources planning</td>
<td>65</td>
<td>4.7538</td>
<td>.43412</td>
</tr>
<tr>
<td>2.</td>
<td>Acquisition of project team</td>
<td>65</td>
<td>4.4000</td>
<td>.78661</td>
</tr>
<tr>
<td>3.</td>
<td>Development of a project team</td>
<td>65</td>
<td>4.4615</td>
<td>.66325</td>
</tr>
<tr>
<td>4.</td>
<td>Effective management of project teams</td>
<td>65</td>
<td>4.5077</td>
<td>.64039</td>
</tr>
</tbody>
</table>

**Aggregate mean** 4.5308

Source: Research Data, (2020)

An average of 4.7538 and a sd of 0.43412 reveals that human resource planning is precarious in any assignment implementation and in the identification of current and future human resource needs and therefore project managers should embrace it for effective project implementation. A mean of 4.400 with a sd of .78661 expresses that the acquisition of a capable project team is important in helping an organization in project execution, refer to table 4.7. An overall mean of 4.4615 with a sd of .66325 confirms that the development of a project team is a key strategy in ensuring new skills are developed which creates effectiveness in project execution. A mean of 4.5077 with a sd indicates that effective management of project teams is a crucial activity since it leads to the effective delivery of respective mandates in a project. The average mean of 4.5308 shows that human resource techniques are important factor in project implementation in any project.

The results correlate with the study of Al-Qudah et al. (2020) that human resource planning is essential in creating and setting a direction in an organization since it schedules future activities and needs essential project implementation in an organization. The research of Senaratne & Samaraweera (2015) that the acquisition of a capable project team helps an organization in effective project execution thus enabling an organization to achieve higher performance. The results correlate with the study of Liu & Cross (2016) that a project needs a flexible project team with skills that enable them to perform project duties more effectively thus leading to higher performance. This is supported by the research of Mir & Pinnington (2014) that management of project teams leads to effective implementation of a project since each project team is able to understand his or her areas of job performance thus doing the correct activity at the right time.
4.4.6 Project Performance

The study asked respondents to assess how project operation management helps a real estate organization in achieving higher performance.

Table 4. 8 Project Performance

<table>
<thead>
<tr>
<th>No:</th>
<th>Project performance management factors</th>
<th>Sample size</th>
<th>Mean</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Completion of projects within budgeted cost</td>
<td>65</td>
<td>4.5077</td>
<td>0.73150</td>
</tr>
<tr>
<td>2.</td>
<td>Completion of projects within set timelines</td>
<td>65</td>
<td>4.5692</td>
<td>0.49904</td>
</tr>
<tr>
<td>3.</td>
<td>Customer satisfaction</td>
<td>65</td>
<td>4.6308</td>
<td>0.57471</td>
</tr>
</tbody>
</table>

**Aggregate mean** 4.5692

Source: Research Data, (2020)

The outcomes reveal that completion of the projects within the budgeted cost is a measure of accomplishment of a project and therefore project managers should guarantee flexible budgets are allocated to ensure projects are completed within the right budget which is confirmed by a mean of 4.5077 and a standard deviation of .73150. An average of 4.5692 with a standard deviation of .49904 reveals that completion of projects within the set timelines is an important measure of project success. Average mean of 4.6308 with a standard deviation of .57471 indicates that attaining customer satisfaction is an important measure of project success. The aggregate mean of 4.5692 shows that project performance measures are important in real estate projects in Nairobi County.

The results correlate with the research of Babar et al. (2017) that completion of the projects within the right budget is a clear success evaluation of the project in an organization. The results indicate that project managers should measure the success of projects by assessing whether they are completed in the set timeline, which correlates with the research of Chesiyna & Wanyoike (2016) that project stakeholders are happy when projects are completed as per outlines and with the set budget. The results reveal that project managers should aim to achieve customer satisfaction in...
projects since customers are satisfied with projects completed in the right manner and with good quality, which is supported by Oppong et al. (2017) study that client contentment is a key parameter that is successful projects since it shows the deliverables of the project were achieved effectively.

4.4.7 Summary of descriptive statistics

Table 4.9 Summary of Descriptive statistics

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Communication Techniques</td>
<td>65</td>
<td>4.3846</td>
<td>0.6879</td>
</tr>
<tr>
<td>Project Risk Techniques</td>
<td>65</td>
<td>4.3667</td>
<td>0.6866</td>
</tr>
<tr>
<td>Project Quality Control Techniques</td>
<td>65</td>
<td>4.5731</td>
<td>0.5537</td>
</tr>
<tr>
<td>Project Procurement Techniques</td>
<td>65</td>
<td>4.6308</td>
<td>0.5073</td>
</tr>
<tr>
<td>Project Human Resource Techniques</td>
<td>65</td>
<td>4.5308</td>
<td>0.6311</td>
</tr>
<tr>
<td>Procurement Performance</td>
<td>65</td>
<td>4.5692</td>
<td>0.6018</td>
</tr>
</tbody>
</table>

Source: Research Data, (2020)

Table 4.9 above indicates that overall responses for the study. 65 respondents participated in the questionnaire successfully. Project communication techniques had an average mean of 4.3846 and 0.6879 standard deviation. The project risk techniques had a total mean of 4.3667 and 0.6866 standard deviation. The project quality control techniques had an average mean of 4.5731 and 0.5537 standard deviation. The project procurement technique had an average mean of 4.6308 and 0.5073 a standard deviation. The project human resource techniques had an average mean of 4.5308 and 0.6311 standard deviation while the performance reporting had an average of 4.5692 and 0.6018 standard deviation. The dependent variable project performance had an average of 4.5092 and 0.6114 standard deviation.
### 4.5 Inferential Statistics

#### 4.5.1 Overall Correlation Analysis

Table 4. 10 Overall Correlation Analysis

<table>
<thead>
<tr>
<th>Project Communication Techniques</th>
<th>Project Risk Techniques</th>
<th>Project Quality Control Techniques</th>
<th>Project Procurement Techniques</th>
<th>Project Human Resource Techniques</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Communication Techniques</td>
<td>Pearson Correlation</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.564**</td>
<td>.617**</td>
<td></td>
</tr>
<tr>
<td>Project Risk Techniques</td>
<td>Pearson Correlation</td>
<td>.564**</td>
<td>.617**</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>Project Quality Control Techniques</td>
<td>Pearson Correlation</td>
<td>.617**</td>
<td>.935**</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>Project Procurement Techniques</td>
<td>Pearson Correlation</td>
<td>.935**</td>
<td>.852**</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>Project Human Resource Techniques</td>
<td>Pearson Correlation</td>
<td>.843**</td>
<td>.796**</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>Project Performance</td>
<td>Pearson Correlation</td>
<td>.845**</td>
<td>.842**</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
<td></td>
</tr>
</tbody>
</table>

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

Source: Research Data, (2020)

According to the outcomes above, project communication techniques has a significant relationship with project performance of real estate project ($r=0.682^{**}$, $p=0.000$). The results also show that project risk management technique has a very strong and positive association with project performance of a real estate projects in Nairobi city ($r=0.845^{**}$, $p=0.000$). The project quality control technique was found to have a strong positive relationship with real estate project
performance (.781**, r=0.000). The project procurement techniques was found to have a very strong relationship with project performance in real estate projects in Nairobi County (.885**, r=0.000). Finally, human resource techniques was found to have a strong positive relationship (.742**, r=0.000) with real estate projects performance in Nairobi City County, Kenya. Therefore, all independent variables (project communication techniques, project risk techniques, project quality control techniques, project procurement techniques and project human resource techniques) have a strong relationship on the performance of real estate projects in Nairobi City.

4.5.2 Model of Fitness

Table 4. 11 Model of Fitness

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.906a</td>
<td>.821</td>
<td>.806</td>
<td>.24590</td>
</tr>
</tbody>
</table>

*a. Predictors: (Constant), Project Communication Techniques, Project Risk Techniques, Project Quality Control Techniques, Project Procurement Techniques, Project Human Resource Techniques*

Source: Research Data, (2020)

Table 4.11 presents the outcomes of the model of fitness of the research variables. These results indicate that project communication techniques, project risk techniques, project quality control techniques, project procurement techniques, and project human resource techniques were satisfactory to explain organizational project techniques and performance in real estate projects with a R square coefficient of 80.6% which explains variability of responses around its mean. This reveals that the five variables project communication techniques, project risk techniques, project quality control techniques, project procurement techniques, and project human resource techniques explains 80.6% of variations in performance in real estate projects in Nairobi City County.

4.5.3 Analysis of Variance

Table 4. 12 Analysis of Variance
<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>16.375</td>
<td>5</td>
<td>3.275</td>
<td>54.161</td>
<td>.000b</td>
</tr>
<tr>
<td>Residual</td>
<td>3.568</td>
<td>59</td>
<td>.060</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>19.942</td>
<td>64</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*a. Dependent Variable: Project Performance*


Source: Research Data, (2020)

The results in table 4.12 displays results on the analysis of variance (ANOVA). In order for the research significant, it is assumed that probability value (p) should be always be less than alpha value (Rouder et al. 2016). The outcomes shows that the model was significant for the study and analysis and therefore the independent variables project communications techniques, project risk techniques, project quality techniques, project procurement techniques and project human resource techniques are fit in prediction of performance of real estate projects in Nairobi County, Kenya. A F statistic value of 54.161 and a p value of .000b concludes that the overall regression model is significant.

### 4.5.4 Regression Coefficients

Table 4.13 Regression Coefficients

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>T</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>(Constant)</td>
<td>3.179</td>
<td>.657</td>
<td>4.836</td>
<td>.000</td>
</tr>
<tr>
<td>Project Communication</td>
<td>.596</td>
<td>.202</td>
<td>.285</td>
<td>.004</td>
</tr>
<tr>
<td>Techniques</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Project Risk Techniques</td>
<td>.522</td>
<td>.136</td>
<td>.361</td>
<td>.000</td>
</tr>
<tr>
<td>Project Quality Techniques</td>
<td>.589</td>
<td>.222</td>
<td>.259</td>
<td>.009</td>
</tr>
</tbody>
</table>
Table 4.13 above depicts the outcomes of the regression analysis. From the outcome the regression model is $y = 3.179 + 0.596x_1 + 0.522x_2 + 0.589x_3 + 0.694x_4 + 0.501x_5$. The model implies that on average without the effect of project communication techniques project risk techniques, project quality techniques, project procurement techniques and project human resource techniques (i.e when they are zero) project performance is 3.179. From the model, it is evident that a unit proliferation in project communication techniques causes a 0.596 increase in project performance, while an upsurge in project risk techniques causes a 0.522 increase in project performance. This is backed up by APM (2016) that stated that risk management reduces or eliminates the identified risks and emphasizes how to address threats and maximize opportunities using suitable management action. As per the results, an effective communication would be essential in projects since it helps in communication of project deliverables, risk factors hence helping project managers to avoid risks that may affect the project performance. This is indicated by the association between project communication and risk techniques used in a project.

Similarly, a unit rise in project quality causes a 0.589 rise in project performance as an increase in project procurement increases project performances by 0.694. Therefore, a practice of quality techniques such as quality control, quality assessment and evaluation is important because when combined with effective procurement practices is able to achieve improved project performance. Therefore, it is recommended that managers in projects in Nairobi City and in other projects should combine such practices to improve their project performance. This is supported by Moatazed-Keivani, Ghanbari-Parsa & Kagaya (2000) who argued that project quality techniques through the ISO 9000 standard series has led to the empowerment of an effective and valuable Quality Management System (QMS) in the department of construction which improves project performance management. However, an increase in project human resource management increases project management performance by 0.501. Therefore, the project managers should ensure good
human resource techniques such as good selection of project teams, development of employees' skills and training to ensure employees have skills that can improve their performance hence increased project performance.
CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the research summary of key findings, conclusions and recommendations deemed appropriate as per the research findings. The research recommendations are given as per the research objectives of this study.

5.2 Summary of the Study

The project aimed at investigating the influence of organisational project techniques and performance of real estate development projects in the Nairobi City County in Kenya. The findings were collected from personnel from real estate projects in the Nairobi City County through a structured questionnaire.

The study aimed to establish the extent to which project communication techniques, risk techniques, quality techniques, procurement techniques, and human resource techniques influence real estate development projects performance in Nairobi City County, Kenya. The majority of respondents who participated in the study were from projects which were 5 years and above. The majority of respondents had served in their respective projects for a period of more than one year and therefore they had enough information on the project techniques used in their real estate projects. However, the majority of projects where respondents came from had completed more than one project.

The majority of respondents agreed that stakeholder identification is an important part of project communication while other majority agreed that communication planning is essential in identifying what message to communicate to the project stakeholders, how and when. Most of respondents agreed that information distribution channels are an important consideration for successful communication in project implementation. Research respondents agreed that management of stakeholder expectations is an important factor in communication planning in real estate project in Nairobi City County. The results also indicate that all respondents agreed that performance reporting is key in measuring the effectiveness of project communication in project
implementation in real estate projects in Nairobi City County. The results were supported by a correlation coefficient which shows a strong contribution of communication techniques used by project managers in a real estate project. Therefore, the application and use of communication techniques is important and vital and it should be maximumly utilised by project managers in real estate projects in Nairobi City County.

The majority of respondents agreed that risk management planning is an important step in ensuring projects are successful. All respondents agreed that risk identification is an important factor in risk mitigation. The majority of respondents agreed that qualitative risk analysis is an important factor in risk management strategy. Most of respondents agreed that quantitative risk analysis is important in risk management strategy. The results indicate that the majority of respondents agreed that planning risk responses is key to anticipating risks and developing contingency measures in successful project completion. The results show that all respondents agreed that monitoring and controlling is important in assessing the effectiveness of company’s risk management strategies in a project. The contribution of risk techniques in project management is important as it is confirmed by a strong correlation coefficient. Therefore, an increase and effective utilisation of risk management techniques increases project performance in a real estate projects.

Quality planning is essential in ensuring successful project completion. All respondents agreed that quality assurance processes ensure adherence to project quality specifications in an organization. The majority of respondents agreed that quality control is important in attaining the safety and usability of real estate projects. The majority of respondents agreed that continual improvement in construction projects is essential in reducing waste, costs and speeding up projects. The results are confirmed by a strong correlation coefficient which shows that an application of quality techniques in projects management increases the performance of the overall project.

The results indicate that all respondents agreed that specification of the quality and quantity of materials to be procured in real estate development is important in ensuring project success. The results also indicated that most of respondents agreed that vendor selection is an important process in guaranteeing the availability of supplies at best cost in a real estate project. The majority of respondents agreed that procurement control helps real estate developers to manage procurement expenditure and set appropriate priorities during project implementation. The results show that all
of respondents agreed that measurement of procurement performance is essential in ensuring adherence to organizational strategy and project objectives in a real estate project. Therefore, the results are confirmed by a strong regression coefficient which shows that procurement techniques are important and its utilisation increases the project performance in the real estate projects.

The results indicate that all respondents agreed that developing a human resource planning helps the organisation to identify current and future human resources needs for a project. The majority of respondents agreed that acquisition of a capable project team helps an organisation in project execution. The majority of respondents agreed that developing a project team is important in enabling acquisition of new skills that makes project team more effective in project execution. The majority of the respondents agreed that effective management of project teams is important in ensuring effective implementation and delivery of duties. Majority of respondents indicates that effective management of project teams is a crucial activity since it leads to effective delivery of respective mandates in a project. The results indicate a strong regression which shows that the project human resource techniques contribute significantly to project performance in a real estate performance.

The majority of respondents agreed that completing projects within cost is an important measure of project success in real estate projects. The results reveal that completion of the projects within the budgeted cost is a measure of success of a project and therefore project managers should ensure flexible budgets are allocated to ensure projects are completed within the right budget. The majority of respondents agreed that completion of projects within the set timelines is an important measure of project success. The majority of respondents agreed that attaining customer satisfaction is an important measure of project success.

5.3 Conclusion

The results of the study reveal that project communication techniques, project risk techniques, project quality control techniques procurement techniques and project human resource techniques have statistically significant effect on the project performance of real estate development projects in Nairobi City County. The research respondents agreed to have experience and knowledge on each of the techniques on project performance management in real estate projects in Nairobi City County. The results also indicate that project communication techniques surpasses other
management techniques in real estate projects and therefore it would help in other management if it is employed in the right way.

The study also show that that risk techniques planning is an important step in ensuring projects are successful. This is because risk techniques enables real estate projects to evaluate the possible areas of risk and the therefore enable the companies to curtail the possibility of risk. The findings shows that through risk techniques real estate projects are able improve their project performance.

The study finding also shows that project procurement techniques is vital to project performances. This implies that real estates projects should ensure high level of intergrety to ensure that the due procurement process is followed to the later to enable Project Performance of various projects.

5.4 Recommendations

According to the study, project communication techniques, procurement techniques, risk techniques, human resource techniques and quality control techniques are important techniques in measuring performance of real estate projects. Therefore, the following recommendations are made to ensure effective implementation and higher project performance.

The real estate projects should establish communication committee and managers for each project to ensure there is overall management of the performance which will enable them to appropriately and timely disseminate important information to promote Project Performance.

The real estate projects should train its employees on risk management techniques to ensure the process of risk identification and mitigation is done in the right way which will significantly enable them to curtail the lossess associated with risk such as incread expenses thus promoting Project Performance.

The real estate project should ensure proper quality control are implemented and ensured for each project so as to ensure maximum quality for their projects which will ensure Project Performance which brings about customer loyalty and thus high profitability.

The real estate project managers should carry out continuous assessment for procurement activities in each project to ensure the procurement process aligns with the project objectives and goals. This
is vital as it will enable the real estates projects to uphold rules and to promote ethics as well as promote Project Performance which enables them to achieve their goals and objectives.

The real estate project managers should motivate its team and provide essential resources needed at the right time for their projects to ensure higher performance which translates into improved reputation and financial performances.

5.5 Suggestions for further study

The study has found that organisational project techniques and performance of real estate development projects in Nairobi City County in Kenya have a great impact. The study used quantitative techniques to collect data from real estate project stakeholders. Therefore, a further study can be carried out by use of qualitative methods such as interviews to collect responses from real estate individuals and examine whether the similar findings are going to be achieved. In addition, to investigate whether the similar trend as found by this study is in other projects in other counties, a similar study should be carried in other counties in Kenya.
REFERENCES


Asberg, D., Nilsson, M., Olsson, S., Samuelsson, J., Svensson, O., Klick, S., ... & Karlsson, A. (2016). A quality control method enhancement concept—continual improvement of


Neyestani, B. (2017). Seven basic tools of quality control: The appropriate techniques for solving quality problems in the organizations. *Available at SSRN 2955721*.


APPENDICES

APPENDIX ONE: APPROVAL LETTER

KENYATTA UNIVERSITY
GRADUATE SCHOOL

E-mail: dean-graduate@kunac.ke
Website: www.ku.ac.ke

P.O. Box 43844, 00100
NAIROBI, KENYA
Tel. 810901 Ext. 4150

Internal Memo

FROM: Dean, Graduate School
TO: Issah Muhseni Karisi
C/o Management Science Dept.

DATE: 20th November, 2019
REF: DS3/CTY/PT/23999/2015

SUBJECT: APPROVAL OF RESEARCH PROPOSAL

We acknowledge receipt of your revised Research Proposal as per our recommendations raised by the Graduate School Board of 7th August, 2019 entitled “Organisational Project Techniques and Performance of Real Estate Development Companies in Nairobi City County Kenya”.

You may now proceed with your Data Collection, subject to Clearance with Director General, National Commission for Science, Technology and Innovation.

As you embark on your data collection, please note that you will be required to submit to Graduate School completed Supervision Tracking Forms per semester. The form has been developed to replace the Progress Report Forms. The Supervision Tracking Forms are available at the University’s Website under Graduate School webpage downloads.

Thank you.

[Signature]
Dean, Graduate School

C.c. Chairman, Department of Management Science

Supervisors:

1. Ms. Gladys Simulai
   C/o Department of Management Science
   Kenyatta University

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APPENDIX TWO: NACOSTI LETTER

This is to certify that Miss. FAITH KARIUKI of Kenyatta University, has been licensed to conduct research in Nairobi on the topic: ORGANIZATIONAL PROJECT TECHNIQUES AND PERFORMANCE OF REAL ESTATE DEVELOPMENT COMPANIES IN NAIROBI CITY COUNTY KENYA, for the period ending 24 January 2021.

License No. NACOSTEP/20/3578

Applicant Identification Number

NOTE: This is a computer generated License. To verify the authenticity of this document, scan the QR Code using a QR scanner application.
APPENDIX THREE: LETTER OF INTRODUCTION

FAITH MUTHONI KARIUKI
Kenyatta University
P.O. Box 43844, GPO
Nairobi, Kenya.
10TH JAN 2019

TO WHOM IT MAY CONCERN

REF: QUESTIONNAIRE ADMINISTRATION

I am a student Kenyatta University taking a Master of Business Administration (MBA) degree in Project Management. I am currently undertaking a project titled: "Organizational Project Techniques and Performance of Real Estate Development Projects in Nairobi City County, Kenya”.

I would appreciate your cooperation in filling the questionnaire attached, as part of my data collection for analysis.

Thank you for your time.

Yours sincerely,

Faith Kariuki
APPENDIX FOUR: QUESTIONNAIRE

A STUDY ON ORGANISATIONAL PROJECT TECHNIQUES AND PERFORMANCE OF REAL ESTATE DEVELOPMENT PROJECTS IN NAIROBI CITY COUNTY, KENYA.

QUESTIONNAIRE ADMINISTERED TO PROJECT MANAGERS

I am carrying out a study on the organizational project techniques and performance of real estate development projects in Nairobi City County, Kenya. Please answer the following questions by ticking in the spaces provided (√) and / or giving an explanation as may be necessary. The following given in this questionnaire shall be treated as confidential and shall be used for no other purposes other than this study. Your assistance in the completion of this questionnaire will be highly appreciated.

1. Age of the projects in Kenya.
   a. Less than 1 years [  ]
   b. 5- 10 years [  ]
   c. 10 – 20 years [  ]
   d. Above 20 years [  ]

2. Duration of service in the projects.
   a. Less than 1 year [  ]
   b. 1-5 years [  ]
   c. 6-10 years [  ]
   d. Above years [  ]

3. Number of projects completed in the last 5 years.
   a. Less than 1 project [  ]
   b. 1- 3 projects [  ]
   c. 4-5 projects [  ]
   d. Above 5 projects [  ]
4. Please indicate the extent to which you agree or disagree with the following statements by using the scale of 1-5 where 1 = Strongly Disagree (SD), 2 = Disagree (D), 3 = Neutral (N), 4 = Agree (A) and 5 = Strongly Agree (SA).

<table>
<thead>
<tr>
<th>Project Communication Aspects</th>
<th>1(SD)</th>
<th>2(D)</th>
<th>3(N)</th>
<th>4(A)</th>
<th>5(SA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. In my company, stakeholder identification is an important part of project communication</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Communication planning is essential in identifying what message to communicate to which category of audience, how, and when.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Information distribution channels are an important consideration for successful communication</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Management of stakeholder expectations is an important factor in communication planning.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Performance reporting is key in measuring the effectiveness of project communication</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>
5. How has project communication management, or lack of it, impacted your project performance?...........................................................................................................................
........................................................................................................................................
........................................................................................................................................

PROJECT RISK TECHNIQUES

6. Please indicate the extent to which you agree or disagree with the following statements

<table>
<thead>
<tr>
<th>Risk Techniques Factors</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(SD)</td>
<td>(D)</td>
<td>(N)</td>
<td>(A)</td>
<td>(SA)</td>
</tr>
<tr>
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<td>1</td>
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<td>3</td>
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<td></td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>In my company, risk planning is an important step ensuring project success.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Risk identification is an important factor in risk mitigation.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Qualitative risk analysis is an important factor in our risk management strategy.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Quantitative risk analysis is an important factor in our risk management strategy.

Planning risk responses is key to anticipating risks and developing contingency measures to ensure successful project completion.

Monitoring and controlling are important in assessing the effectiveness of the company’s risk management strategies.

---

**PROJECT QUALITY CONTROL TECHNIQUES**

7. Please indicate the extent to which you agree or disagree with the following statements.

<table>
<thead>
<tr>
<th>Project Quality techniques</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(SD)</td>
<td>(D)</td>
<td>(N)</td>
<td>(A)</td>
<td>(SA)</td>
</tr>
</tbody>
</table>
Quality planning is essential in ensuring successful project completion.

Quality assurance processes ensure adherence to project quality specifications.

Quality control is important in attaining the safety and usability of real estate projects.

Continual improvement in construction projects is essential in reducing waste, costs and speeding up project completion.

8. How has project quality management, or lack of it, impacted your project performance?

PROJECT PROCUREMENT TECHNIQUES

9. Please indicate the extent to which you agree or disagree with the following statements.
### Project Procurement Technique

<table>
<thead>
<tr>
<th></th>
<th>Specification of the quality and quantity of materials to be procured in real estate development is important in ensuring project success.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Vendor selection is an important process in guaranteeing the availability of supplies at best cost.</td>
</tr>
<tr>
<td>3</td>
<td>Contracting is crucial in guaranteeing value for money and supplier’s reliability.</td>
</tr>
<tr>
<td>4</td>
<td>Procurement control helps real estate developers to manage procurement expenditure and set appropriate priorities during project implementation.</td>
</tr>
<tr>
<td>5</td>
<td>Measurement of procurement performance is essential in ensuring adherence to organizational strategy and project objectives.</td>
</tr>
</tbody>
</table>
10. How has project procurement management, or lack of it, impacted your project performance?

PROJECT HUMAN RESOURCE TECHNIQUES

11. Please indicate the extent to which you agree or disagree with the following statements.

<table>
<thead>
<tr>
<th>Project Human Resource Techniques</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(SD)</td>
<td>(D)</td>
<td>(N)</td>
<td>(A)</td>
<td>(SA)</td>
</tr>
<tr>
<td>1</td>
<td>Developing a Human Resources Planning helps the organization to identify current and future human resources needs for a project.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Acquisition of a capable project team helps the organization in project execution.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Developing a project team enables them to acquire new skills which makes the teams more effective in project execution.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Effective management of project teams is important in ensuring their delivery on their respective mandates.

12. How has project human resource management, or lack of it, impacted your project performance?

PROJECT PERFORMANCE

13. Please indicate the extent to which you agree or disagree with the following statements.

<table>
<thead>
<tr>
<th>Project Performance</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(SD)</td>
<td>(D)</td>
<td>(N)</td>
<td>(A)</td>
<td>(SA)</td>
</tr>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Completing projects within cost is an important measure of project success.</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Completing projects within the set timelines is an important measure of project success.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Attaining customer satisfaction is an important measure of project success.

14. In your opinion, what should your organisation do in order to improve project performance?

..............................................................................................................................................................................................
..............................................................................................................................................................................................
..............................................................................................................................................................................................
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APPENDIX SIX: REAL ESTATE DEVELOPMENT PROJECTS

<table>
<thead>
<tr>
<th>ITEM</th>
<th>NAME</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Acorn Group Limited</td>
</tr>
<tr>
<td>2</td>
<td>ACTi’s Real Estate Developers</td>
</tr>
<tr>
<td>3</td>
<td>AL Fabrication Solutions</td>
</tr>
<tr>
<td>4</td>
<td>AMS Properties Ltd</td>
</tr>
<tr>
<td>5</td>
<td>Anjarwalla &amp; Khanna Advocates</td>
</tr>
<tr>
<td>6</td>
<td>Axis Real Estate Limited</td>
</tr>
<tr>
<td>7</td>
<td>Bahati Ridge Development Ltd</td>
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<tr>
<td></td>
<td>Company Name</td>
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<td>-------------------------------------------</td>
</tr>
<tr>
<td>8</td>
<td>Bamburi Cement Ltd</td>
</tr>
<tr>
<td>9</td>
<td>Blueline Properties Ltd</td>
</tr>
<tr>
<td>10</td>
<td>Britam</td>
</tr>
<tr>
<td>11</td>
<td>Broll Kenya Ltd</td>
</tr>
<tr>
<td>12</td>
<td>Camelot Consultants Ltd /Lantana Homes</td>
</tr>
<tr>
<td>13</td>
<td>CEMEX Holdings Ltd</td>
</tr>
<tr>
<td>14</td>
<td>CFL and Company Advocates</td>
</tr>
<tr>
<td>15</td>
<td>Chigwell Holdings Limited</td>
</tr>
<tr>
<td>16</td>
<td>Coral Property International Ltd</td>
</tr>
<tr>
<td>17</td>
<td>Coulson Harney Advocates</td>
</tr>
<tr>
<td>18</td>
<td>County Home Developers Ltd / Runda View</td>
</tr>
<tr>
<td>19</td>
<td>Cytonn Real Estate</td>
</tr>
<tr>
<td>20</td>
<td>Davis and Shirtliff</td>
</tr>
<tr>
<td>21</td>
<td>Diamond Property Merchants</td>
</tr>
<tr>
<td>22</td>
<td>DLR Group</td>
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<tr>
<td>23</td>
<td>Dream Home Construction Company Ltd</td>
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<tr>
<td>24</td>
<td>Dunhill Consulting Ltd</td>
</tr>
<tr>
<td>25</td>
<td>Edifice Ltd</td>
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<tr>
<td>26</td>
<td>Enkavilla Properties Ltd</td>
</tr>
<tr>
<td></td>
<td>Company Name</td>
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</tr>
<tr>
<td>27</td>
<td>Emerge Developments</td>
</tr>
<tr>
<td>28</td>
<td>Fedha (Management) Ltd</td>
</tr>
<tr>
<td>29</td>
<td>Galaxy Heritage Ltd</td>
</tr>
<tr>
<td>30</td>
<td>Glamart Properties Ltd</td>
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<td>31</td>
<td>ELM Ridge Ltd</td>
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<tr>
<td>32</td>
<td>Homescopes Properties Ltd</td>
</tr>
<tr>
<td>33</td>
<td>Heri Homes Ltd</td>
</tr>
<tr>
<td>34</td>
<td>HASS Consult Ltd</td>
</tr>
<tr>
<td>35</td>
<td>Green Kenya Corporation Ltd</td>
</tr>
<tr>
<td>36</td>
<td>Housing Finance and Development Investment (HFDI)</td>
</tr>
<tr>
<td>37</td>
<td>Ijenga Ventures Ltd</td>
</tr>
<tr>
<td>38</td>
<td>Imaran Real Estate Ltd</td>
</tr>
<tr>
<td>39</td>
<td>Jabez Properties</td>
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<td>KAM Homes Investment Ltd</td>
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<td>41</td>
<td>Karibu Homes</td>
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<tr>
<td>42</td>
<td>Karume Holdings Limited</td>
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<tr>
<td>43</td>
<td>Knight Frank Kenya Ltd</td>
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<tr>
<td>44</td>
<td>Kzanaka Limited</td>
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<tr>
<td>45</td>
<td>Laser Property Services Limited</td>
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<tr>
<td>46</td>
<td>Leo Capital Holdings Ltd</td>
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<td>47</td>
<td>Manrik Group</td>
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<tr>
<td>48</td>
<td>Mentor Management Limited</td>
</tr>
<tr>
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<td>Mwanzoni Ltd</td>
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<td>50</td>
<td>Mugumo Developments Ltd</td>
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<td>51</td>
<td>Natureville Homes</td>
</tr>
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<td>Oak Park Properties Ltd</td>
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<td>Optiven Limited</td>
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<td>54</td>
<td>Paradigm Projects Ltd</td>
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<td>55</td>
<td>Pioneer Holdings (Africa) Ltd</td>
</tr>
<tr>
<td>56</td>
<td>Pediment Developers</td>
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<td>PDM (Kenya) Ltd</td>
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<td>Parmalen Investments Ltd</td>
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<td>Property Reality Company Ltd</td>
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<td>Rozana Properties Ltd</td>
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<td>61</td>
<td>Sigimo Enterprises Ltd</td>
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<td>Spartan Developers Limited</td>
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<td>Tatu City Ltd</td>
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<td>The Epic Properties Ltd</td>
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<td>Company Name</td>
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<td>Tilisi Developments Limited</td>
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<td>Urban Nirvana Property Solutions Ltd</td>
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<td>VAAL Real Estate Ltd</td>
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