

**MONITORING AND EVALUATION PROCESS ON PERFORMANCE OF PRIVATE  
RESIDENTIAL BUILDING PROJECTS IN NAIROBI COUNTY KENYA; A CASE OF  
SELECTED PRIVATE BUILDING PROJECTS.**

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**A Research Project Submitted in Partial Fulfillment of the Requirements for the Award of  
the Master's Degree in Monitoring and Evaluation, School of Business at Africa Nazarene  
University.**

**June, 2024**

**DECLARATION**

I, the undersigned, declare that this research project is my original work and that it has not been presented in any other university or institution for academic credit.

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## **DEDICATION**

This research project is dedicated to my dear husband and friend Kenneth Gikonyo, my children, Alta and Oslo, my parent Nancy Migaa for encouraging and ensuring I uninterruptedly pursue my career dreams.

## TABLE OF CONTENTS

<b>DECLARATION</b> .....	<b>ii</b>
<b>ACKNOWLEDGEMENT</b> .....	<b>iii</b>
<b>DEDICATION</b> .....	<b>iv</b>
<b>TABLE OF CONTENTS</b> .....	<b>v</b>
<b>LIST OF TABLES</b> .....	<b>ix</b>
<b>LIST OF FIGURES</b> .....	<b>x</b>
<b>DEFINITION OF TERMS</b> .....	<b>xi</b>
<b>ABSTRACT</b> .....	<b>xii</b>
<b>CHAPTER ONE</b> .....	<b>14</b>
<b>INTRODUCTION AND BACKGROUND TO THE STUDY</b> .....	<b>14</b>
1.1 Introduction .....	14
1.2 Background to the Study .....	14
1.2.1 Private Building Projects Performance.....	15
1.2.2 Monitoring and Evaluation Process.....	15
1.2.3 Monitoring and Evaluation Planning.....	17
1.2.4 Capacity Building .....	17
1.2.4 Monitoring and Evaluation Stakeholder Engagement.....	18
1.2.5 Utilization M&E Results. ....	19
1.3 Problem Statement .....	20
1.4. Objectives of the Study .....	21
1.4.1 General Objective .....	21
1.4.2 Specific Objectives .....	21
1.5. Research Hypothesis .....	22
1.6 Justification of the Research .....	22
1.7 Limitations to the Study .....	23
1.8 Delimitation to the study.....	23
1.9 Theoretical Framework .....	23
1.9.1 Theory of Change .....	24
1.9.2. Dynamic Capabilities Theory .....	25
1.10 Conceptual Framework .....	26

<b>CHAPTER TWO .....</b>	<b>28</b>
<b>LITERATURE REVIEW .....</b>	<b>28</b>
2.1 Introduction .....	28
2.2 Performance of Private Residential Buildings in Nairobi County, Kenya.....	28
2.2.1 Monitoring and Evaluation Planning and performance of private residential building projects.....	29
2.2.2 Stakeholder Engagement and Performance of construction projects .....	30
2.2.3 Use of Monitoring and Evaluation Results and Construction Projects Performance...	33
2.2.4 Building Capacity and Performance of Construction Projects .....	36
2.3 Literature Review Summary and Research Gaps.....	38
<b>CHAPTER THREE .....</b>	<b>40</b>
<b>RESEARCH DESIGN AND METHODOLOGY .....</b>	<b>40</b>
3.0 Introduction .....	40
3.1 Design of the Research.....	40
3.2 Target Population .....	40
3.3 Sample and Sampling Procedure.....	41
3.4 Collection of Data .....	42
3.4.1 Questionnaire.....	42
3.4.2 Interview .....	43
3.5 Validity of the Instruments.....	43
3.6 Instruments Reliability .....	43
3.7 Procedures for Collecting Data .....	44
3.8 Analysis of Data and Presentation .....	44
3.9 Ethical Considerations.....	45
<b>CHAPTER FOUR.....</b>	<b>46</b>
<b>DATA ANALYSIS AND FINDINGS.....</b>	<b>46</b>
4.1 Introduction .....	46
4.2 Respondents Response Rate.....	46
4.3. Descriptive Analysis of the Respondents.....	47
4.4 Descriptive Statistics of Responses on Monitoring and Evaluation Processes.....	51

4.4.1 Effect of Monitoring and Evaluation Planning on Performance of Private Building Projects in Nairobi County .....	51
4.4.2 Effect of Stakeholders' Engagement on Performance of Private Building Projects in Nairobi County .....	60
4.4.3 Effect of Capacity Building on Performance of Private Building Projects in Nairobi County .....	70
4.4.4 Effect of Utilization of M&E Results on Performance of Private Building Projects in Nairobi County .....	77
4.5.1 Pearson Correlation for the Combined Effect of Monitoring and Evaluation Processes .....	88
4.5.2 Multivariate Regression Analysis.....	89
<b>CHAPTER FIVE .....</b>	<b>91</b>
<b>DISCUSSIONS, CONCLUSIONS, AND RECOMMENDATIONS .....</b>	<b>91</b>
5.1 Introduction.....	91
5.2 Discussions of Findings .....	92
5.2.1 Discussion on M & E Planning and Performance of Private Residential Building Projects .....	92
5.2.2 Discussion on Stakeholder Engagement and Performance of Private Residential Building Projects .....	93
5.2.3 Discussion on Capacity Building and performance of private residential building projects.....	94
5.2.4 Discussion on Utilization of M&E Results and Performance of Private Residential Building Projects .....	94
5.3 Conclusions .....	95
5.4 Recommendations of the Study.....	96
5.5 Contribution to the Body of Knowledge. ....	97
5.6 Areas for Further Study.....	99
<b>REFERENCES .....</b>	<b>100</b>
<b>APPENDIX I: QUESTIONNAIRE .....</b>	<b>105</b>
<b>APPENDIX II: INTERVIEW GUIDE.....</b>	<b>109</b>

APPENDIX II: AUTHORIZATION LETTER TO CONDUCT RESEARCH ..... **Error!**

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APPENDIX II: RESEARCH PERMIT .....114



## LIST OF TABLES

Table 2.1: Summary of Past Studies .....	38
Table 3. 1: The Distribution of the Target Population .....	41
Table 3.2: The Distribution of the Sample Size .....	42
Table 4.1: Instrument Response Rate.....	47
Table 4.2: Gender.....	48
Table 4.3: Age bracket .....	48
Table 4.4: Number of Years worked in the Company .....	49
Table 4.5: Area of specialization.....	49
Table 4.6: Level of Education .....	50
Table 4.7: Job Position .....	51
Table 4.8: Results of descriptive statistics on M & E Planning .....	52
Table 4.9 Correlation between M & E Planning and Performance of Construction Projects...	57
Table 4.10: Simple Regression Results for Effect of M & E Planning on Performance .....	58
Table 4.11: Results of descriptive statistics on Stakeholder Engagement .....	61
Table 4.12 Pearson Correlation between Stakeholder Engagement and Performance .....	67
Table 4.13: Simple Regression Results for Stakeholder Engagement on Performance.....	68
Table 4.14: Results of Descriptive Statistics on the Responses of Capacity Building .....	70
Table 4.15 Pearson Correlation between Capacity Building and Performance .....	75
Table 4.16: Simple Regression Results for Effect of Capacity Building on Performance .....	76
Table 4.17: Results of descriptive statistics on the responses of Utilization of M&E Results .	78
Table 4.18 Pearson Correlation between M&E Results and Performance .....	83
Table 4.19: Simple Regression Results for Effect of M&E Results on Performance.....	83
Table 4.20: Results of Descriptive Statistics on Performance of Construction Projects .....	85
Table 4.21 Pearson Correlation.....	88
Table 4.22: Model Summary.....	89

**LIST OF FIGURES**

Figure 1.1 Conceptual Framework for the Extent to Which M&E Processes Influence Performance of Private Building Projects in Nairobi County, Kenya ..... 27

## DEFINITION OF TERMS

**Information Systems:** this refers to how people, hardware and software, data resources and networks are combined to collect, transform, store and disseminate information in a firm, business or organization.

**Planning:** this is described as the collection of instructions by a team working on a project about what is required, project timelines, and necessary resources required to meet the project's success criteria.

**Performance of project:** denotes the relationship between the realization of goals in realizing the technical needs, client satisfaction expanding the market share in addition to meeting specified profit margins and revenues.

**Training:** Measures to improve the skills of project team members through benchmarking or in-service training

**Stakeholder Engagement:** this describes the way in which a project outcome is affected by the participation and involvement of individuals, groups and institutions concerned.

## **ABSTRACT** Your abstract should include

The topic, study objectives, based on what theory, research methodology, target population, what was the sample and sampling process, data collection instruments, data analysis tools, findings, conclusion and recommendations. The overall objective of this study was to establish the influence of Monitoring and Evaluation Processes on performance of private building projects in Nairobi County, Kenya. The specific objectives of the study were: To determine the effect of monitoring and evaluation planning on performance of private building projects, to examine the effect of stakeholders' engagement on performance of private building projects, to assess the effect of capacity building on performance of private building projects and to establish the effect of utilization of M&E results on performance of private building projects in Nairobi County, Kenya. The study was anchored in the Theory of Change and the Dynamic Capabilities Theory both of which were relevant with the study. A descriptive study design was adopted for the study. The sample size of the study consisted 526 respondents from construction firms, architectural firms', quantity surveying firms and engineering consulting firms operating in Nairobi County. Data was collected by use of questionnaires that were administered to the respondents. The reliability coefficients for research instrument were above the threshold of 0.70. Data was analyzed both qualitatively and by use of inferential statistics. Quantitative data was analyzed using descriptive statistics and presented through percentages, means and frequencies. Inferential statistics analyses included the use of Correlation and regression analysis. The study found that there was a positive association between Monitoring and evaluation processes and performance of private building projects. The study established that there was a significant correlation between utilization of M&E Results and performance of construction companies with a P-Value of  $0.000 < 0.05$ , there was a significant correlation between M & E Planning and Performance of Construction Projects with a P-Value of  $0.000 < 0.05$ , there was a positive relationship between Stakeholder Engagement and Performance of Construction Projects with a P-Value of  $0.000 < 0.05$  and capacity building was a significant positive predictor of performance of construction projects with a P-Value of  $0.000 < 0.05$ . The study concluded that M&E is vital in all phases of the project cycle and that if a construction project's M&E is properly carried out, it will give the management an accurate data (information) of the project progress and allow the management to identify the variation of the projects from the project management plan. The study finally concluded that M&E also aids in improving project management performance as they concentrate on enlisting all stakeholders through an informed monitoring and evaluation system, resulting in synergy and excellent output in the development of construction projects. Based on the findings that M&E planning has the highest correlation with project performance, it is here by recommended that a well thought out M&E plan needs to be in place and be fully implemented if project performance is to enhanced. From the findings, it shows that stakeholders' engagement requires enhancement of relationships between parties, fostering and maintaining project support, collecting data for the organization, lowering the risk of conflict or other construction issues, and improving the organization's image which will result to enhance construction projects performance. This study therefore recommends that stakeholders' engagement, is a must for M&E. The findings depicted that capacity building significantly influenced the level of performance of construction projects. This study recommends that to enhance capacity building requires the firms in the construction industry to have formal training to stakeholders which will improve client acceptance, create timely delivery, improve cost effectiveness and improve the organizations acceptance which will result to improvement in project performance. The findings depicted that utilization of M&E

results significantly influenced the level of performance of construction projects. The study recommends that the firms in the construction industry should M&E results which will help to obtain accurate data on the project progress. On suggestions of further areas of study, a similar study on the variables of the current study can be conducted in other organizations operating in Kenya for comparison purposes. Lastly, a similar study can be carried out to investigate effect of a moderating or mediating variable on the relationship between monitoring and evaluation and performance of construction projects.

## **CHAPTER ONE**

### **INTRODUCTION AND BACKGROUND TO THE STUDY**

#### **1.1 Introduction**

This section consists introduction, background to the study, problem statement, study objectives, research questions, significance of the study, limitation and delimitation of the research in addition to conceptual framework.

#### **1.2 Background to the Study**

Project managers can enhance project performance through a process known as monitoring and evaluation (M&E), which has an effect on the outcome of a project (Girma, 2021). Project managers can enhance a project's performance by influencing the results through applying M&E process. The main goal of the process is to increase outputs, outcomes, and impact (Simon, 2021). Most third-world countries started a lot of infrastructure projects, but they mostly failed for a variety of reasons. In this regard, mediocre planning, poor project implementation and inefficient monitoring and assessment of projects stand out among these reasons for project failure (Kissi, 2019). According to Tengan & Aigbayboa (2018) projects have to be implemented successfully to generate job opportunities, provide efficient healthcare, educational and economic infrastructure, stakeholders satisfaction, value for money, realize project budget, and schedule in addition to contributing to the socio-economic growth of countries. As such, M&E need to be understood and implemented fully for the entire life cycle of the project (Tengan & Aigbayboa, 2018).

Efficiency in general project planning, management, and implementation is improved by M&E, and as a result, several initiatives are undertaken with the explicit objective of raising the standard of life for the residents of a given community (Obino, 2021). Monitoring involves checking to see if the project plan has been followed, any modifications have been noted, and timely corrective action has been taken (Estrella, 2017). Data is systematically gathered as the project develops. Evaluation, according to Desalegn (2022), is the systematic and unbiased analysis of a program or project that has already been launched, as well as its planning, execution, and outcomes.

### **1.2.1 Dependent Variable; Private Building Projects Performance**

Building project performance refers to project elements that are significant to project sponsors, beneficiaries, and stakeholders. Performance, according to Humphrey (2021), should be understood as the effectiveness and efficiency of an action, with measurement serving as the method of quantification. To maximize advantages and plan for the future, it is crucial that project performance across all categories be assessed. Several factors that are essential for tracking project progress affect how well a project performs (Taye, 2019). Kerzner (2017) conceptualizes the project Key Performance Indicators (KPI) as budget cost, timeframes, resources, magnitude, quality, and actions a base metrics for managing a project. According to Nguyen (2017), standard project performance measures like cost, time, security, and quality need to be applied to strengthen the improvement of the system rather than separated parameters that require personal attention. Quality, effectiveness, project safety, social and environmental performance, and donor and beneficiary satisfaction are important project KPIs (Owusu, 2019). Similar to this, Adugna (2021) highlighted customer satisfaction, budget and schedule compliance, and attainment of acceptable quality and health and safety standards as critical indicators of a well-performing infrastructure project.

### **1.2.2 Independent Variable; Monitoring and Evaluation Process**

Evaluation and monitoring are becoming more and more important tools for program management. As stated by Maalim (2017). Evaluation is an assessment whose goal is to provide answers about a program or intervention. Monitoring is the gathering and analysis of data on a specific program or intervention. According to all these different definitions, monitoring is a continuous process that is primarily based on goals and scheduled tasks during the work's planning phase. It helps to maintain the work on schedule and can notify management if something is not going according to plan when the project is being worked on (Simwaka, 2020). When implemented appropriately, it can serve as a valuable instrument for effective project management and provide a fitting foundation for assessment. It enables one to determine whether capacity is appropriate and sufficient, whether project resources are sufficient and being used appropriately, and whether one is proceeding according to plan. Evaluation is primarily concerned with the project's impact and results. It is typically a recurring evaluation of modifications to the predefined outcomes related to the project's treatments or program

(Thambura, 2023). It assists the project manager in making decisions about the project's future and evaluating whether the goals and objectives have been met.

Monitoring and Evaluation process ensures that the project/program results at the levels of impact, outcome, output along with input can be quantified so as to offer a framework for accountability and in assisting in making informed decision at program and policy levels. International Fund for Agricultural Development- IFAD (2018) sees monitoring and evaluation process as part of design programs as it ensures that there is logical reporting; the process that interconnects results and demonstrates accountability, it quantifies efficiency and effectiveness, guarantees effective resource distribution, stimulates learning that is continuous along with enhancing better decision making.

Though monitoring and evaluation process implementation has substantial cost, time as well as human resource implications, it is very vital for successful projects and should not be overlooked at the beginning of the process (Nyakaru, 2022). Those involved in the process understand the importance of evaluation (Kissi, 2019). It is important that the project implementers recognise the methods and the thinking that is based on monitoring and evaluation techniques used (Amina, 2022). It is equally essential that the implementors of the program accept responsibility for the used processes, are dedicated to them, and feel vested to convince other stakeholders of their support along with their benefits in the long run.

Project monitoring and evaluation should bring a resonate way of considering goals achievement. Over time, this help to meet community's priority needs. Hubert (2018) noted that community engagement and strengthening of local capacities should be applied throughout the programme cycle. This means that the community should be involved in a direct manner in the identification of their own needs, defining the objectives of the programme, implementing the activities and monitoring and evaluating the programme. Human resources in a project are very critical in project management. Particularly, they are essential for an effective monitoring and evaluation. The technical capacity and organizational know-how in carrying out evaluations, the value and participation of its human resources in the process of decision making as well as their motivation in executing the decision arrived at can significantly have an effect on the evaluation (Eboo, 2021). Hubert (2018) further illustrate that this should not be just mere training by undertaking learning approach and have a positive effect on the evaluation process within the organization.



### **1.2.2.1 1st Objective; Monitoring and Evaluation Planning**

The underlying presumptions necessary for the realization of project objectives are typically outlined in M&E planning, together with expected links between actual actions, required outputs, and final outcomes which is basically the logical framework (Botha, 2019). In this regard, M&E strategy is expected to include elaborate conceptual measurements and their definitions, baseline data, a monitoring timeframe, sources of data, and budget estimates for the different tasks (Mohamed, 2017). Further, listing all the partnerships and alliances that will assist in realizing the goals is typically included in plans. This is also a strategy for sharing and applying the acquired knowledge (Molas & Boni, 2021). As such, it will demonstrate how planning for M & E takes into account the needed effort that must be effected so that progress or delay, is detected promptly.

While some say that M&E should be established after the planning phase but before the design phase of a project or intervention, the majority of project monitoring and evaluation researchers argue that planning for M&E should be done right at the beginning of project planning (Kissi, 2019). (Singh, 2022). Despite these differences in viewpoint, the majority of academics concur that the plan has to contain details regarding the project's evaluation process (Eboo, 2021). The M&E plan delineates the factors that impact project performance. The M&E plan often describes the underlying presumptions that, based on the anticipated linkages between actions, outputs, and outcomes, will determine whether project goals are achieved. An M&E strategy should also include clearly defined conceptual measurements and definitions, the monitoring schedule, a list of data sources to be used, baseline data that is required, and cost estimates for the monitoring and evaluation tasks. Most plans also include a list of the partnerships and collaborations that will help achieve the desired results; and a plan for the dissemination and utilization of the information gained (Uwanyirigira, 2022).

### **1.2.2.2 2<sup>nd</sup> Objective; Capacity Building**

The term capacity describes an organization's potential to successfully complete its goals over time (Kotter, 2017). Duchek (2020) asserts that increasing an individual's capacity enables an organization to increase its capacity. Organizations that have more resilient individually are better able to work together for the greater benefit. Last but not least, people connected in robust organizations give rise to a better neighborhood in addition to improved life for the population.

It takes a lot of work to increase the ability of persons, groups, society-based partnerships and associations, and the larger community as a whole. According to Lussier (2021) the process, basically entails training and education in a broad variety of areas and aimed to enhance skills, knowledge, and abilities at different levels. M&E system mainly understands training required, capability of those involved, and correcting capacity shortfalls (via organized capacity development programs). These understandings are achieved by conducting human capacity assessments (Thapa, 2019). For a functional M&E system, UNAIDS (2021) asserts that having the correct skills for the job is just as important as having a dedicated and sufficient M&E staff member. Additionally, the development of M&E human capacity necessitates a variety of activities for example both formal and in-service training, mentoring, internships and coaching. Moreover, addressing technical side of M&E, its capacity training should also address leadership, economic management, facilitation, supervision, advocacy, and communication skills (Sterling, 2022).

### **1.2.2.3 3<sup>rd</sup> Objective; Monitoring and Evaluation Stakeholder Engagement**

Any project, activity, or program must involve stakeholders in order to be successful. Any person, group, or organization that has the potential to influence, impact, or feel influenced by a program is considered a stakeholder. Clients, project managers, subcontractors, vendors, developers, finance companies, investors, employees, and local communities are examples of stakeholders (Pirozzi, 2019). Stakeholder engagement is the systematic identification, assessment, and planning of measures to engage with, influences, and negotiate stakeholders (Oliveira, 2019). Stakeholder involvement in a project refers to the ongoing commitment and growth of stakeholder relationships to achieve a successful project or program. Project operations like planning, carrying out, monitoring, and tracking can frequently involve stakeholders (Brajer, 2021).

Worldwide and especially in developing nations like Kenya, the construction sector relies heavily on physical labour, necessitating additional human resources to carry out the numerous tasks necessary to meet established goals. To avoid rework, higher project costs, and longer project duration, these tasks must, however, be closely supervised to guarantee that they are carried out correctly from the start (Portny, 2022). This suggests that monitoring and evaluating project materials and labour utilization is necessary in order to obtain the desired result. Project M&E are believed to contribute to the achievement of effective usage and efficient utilisation of

project resources in the direction of the accomplishment of this goal (Kerzner, 2017). Consequently, the success and overall performance of the construction sector depends on M&E, which aims to promote strategic decision-making to ensure efficient material usage and, as a result, aid in the management of construction project waste (Kerzner, 2022). Therefore, it would be crucial to comprehend how M & E might be used in building projects in the Kenyan context.

#### **1.2.2.4 4<sup>th</sup> Objective; Utilization of M&E Results.**

Findings from M&E are disseminated through talking to right people, like project workers, stakeholders, and financiers (Winiko, 2018). As such, it is essential because it keeps interested parties aware of the project's status and enables decisions about what needs to be changed or maintained with their complete knowledge. Results from M&E assists stakeholders comprehend how the project is working, its efficiency in achieving its goals, and whether there is opportunity for improvement (Kabeyi, 2019). If stakeholders are made aware of the findings, then this is definitely feasible. Sharing findings is crucial to assuring the political, financial, and social support needed to improve the program. Additionally, releasing the findings allows investors and volunteers who ensured programs become a success to receive public recognition, which is an assured way to draw in new funders (Kihuha, 2018). Utilization and dissemination of M&E findings is crucial and should by all means make the process to be a success. Folotiya (2018) stipulates that smooth flow of information when undertaking a project is vital for the full completion to be realized. This opinion is mirrored by Leonard (2018), who lists good flow of information as a crucial element in the project's success. In this regard, a project's success depends on the implementation of M&E outcomes; a component of communication in a project. Application of M&E results is linked with their adequate implementation. Evaluators typically invest a lot of effort in planning and carrying out an evaluation that produces reliable results, but stakeholders rarely use the data to improve programs. A strong evaluation methodology and design can result in a very well-implemented evaluation, but if the results are not used, the evaluation is still ineffective (Tengan, 2021). Utilizing M&E results is crucial; thus, it should be taken into account during the M&E process (Bamusiime, 2020). As noted by Winiko (2018) making use of the results entails relaying lessons to the project staff on how the program is running, whether design is being followed, how resources are being utilized in addition to how changes in program are being implemented.

### **1.3 Problem Statement**

One of the sectors most crucial to the growth of Kenya's economy and infrastructure has been the construction industry (Onjala, 2018). One of the key strategies for the success of the construction sector is M&E. The M&E procedures that can be applied in the construction sector to enhance not just the end product rather than procedures and the whole system are not well understood, though. Monitoring and evaluation concerning the construction sector ought to be applied to different sections for example workmanship, materials and processes (Kissi & Agyekum, 2018). Mediocre M&E in any of these fields can adversely lead to monumental issues in the entire sector. Consequently, being equipped with prior experience and knowledge in M&E is an added advantage in dealing with problems related to sub-standard quality that currently bedevils the Kenyan building and construction industry. Therefore, it is crucial to adopt a system that places an opportunity for this challenge to be adequately addressed.

On average, 35 to 60 percent of projects started in Kenya experience cost overruns, and 35 to 73 percent of projects experience schedule overruns as a result of ineffective M&E (Kagiri and Wainaina, 2017). In the Nairobi County, Kenya, 48% of approved construction projects are still unfinished, and 10% of these projects have entirely halted because of inadequate M&E (Ndung'u, 2018). A survey conducted by Construction Review in 2017 revealed that lack of effective M&E was listed as one of the dominant challenges facing current construction projects that require immediate solution as a result of increased disputes and delays (Mugo and Moronge, 2018). Problems with M&E are inherent in projects, and their effects lead to constraints in timeframes, costly, and bothering since they undermine relationships between stakeholders to the contract and increase the contract's cost (Bundi, 2018).

In the recent past, tragedies of completed and buildings under construction collapsing has been rising. According to a 2022 audit report from the National Construction Authority (NCA) on collapsing of buildings in Kenya blames mediocre workmanship and gross non-compliance to regulations and standards. Moreover, lack of effective M&E process during the construction are major contributors. The report postulated that approximately 10,000 out of 14,895 buildings were earmarked as unfit for people to reside and required extra reinforcement or demolition. At the same time, Kenya has over the last five years recorded 87 collapsed building. In the same vein, an estimated 200 people have died as a result in the last five years, and over 1,000 critically injured according to the report by NCA (2022). Further data noted that, sixty-five per cent of

collapsed building projects were occupied, 25% commercial while 10% were for multi-purpose developments. The report further established that 66% of the projects collapsed after completion, while 34% collapsed while under construction. As noted by the Board of Registration of Architects and Quantity Surveyors (2021), 10% of annual revenue is lost in the real estate sector resulting from collapsed buildings.

Against this backdrop, it is important to note that systematic M&E in the building and construction sector is quite often put aside and focus is instead concentrated to other sections of project management. This includes initiation formulation, project planning, implementation and closing out (Aigbavboa, 2018). As such M&E is the only activity in projects that dominates the entire cycles of the project management and assists to make sure the projects are on track. Previous studies on M&E (Kaberia, 2019; Kananura, 2017; Singh, 2017) pointed out that adequate M&E of projects by the project committee aids in making informed decisions concerning continuity of projects which in turn facilitates the success of a project. Therefore, high failure rate among these studied building and construction projects encourages this research to focus on determining whether effective M&E exists and how it impacts its performance.

#### **1.4. Objectives of the Study**

##### **1.4.1 General Objective**

The general objective of this study was to establish the influence of Monitoring and Evaluation Processes on performance of private building projects in Nairobi County, Kenya.

##### **1.4.2 Specific Objectives**

- i. To determine the effect of monitoring and evaluation planning on performance of private building projects in Nairobi County, Kenya.
- ii. To examine the effect of stakeholders' engagement on performance of private building projects in Nairobi County, Kenya.
- iii. To assess the effect of capacity building on performance of private building projects in Nairobi County, Kenya.
- iv. To establish the effect of utilization of M&E results on performance of private building projects in Nairobi County, Kenya.
- v. To determine the combined effect of monitoring and evaluation processes on performance of private residential building projects in Nairobi County, Kenya.

## **1.5. Research Hypothesis**

The following hypotheses were tested;

H<sub>01</sub>: There is no significant relationship between Monitoring and evaluation planning and performance of private building projects in Nairobi County, Kenya

H<sub>02</sub>: There is no significant relationship between Stakeholders' engagement and performance of private building projects in Nairobi County, Kenya

H<sub>03</sub>: There is no significant relationship between capacity building and performance of private building projects in Nairobi County, Kenya

H<sub>04</sub>: There is no significant relationship between use of M&E results and performance of private building projects in Nairobi County, Kenya

H<sub>05</sub> There is no significant relationship between the combined effect of monitoring and evaluation processes on performance of private residential building projects in Nairobi County, Kenya.

## **1.6 Justification of the Research**

Results of this research will help inform the construction firms to appreciate the benefits of monitoring and evaluation on construction projects. This knowledge will enable the investors / owners of the construction firms to come up with strategic policies that promote conduct and action that will support realization of above board performance in the construction projects. The national government being an interested party in the industry, the research will assist policy makers appreciate the importance of M&E in construction firms in the country and set up conducive environment for the industry.

In addition, it will contribute significantly to the construction industry and will help the various professionals in the construction industry to recognize benefits of M&E in construction projects. In essence, construction experts will hence be in a position to align the need of M&E in their firms and how to get better in future. The research will provide a feeling of understanding into the improvements to undertake when developing M&E programs. As such, the study will help in formulating how the other organizations cannot imitate the M&E systems hence providing the firm an advantage over the competitors.

Additionally, the research will fill a gap, as a scholarly study in the field of M&E from a third world country's perspective since majority of the existing studies on M&E in construction industry concentrated on developed countries. This study can also be used as reference material

by other researchers hence contributing to the vast body of knowledge. This study can also form a basis for further research by identifying other areas of M&E in the public and private sectors that require further research.

### **1.7 Limitations to the Study**

The study intended to gather information from workers of registered construction firms in Nairobi County relating to crucial areas on M&E and performance in the construction firms. In this regard, the researcher expected a situation whereby workers may not feel free to avail the required information. As such, the researcher overcame this setback by getting an authorization letter from the construction firms. The researcher in addition committed to the study respondents that confidentiality and research ethics would be adhered to. Time constraints also limited the study as construction staff work in busy schedules and booking appointments with them to answer the questionnaires and schedule them for interviews proved hectic. Consequently, this was addressed by applying drop and pick technique of administering questionnaires and online interviews via zoom.

### **1.8 Delimitation to the study**

This study delimited itself by focusing its scope to Nairobi County. The research in addition examined four constructs of M&E process determining the performance of private residential building projects in the county as outlined in the objectives above (monitoring and evaluation planning, utilization of M&E results, capacity building and stakeholders' engagement). Conversely, variables for example land that is used for construction of projects, environment and local government policies which are all vital in construction projects were not focused in this research, hence a delimitation. The target population of this study comprised construction firms, architectural firms, quantity surveying firms and engineering consulting firms in Nairobi County. The research chose the capital city (Nairobi) since it has the highest level of building activities, most professionals practice therein and as such, it was a good representative of the entire country.

### **1.9 Theoretical Framework**

This part discusses relevant theories that are pertinent to this research. As such, Change and Dynamic Capabilities Theories were reviewed.

### **1.9.1 Theory of Change**

This theory was first proposed by Kirkpatrick in the 1950s. It is a particular kind of theory that entails planning, involvement plus assessment methodology which is employed by philanthropic, non-profit, and public sectors in support for social change. As opined by Thorpe (2017) this theory establishes objectives for the long-term and then work in reverse to determine the optimum conditions. In addition, this theory elaborates the change process by identifying causal linkages in an endeavor, i.e., its short-term, intermediate and outcomes in the long-run. Recognized changes are represented by a pathway that illustrates how one consequence relates to the others logically and chronologically. Reasons or justifications for explaining a specific result is considered a requirement for another are applied to elaborate how the findings are related to one another (Casper, 2017). Likewise, this innovation theory of change aims to make a distinction between expected and actual findings, and in involving interested parties to model their favored outcomes before they make a decision intervention way to realize those results. One prevalent misinterpretation regarding Theory of Change is that it is just a planning and evaluating strategy (Casper, 2017). However, it is a form of critical theory that promotes a clear distribution of power dynamics. Moreover, it includes the required inclusion of various perspectives and participants in realizing solutions. In this regard, this theory can be structured retrospectively by understanding program documents, discussing with stakeholders and analyzing data. This is usually carried out during evaluations, recapping on what has worked or not for the purpose of understanding the past and planning for the future.

As highlighted by White (2017) the theory of change illustrates a nexus of defining how and why a framework or intervention will function. Conversely, policy makers usually invent policies which are vague on the effect they desire and the assumptions which underscore the practices necessary in realizing the policy. In addition, White (2017) noted that lack of adequate consideration and planning, tasks can be carried out without achieving the desired/expected change. In this regard, the theory of change is utilized to create and develop milestones and targets while indicating a logical flow of how actions lead to impact. This theory therefore defines the components in addition to procedures required to facilitate a specific long-term goal. According to White (2017) theory of change denotes types of interventions; single project or a integrated community venture that produce expected results. As such, theory of change entails the assumptions usually supported by a study that stakeholders utilize to elaborate the change



process (Kruk, 2018). Moreover, this theory helps in illustrating how differences may arise within different phases of a project with no certain predictions. Further, the theory describes how to alter changes through specific strategic intervention procedures. In the same vein, this theory will be crucial to the research as it will enable team projects and interested parties to concentrate energy on particular future realities that are indispensable to the completion of the construction projects. The theory will be supporting the independent variable of the study i.e., M&E.

### **1.9.2. Dynamic Capabilities Theory**

This theory illustrates that businesses need adaptable planning in order to run successfully. The theory is linked to Teece (2018) and aids businesses in adapting to a changing environment. To do this, dynamic skills that quickly generate new forms of competitive advantage are established. A firm's strategy should be based on a thorough examination of the environment's constantly changing dynamics, according to Teece (2018). To adapt, integrate, and reconfigure key capabilities of the company, including skill sets and other resources, to the fast changing environment, the firm can use this information. Bledy (2018) identified competitiveness in the continuously changing environmental pressures in terms of dynamic capacities as opposed to competition in industry or positioning. "Dynamic" refers to the need for an organization to restructure its competencies to keep up with shifting environmental forces.

According to Buzzao (2021) dynamic capability defines an organization's capacity to combine, enhance, and restructure both external and internal organizational resources and functional capabilities to respond to a constantly changing environment. Further, "It describes the persistent behavioral orientation of an organization or business to integrate, reconstruct, refresh, and reinvent its resources and skills. In order to attain and retain competitiveness in the face of the dynamic environment, this aims to upgrade and develop its key competencies." (Teece, 2018). The ability of a company to systematically address problems is known as dynamic capability. It is a product of that company's capability to seize business opportunities and threats, to act instantly and strategically, in addition to adapting its resource base according Teece (2020). With the advent of mixed use and explanation of terms Buzzao (2021) noted that definitional clauses of dynamic capabilities, efforts to reconcile is achieved through intrinsically connecting it to market dynamics.

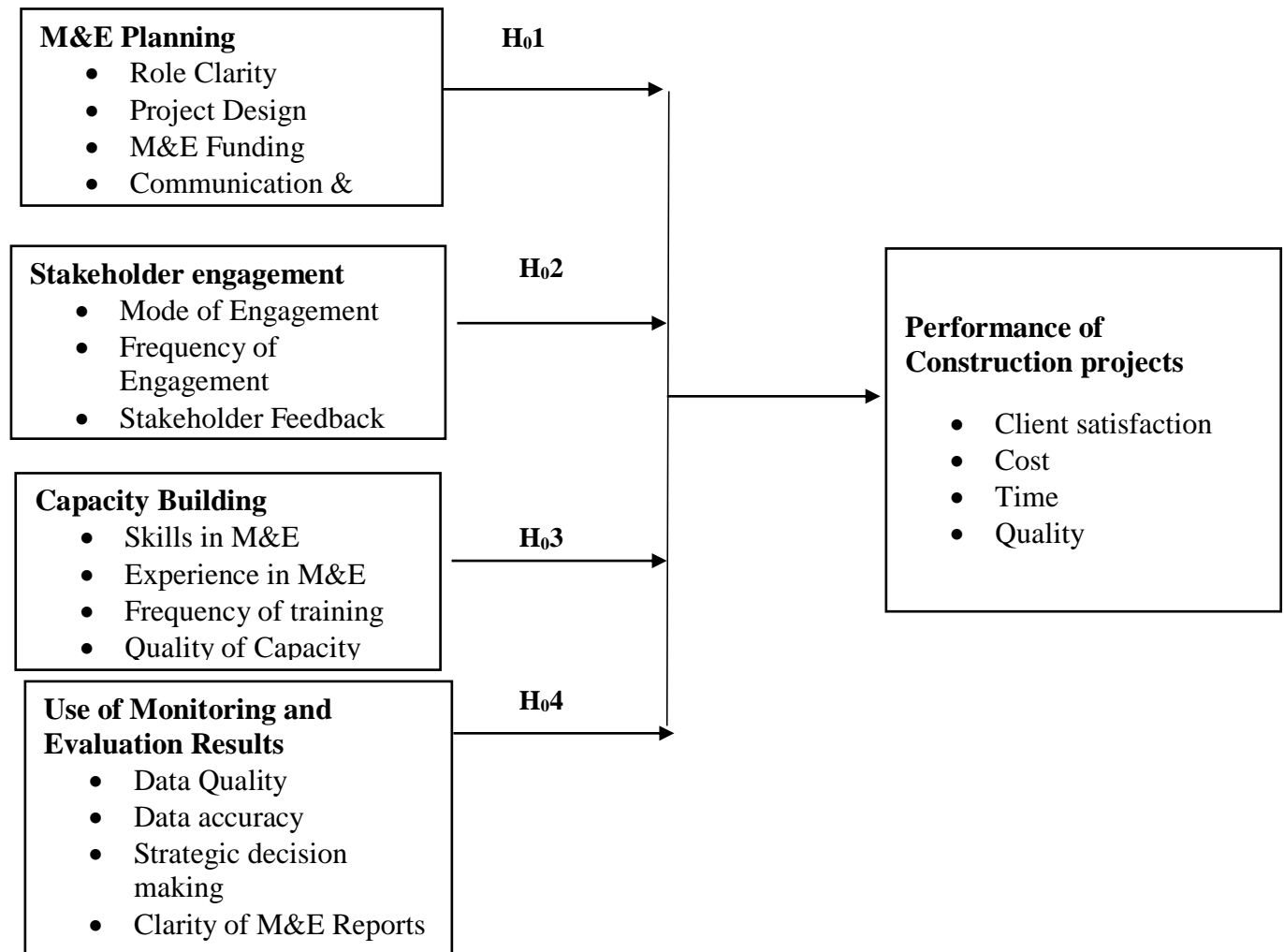
In developing dynamic capabilities, Schoemaker (2018) related it to specific environmental and technological detecting framework that the firm establishes to the choosing form of organizational and strategizing capabilities. The author noted that firms with robust strategic positions are endowed with extra options and a higher chance of success in times of uncertainty. In this regard, this theory will be relevant to this research in anchoring how the construction firms will be placed to provide adequate resources in terms of workforce and raising required funding to M&E (Schoemaker, 2018). Moreover, this theory will help to illustrate the manner in which construction firms will deal with external factors for example regulatory issues and compliance in promoting its M&E mechanism.

### **1.10 Conceptual Framework**

Conceptual framework illustrates the connection linking the independent, moderating and dependent variables. In this regard, this research intends to determine the effects of M&E process on project performance of private residential building projects in Nairobi County, Kenya. The independent variable in the study is M&E process which comprises M&E planning, stakeholder involvement, capacity building and application of M&E results as shown in Figure 2.1 below. On the same note, the dependent variable of this research is performance of construction projects.

**Independent Variable**

**Dependent Variable**



**Figure 1.1 Conceptual Framework for the Extent to Which M&E Processes Influence Performance of Private Building Projects in Nairobi County, Kenya**

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

In this section, review of literature on the effects of M&E is presented on construction projects performance. This chapter deals with, empirical studies and summary and research gaps. This is done in line with the study variables.

#### **2.2 Performance of Private Residential Buildings in Nairobi County, Kenya**

As illustrated by Oda (2022), the overall quality of a specific project is referred to as the project performance. In terms of its effect on the targeted beneficiaries and the longevity of its actions, this is. However, due to the unique structural characteristics of the projects, project performance is different from that of the manufacturing or industrial sectors. Project construction performance can be attained through review against relevant criteria, M&E, benchmarking against specified standards, or prior performance of similar projects, just like with the operations of other sectors. (Bichanga, 2019).

According to Gaibo (2019) “a basic criterion against which project performance can be determined against includes; relevancy, efficiency, effectiveness, its impact on the beneficiaries in addition to whether the interventions are sustainable.” According to the author, relevance refers to how the projects' actions align with the goals of their receiver, investors, and target audience. When establishing the project's relevance, it is important to consider whether the project's ultimate goals reflect the needs of the receivers and whether its processes and outputs are consistent with those aims (Gaibo, 2019). Effectiveness as observed by Ongondo (2019) assessed whether a certain project is capable of achieving its objectives. Impact establishes the project's good and bad consequences in a similar manner. On the other hand, efficiency examines inputs and outputs to determine whether the project utilizes the resources at its disposal to produce the desired outcomes. According to Ongondo (2019) sustainability evaluates the ability of the project advantages to continue when the project winds up. In this sense project performance is an attribute that can be assessed with regard to whether it is adding value or it improves effectiveness of an organization (Papanikolaou, 2020). According to Okaka (2019) performance is approached as individual’s achievement at work after exerting effort. As deduced from the definitions above, performance of a project focuses on “how the workers’ ability to

complete the tasks they are responsible for and how those jobs assist in realizing the goals of the organization.”

### **2.2.1 Monitoring and Evaluation Planning and performance of private residential building projects**

One major tool that partners use to ensure that business initiatives are successful is M&E planning (Neumann, 2018). Several scholars on project M&E (Khan, 2017; Hubert, 2018) noted that planning for M&E ought to be carried out right away while a project is being planned, while others argue that it should be done later on but before a project or intervention is being designed (Singh, 2018). Against this opinion however, majority of scholars concur that plans should avail information on how a project should be evaluated (Gaibo, 2019). A M&E framework should take the following factors into account, according to Carter (2017): resources and time requirements. Is the project equipped with internal resources and adequate time to implement the required M&E procedures, such as the analysis of data collected? Other factors considered and accepted by Meneses (2021) include: Realisticness of the suggested activity. Can they be put into action? When it comes to carrying out the suggested actions, is the specified timeline realistic? There are also other things to think about, such as whether there is a plan in place to address the ethical dilemmas and difficulties that come with carrying out the suggested activities. Is there a study ethics committee protocol that has been submitted for review? When these factors are taken into account, it can be said that M&E planning is full in terms of coverage for the purpose of giving a project's direction throughout implementation oversight.

Agyekum (2019) researched on “the effect of project M&E practices on construction project success in Ghana.” The results of the research showed that M&E activities had a positive statistically significant connection with construction tasks success criteria. Moreover, M&E planning and scope of the project indicated a robust significant connection showing that, in developing nations, these 2 main variables should be given special focus in realizing project success. Tekkwo (2019) conducted research on “the influence of M&E on project performance in South Africa.” Research has shown that using M&E as a management tool can affect how well a project performs. The study found that it may be observed in procedures like M&E planning, where necessary performance indicators are chosen and a timetable for data collecting is created before a project is put into action. Planning for M&E includes how data will be

examined to demonstrate project performance. In this way, M&E planning covers all necessary actions to guarantee improved project performance.

Hussein (2020) conducted a study on “effect of monitoring practices on performance of projects in the water sector trust fund.” The study illustrated that monitoring planning positively and significantly affected relationship with project performance. The research came to a conclusion that “adequately planned M&E facilitates the team undertaking a project to get a better understanding of the target population’s needs which helps to define the scope of the project and design objectives that are relevant, measurable and achievable.” The study also produced instruments for monitoring that help in determining whether the anticipated outcomes are occurring as anticipated, what steps must be taken to attain the intended outcomes during project implementation, and whether these activities are having a good effect on the project. The study made the recommendation that project managers should keep an eye on the aspect of project planning, which necessitates keeping an eye on aspects of the project such effort, cost, schedule, and timeframes.

Hubert and Mulyungi (2018) on a study on “effect of M&E planning on the performance of projects in Rwanda disclosed positive correlation between M&E planning and performance of projects.” Kaluai and Muathe (2020) study established M&E planning contributed to project performance. Atwal and Mudi (2019) on a study investigating M&E planning on performance of projects dealing with water supply in Kakamega county, Kenya showed that there was a considerable positive connection between M&E planning and performance of projects dealing with water in the county. The study proposed that the County Government of Kakamega should set up definite policies and regulations to ascertain compulsory M&E planning in the entire water projects in the county.

### **2.2.2 Stakeholder Engagement and Performance of construction projects**

Stakeholder engagement is the procedure of ensuring that all people, organizations, or groups that will be impacted by or may be impacted by the outcome of a project participate in the planning of a project's and decision-making processes to involve their anticipations and requirements (Davis, 2017). According to Viale (2017) public participation plays a critical function in the development of projects. On the other hand, stakeholders may not participate in emergency circumstances and implementation of venial decision of the organizations. At the same time, it is also vital to incorporate interested parties during major situations which can

affect them more importantly to curb recurrence of the challenge in the future (Viale, 2017). In this regard public involvement usually entails sharing of information and sourcing inputs from the interested parties. As stipulated in Kenyan Constitution 2010, people can freely participate public participation processes.

Kobusingye (2017) noted that the origin of public participation or involvement was realized in developed countries. The scholar observed that categorization processes are the ones which gives power citizens. From the 1970s, participation of the public has been promoted in majority of regions of developed countries like United State of America as a framework which promotes urbanization environment in addition to enriching the quality of life of the stakeholders by meeting their wants. As asserted by Raihans (2018) the rise of global movement at the beginning of the early 80s led to the production of city drawing plans with help of the people. In spite the government's propensity to skew public decision-making prior to implementation, the study done by Rajhans (2018) placed emphasis on the democratic rights of the public involvement. Until recently, majority of industrialized nations such as America, Holland, Hong Kong and Brazil have managed effectively to employ this mechanism. Participation of developed countries in public participation processes illustrates the huge role of this mechanism. For example, contribution of improved project development and incorporated governance (Reed, 2018). In addition, various designs of stakeholders' participation for instance public hearing, doing surveys, committees on advisory and exhibitions have been formulated to meet the expectation of public involvement process in the developed nations. In ensuring effective stakeholder participation in project management stages which comprise:” identification phase, initiation phase, project planning phase, its implementation, monitoring and evaluating phase” (Al Nahyan, 2019).

Early stakeholder involvement in building projects in New Zealand was found to be the primary factor influencing the efficiency and effectiveness of project performance (Driskell, 2017). Additionally, Kerzner (2022) highlighted in Australia that involvement of a contractor seems to be insignificant just when the project commences hence leading to poor performance. To overcome this, it was stated that there was crucial to involve contractors at the beginning of a project possibly by hiring a “unified project conveyance approach”. Further, it was observed that owners of projects and investors should innovate ways to promote stakeholder participation and

apply them from the start to finish (Esteeves, 2017). Relating to research done in Cambodia, India and Gaza Strip, cost of project overheads was linked to poor construction project performance.

Alqaisi (2018) conducted a study on impacts of stakeholder's involvement and communication management on the success of construction projects. Research study established that ineffective communication and management of stakeholder expectations led to negative impacts on project performance. Research concluded poor and inadequate planning for all spheres of the project, together with managing stakeholder expectations and establishing communicating methods with them, brings about major hiccups in the project, which leads into project closing down sometimes. The study recommended that giving necessary appreciation to stakeholders' involvement as a crucial part of the project planning process, which commences with initial beginnings of the project and continues throughout the entire life of the project, was very crucial.

Mambwe (2020) on research on stakeholder's impact on engagement and performance of construction projects in Zambia found that robust and great correlation between stakeholder participation and scheduling of projects in addition to stakeholder engagement and project specifications. Findings also indicated that stakeholder's engagement was powerfully but counter correlated to cost of the project. The study proposed that stakeholder engagement in projects doing road construction should be promoted as this would relatively bestow to projects performance in-terms of cost. Research also recommended that engagement of stakeholders in costing of project should not be separate episodes but rather be used throughout the phases of the project. The research in addition recommended that, stakeholders ought to be engaged in all phases of project scheduling to make sure project produces expected results as outlined by concerted efforts.

Research carried out by Githinji, Ogolla and Kitheka (2020) on effect of stakeholder's participation on performance of projects. Research results illustrated that participation of stakeholders in identifying projects was found to significantly and positively linked to project performance and at the same time was seen that firms respect for stakeholders' issues was a crucial factor influencing project identification; stakeholders' participation, planning of projects was found to significantly and positively linked to project performance. Research also illustrated



that participation of stakeholders in funding of projects was positively and significantly related to performance of projects and finally the study found participation of stakeholders in allocation of resources was consequential. Research proposed that there should be promotion of stakeholder involvement in identification of projects for increased contribution to project performance; taking into account of all stakeholders on equal basis rather than implementing what the national government instructed and well laid out terms of engagement for stakeholders to limit confusion on their capability during the project management process. Mwanza (2020) observed that project stakeholders' culture had a bold positive significant impact on construction projects performance in Kakamega County, Kenya. The research proposed that interested parties in the construction sector should design clear strategies.

### **2.2.3 Use of Monitoring and Evaluation Results and Construction Projects Performance**

As illustrated by Curtis (2021) dissemination comprises of purposive, goal-oriented flow of knowledge or information that is particular and potentially applicable, from one social system to the other. Dissemination is the process of sharing information and knowledge hence the conduit for linking the construction projects and the stakeholders (Haupt, 2021). According to Vanfosson (2017), once the assessment is complete, the first duty is to inform the stakeholders of the findings, and you should make sure that they are accurate and reliable. Kingston (2018), postulates that, it does not auger well to relay findings from insufficiently done evaluation prior confirming the origin of the errors with a view to make amendments before dissemination. Kingstone (2018) continues to argue that, a person is required to share information with necessary stakeholders and other players soonest possible. Information on performance is to be utilized as a management tool. In this regard, information on performance is derived from both M&E. They both have the ability to offer significant, ongoing, and immediate feedback on the progress of a given project, activity, or policy. The regulation of what is reported, when it is reported, and to whom it is reported makes reporting and analyzing performance results a crucial step (Xiao, 2019).

All project stakeholders must recognize the necessity of fostering the exchange of research data. The potential of distribution to further research is one of its main benefits. Sharing research data encourages collaboration among researchers and prevents duplication of effort (Beckett, 2018). Application of the similar results also creates a level ground for various scholars to test and

illustrate their propositions. This allows for creation of synergy between them for the improvement of the research industry. M&E findings dissemination is linked with sharing findings with interested parties concerned with the M&E process. This is crucial since M&E involves a variety of stakeholders, all of whom have a stake in the project's success and a role to play in the M&E process (Munafo, 2017). In this regard, if project information is reliably communicated during the M&E process, it is anticipated that M&E that can update construction project performance can be realized. Churruca and Ludlow (2019) stress the significance of communicating findings to concerned stakeholders of projects in Britain in their article titled "a step by step guide to M&E" by offering a communication structure that involves identifying the target audience, tailoring the findings to key stakeholders, and drawing down the most important takeaways for key stakeholders.

According to World Bank (2021) the need for M&E does not arise simply from carrying out M&E or possessing available information. It comes from utilizing the information to enhance performance. As a result, it suggests that the importance of utilizing M&E findings is indisputable and that every effort should be made to ensure that they are utilised. Kananura (2017) discussed "reasons why M&E result usage is crucial to a task." They point out, first and foremost, that M&E findings support project interventions by putting project workers in a learning environment as they try to understand how and why the program is operating. Furthermore, they claim that M&E results help the project team to argue for more funding because M&E outcomes have a significant impact on how investors decide how to allocate resources and what to finance. Since these findings are crucial in the early identification of issues, the third reason why M&E results lead to adjustments in project implementation. It is evident from the foregoing that the need for result utilization is not based on primary data, and this provides a basis for prompt corrective action.

Winiko (2018) conducted a study based on "M&E processes, management of project maturity and digital education performance of technology project in Malawi." The research revealed a considerable and favorable influence of the dissemination of M&E findings. The study also discovered that the Malawian initiative using digital education technologies performed significantly better when M&E results were used. In spite of being a crucial component of the digital education technology project, research suggested that the company focus on capacity

building programs for disseminating M&E outcomes. Mutekhele (2018) researched on dissemination of data and application, performance of educational building infrastructural tasks in Bungoma County, Kenya. Results of the research revealed that “dissemination of data and utilization had no significant effect on performance of educational building infrastructural projects in the county.” Research proposed that implementation committees to comprise more young minds for purposes of innovations and application of emerging technologies and more focus be availed on building their capacity for M&E function (Mutekhele, 2018).

Sayyed (2021) conducted “an empirical survey and used descriptive analytical techniques to examine the data while examining the impact of data distribution platforms on the effectiveness of government entities.” As a result, 97 employees were selected as the sample size by simple random sampling. In the study, surveys were used to gather data, and structural equation modeling was used to analyze the data. The study's conclusions showed that the performance of infrastructure development tasks in the educational sector is impacted by the dissemination of data. Mohan (2019) contend reliable M&E system should to have adequate data dissemination and approach. Kihuha (2018) “researched on M&E practices and performance of international environment facility projects in Kenya.” Research population comprised 15 project managers, 32 subordinate staff and 5 M&E staffs. Data analysis was carried out by utilizing computerized “statistical package of social scientists” (SPSS) and tables used to summarize and interpretation and inference. The study disclosed that “there was inadequate use of M&E to enhance decision making during implementation of projects” (Kihuha, 2018).

Oluoch (2020) conducted a study on “dissemination of data and use of curative and preventive tuberculosis health care services in public health facilities in Kisumu County, Kenya.” Correlational design was used in this study to evaluate the hypothesis. In this regard, stratified random selection was used to choose a sample of 221 participants from a population of 517. A structured questionnaire with both open-ended and closed-ended questions was used to collect the data. An interview schedule and a Likert type on a 1–5 scale were used. The hypothesis was put to the test using a correlational design. Inferential and descriptive statistics were used to quantitatively examine the data, and the results were presented as frequency tables with means and standard deviations. Narrative statements were used to present qualitative data.

The study's findings showed that utilization and dissemination of data have an impact on how both curative and preventive TB healthcare services are provided in public health institutions.

#### **2.2.4 Building Capacity and Performance of Construction Projects**

The term "capacity" describes an organization's capability to successfully carry out its objective and maintaining in the long haul. The word "capacity" can also refer to a person's abilities and skills (Darling, 2020). Baser (2019) defines “capacity as an organization's capability for self-sufficiency.” According to Stoneburner (2022), “a system, team, organization, or individual can use capacity as a tool to attain goals.” According to Merino (2018), “sustainability is influenced by everyone’s capacity to set and achieve development goals in a way that is both sustainable and long-term.”

Watson (2018) postulates that “capacity building focuses on increasing an individual and organization’s abilities to perform core functions, solve problems, and objectively deal with developmental needs.” This is supported by Omondi (2016) who “referred to capacity building as improving or upgrading the ability of the person, team and institutions to implement their functions and achieve goals over time.” Building capacity is “crucial at all scales, from individuals to international organizations” (Horton, 2022). The development of leadership, advocacy, speaking and listening skills, technical skills, organizing abilities, and other facets of personal and professional growth may all be included in capacity building (Linnell, 2017). Similar to how Adhikari, Bhandari, and Shrestha (2017) identified “personal development as being linked to leadership development, advocacy skills, training and facilitation skills, technical skills, and organizational skills, individual level capacity building is also tied to personal development.” For an institution to be effective, competent leadership or strong leadership is frequently required.

Effective M&E of construction projects depends on the project team having the necessary capabilities to carry it out. Every organization must develop “the project team's skills in a variety of areas, including data gathering, analysis, report writing, dispersing M&E funding, and logical framework approach” (Kihuha, 2018). Through the provision of suitable and necessary skills, organizations support the field staff members working in M&E in increasing their capability. The project team should be given distinct duties and designations based on their level of

experience in order for the projects to be implemented properly. In particular, “for projects where staff employees must perform project operations independently, training for relevant skills should be organized if their knowledge and experience are insufficient” (Mero, 2019).

It is believed that a rise in M&E capacity building will have a favorable impact on the state of M&E implementation, and vice versa. The organization's main focus should be on enhancing employee competencies so that they can effectively contribute to the organization and carry out an independent M&E exercise (Rosen, 2018). The World Bank (2019) states that “having an efficient M&E human resource capability in terms of quantity and quality is required in order to maintain and retain a stable M&E workforce.”

Imasaja (2017) conducted a study on “the effects of capacity development strategies on the performance of the department for international development in Kenya.” The results showed “that effective financial management, human resource development, information management, communication and technology, as well as ongoing system automation, were all part of the Kenyan department for international development's capacity development plans.” The effective program management, accurate financial forecasting, timely fund transfers to project beneficiaries, and improved relationships between the employer and employees, as well as with project implementation partners and other stakeholders connected to DFID operations in Kenya, were all made possible by these capacity development strategies.

Tengan and Aigbavboa (2018) conducted a study on “the role of M&E in construction project management in South Africa.” The study found that, “when given the necessary attention by the project implementers/team through the provision of adequate resources, the development of technical capacity, and the creation of a supportive project environment, effective M&E plays a critical role in the implementation of construction projects.” Project performance will also be improved by stakeholder involvement and participation in M&E. Shihemi (2017) in “a study on M&E tools on projects performance of building and construction projects established that training had a significant influence on the project performance.” The analysis came to the conclusion that because M&E teams had received training, the building project had enough M&E human resource capacity. The study came to the further conclusion that capacity building improved the performance of building and construction projects and that the M&E abilities of

the staff performing M&E of those projects were good. The study suggested that in order to meet the goal of M&E, monitoring employees should have proper training. The personnel should regularly take refresher courses to stay current in their specialties.

**2.3 Literature Review Summary and Research Gaps**

Literature review has asserted that recognizable research has been done on the variables conceptualised in the study. Likewise, majority of research is in agreement on the function of M&E in affecting the stage of project performance. While study has been done on the relevant topics, several significant dimensions have not yet been thoroughly covered. Therefore, the review has identified a lot of holes. The gaps include context, conceptual, empirical, and technique deficiencies, among others. Empirical gaps are established with the intention of presenting a broad range of variables for M&E. The majority of previous studies focused on discrete M&E dimensions, therefore there is a need to broaden the variables studied (Githinji, Ogolla & Kitheka, 2020; Mambwe, 2020; Hubert & Mulyungi, 2018; Ngari, 2017). Contextual gaps are also identified regarding the requirement to locally duplicate similar studies for increased relevance of the findings. The majority of studies on these topics have an international focus, which may not be relevant in the local context (Hubert & Mulyungi, 2018; Obeidat & Aldulaimi; 2017; Agyekum, 2019). Gaps in the study's methodology highlight the need for more concrete project performance metrics, such as cost, time, and stakeholders’ satisfaction, which are typically missing from earlier studies (Humphrey, 2021; Taye, 2019; Adugna, 2021; Mambwe, 2020). This study aims to take a contingency approach to design an integrated model to analyze the interaction effects of M&E on construction project performance in Nairobi County, Kenya, in order to close these knowledge gaps. Table 2.1 helps to outline a summary of studies relating M&E and construction project performance and the knowledge gaps.

**Table 2.1: Summary of Past Studies**

Author	Focus of The Study	Findings	Research Gaps	Focus of this Study
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Obeidat & Aldulaimi; 2017	“Role of project management information systems towards construction project performance in the United Arab Emirates.”	“PMIS was a quality software solution, which when customized, provided modern project managers with an accurate, reliable, and objective system of real-time information in a construction project.”	Contextual, methodological and empirical gaps on the need to replicate the study locally.	Gaps will be filled by conducting the study in Kenya.
Hussein (2020)	“Influence of project management information systems attributes on project performance.”	“The use of the project management information systems to generate quality information needed by the user (project manager) to perform project tasks helped the project managers perform their tasks in a more professional manner thus increasing the probability of the project success.”	“Methodological gaps on the need to consider to consider other factors of M&E such as staff training, stakeholders participation and planning”	The current study will focus on staff training, stakeholders participation and planning as factors in M&E
Hussein (2020)	“Influence of monitoring practices on projects performance at the water sector trust fund.”	“Monitoring planning had a positive and significant relationship with project performance.”	“Contextual, methodological and empirical gaps on the need to replicate the study on a construction environment.”	Gaps will be filled by conducting the study in construction firms.
Alqaisi (2018)	“Effects of stakeholder’s engagement and communication management on construction projects success.”	“The study established that Poor communication and management of stakeholder expectations resulted in negative impacts on project performance.”	“Methodological gaps on the need to consider to consider other factors of M&E such as staff training, stakeholders’ participation and planning.”	The current study will focus on staff training, stakeholders’ participation and planning as factors in M&E
Mambwe (2020)	“Impact of stakeholder engagement on performance of construction projects in Zambia.”	“Stakeholder’s engagement was strongly but negatively correlated to project cost.”	“Contextual, methodological and empirical gaps on the need to replicate the study locally.”	Gaps will be filled by conducting the study in Kenya.

## **CHAPTER THREE**

### **RESEARCH DESIGN AND METHODOLOGY**

#### **3.0 Introduction**

In this section, research methodology that was applied in data collection and analysis was discussed. The following subsections were used; design of the research, study population, sampling techniques and procedures, collection of data techniques, reliability and validity, analysis of data and presentation of data and research ethics.

#### **3.1 Design of the Research**

It is described as a methodical and well-organized series of inquiries that aims to answer the research questions truthfully, in addition to enabling the researcher to summarize the data findings that is useful for making decisions (Williams, 2017). Thus, the study research design is very significant in establishing a guideline to the study arrangement procedures and data compilations. This creates a research flow and bonding of the major parts of the methodology to create harmony in study research tool analysis. Bell (2022) defined the research design as the strategy or road map that a researcher uses to collect data to answer the study problem. In this regard, the study adopted a descriptive and correlational research design. As such, descriptive design aided in determining the kind of association, describing complex relationships of various variables that account for the end result and forecasting a finding from different predicting variables (Williams, 2017). In descriptive research technique, it identifies and gives a report the way things are on the ground and tries to illustrate characteristics for example behavior, values, and attitudes. Correlational design on the other side will aid in investigating relationship between variables. It also in reflecting the strength or the direction of more than one variable. This research technique in addition allowed the application of interview guide and structured questionnaires for both quantitative and qualitative data respectively. Collection of data from a large group of people at significantly low cost and depending on the design of the survey, rather quickly. According to Polack (2020) descriptive research enables the collection of data and use of correlational analysis to derive meaningful conclusions.

#### **3.2 Target Population**

As noted by Thornhill (2017) study population is the bigger group from which a sample is obtained. Consequently, Lewis & Thornhill (2017) defined population as a basis of information



from which a sample is chosen. The authors noted that an effective sampling frame should give information necessary to get selection; a detailed and integrated basis from which a sample can be achieved and a significant figure of viable respondents to ensure quality selection. Therefore, the target population of this research comprised one NCA 1 Registered Contractors in each 285 construction firms registered by the National Construction Authority under NCA 1 Category for Building Contractors (NCA, 2020), one Architect in each of the 214 Registered Architectural Firms, one Quantity Surveyor in each of the 150 Registered Quantity Surveying Firms (Board of registration of Architects and Quantity Surveyors, Kenya, 2022) and one Engineer in each of the 158 Registered Engineering Consulting Firms (Engineers Board of Kenya, 2022) in the county. Nairobi, the biggest city in Kenya, was chosen since it has the highest level of building activities, most professionals practice therein and as such, it was a good representative of the entire country. Below is table 3.1 which illustrates the target population according to distribution.

**Table 3. 1: The Distribution of the Target Population**

<b>Registered Firms</b>	<b>Target Population</b>	<b>Percentage</b>
NCA 1 Registered Contractors	285	35
Architects	214	27
Quantity Surveyors	150	19
Engineers	158	20
<b>Total</b>	<b>807</b>	<b>100</b>

### **3.3 Sample and Sampling Procedure**

As described by Taherdoost (2018) sample refers to a portion of the population of study. The importance of sampling is to obtain a representative segment which will facilitate the researcher to get information regarding a population (Martínez, 2019; Taherdoost, 2018). In the same vein, Cooper & Schindler (2012) postulate that sampling is undertaken to cut costs, improve frequency of collecting data, increase accuracy of results and accessibility of the targeted participants. According to Oppong (2017) sampling is done to obtain a representative group, allowing the researcher to get clues regarding entire target population. This research used simple random

sampling using the lottery method in establishing the number of firms who were involved in the research. Sample size for this research was realized by applying “Krejcie & Morgan (1970) formula. To ease the process of determining sample size for the researchers, the authors designed a table hinged on the formula which displays the population of a research and the expected size of the sample. This thus ensured that the researcher derived a sample representing the study.

$$S = \frac{X^2 NP (1-P)}{d^2 (N-1) + X^2 P (1-P)}$$

Krejcie and Morgan table gave a total of 526 respondents and a sub sample size distribution as illustrated below in Table 3.2.

**Table 3.2: The Distribution of the Sample Size**

<b>Registered Firms</b>	<b>Target Population</b>	<b>Sample Size</b>	
<b>Percentage</b>			
NCA1 Registered Contractors	285	165	32
Architects	214	140	27
Quantity Surveyors	150	108	20
Engineers	158	113	21
<b>Total</b>	<b>807</b>	<b>526</b>	<b>100</b>

### 3.4 Collection of Data

In this section data collection methods that were applied to gather primary data are outlined. In this regard, interviews and questionnaires were used.

#### 3.4.1 Questionnaire

In this study, primary data was gathered by use of questionnaires. As such the questionnaires were administered to staff in the firms. The questionnaire consisted of closed ended questions which provided accurate information, reduced information bias and enabled analysis of data. The questionnaire was based 5-point Likert scale rating ranging from strongly disagree to strongly agree. Before formulating the questionnaire, preview of the relevant literature was done to establish the key factors of the research variables. Full measurement constructs for the research were adopted from past studies. All this was considered for two main reasons. To start with,

questions had already been tested for validity and reliability by other researchers. Additionally, the results in subsequent study employing similar constructs could be compared to past research (Chiang, 2015). The questionnaire consisted of Three (3) parts namely: Part One which captured the bio-data of the participants. Part Two captured issues on the independent variables of the research. Section Three captured items on the dependent variable of the study.

### **3.4.2 Interview**

For the interviews', purposive sampling method was applied to Quantity surveying firms for face to face interviews. As such, one on one interview was carried out involving 8 professionals (two (2) NCA 1 Registered Contractors, two (2) Quantity Surveyors, two (2) Engineers and two (2) Architects). The interviews were used to elicit information on M&E processes.

### **3.5 Validity of the Instruments**

According to Jankowicz (2015) validity refers to as the extent to which research instrument measures what it claims to measure. Consequently, validity deals with the accuracy and importance of inferences which are pegged on the study findings (Bryman and Cramer, 2015). In this regard, a pilot test was done to find out the research instrument's validity. The recommended changes were incorporated in the final instruments of data collection. In determining face validity of the study instrument, this research used past scales that had been validated by other researchers. A pilot test was carried out in the neighboring Machakos County to determine face validity of the research instrument. The recommended changes were also incorporated in the final instruments of data collection. Instruments piloting assisted to enhance face validity. Further, expert judgment enhanced content validity. Questionnaire was critiqued by research supervisor. At the same time, critique comments were considered in revising the study instrument to promote face validity. Moreover, format modifications and wording were used to enhance clear understanding of the questions and the general format of the questionnaire.

### **3.6 Instruments Reliability**

As highlighted by Malhotara (2014) reliability refers to the level to which a questionnaire measures observations or any test procedure giving similar results. In other words, "it is the stability or consistency of findings over a period of time across rates. Conversely, internal consistency of the study instruments was tested through Cronbach's Alpha." According to Sekaran (2013) Alpha Cronbach's denotes the reliability coefficient that illustrates how the

variables in a set are correlated to each another. Ehlers (2017) opined that a reliability level of 0.70 is significant on predictor tests on a measure computed as a coefficient ranging from 0 to 1. All the measurements had a Cronbach's Alpha value of above 0.70.

### **3.7 Procedures for Collecting Data**

A letter of introduction from Africa Nazarene University, School of Business was obtained by the researcher after approval of the proposal by the supervisor and the Business School. At the same time, study assistants were assigned to each of the construction company chosen in Nairobi County. "Drop and pick" method as well as online questionnaires were used in the collection of data. In this regard, participants were given appropriate time to answer the questionnaire according to their flexibility and the length of the questionnaires.

### **3.8 Analysis of Data and Presentation**

Bless et al. (2018) described analysis of data as the procedure of organizing, manipulating and Interpretation of collected data. Consequently, Cooper & Schindler (2013) illustrated that analysis of data entails minimizing gathered data to adequate size, summarizing, identifying patterns, and using statistical applications such as tables and percentages. In this research, analysis of data used qualitative and quantitative methodology so as to extract meaning from the gathered data. In this regard, data was analyzed qualitatively through the use of "statistical package for social sciences" (SPSS) 25.0 and presented through means, percentages, and standard deviations and inferential statistical analysis was used specifically regression analysis to determine the relationship. "Liner regression model" equation was applied to describe how mean of the "dependent variable" changed with changing conditions of the independent variables in the form:

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

Where:

Y = Performance of construction companies in the county

X1 = Planning for M&E

X2 = Stakeholders' Engagement

X3 = Capacity Building

X4 = Utilization of M&E results

e = Error term

### **3.9 Ethical Considerations**

As observed by Frenrich & Ferrell (2018) ethics are described as beliefs and norms about what is considered right and wrong. Moreover, the authors illustrated that ethics during research focuses on determining what is right and wrong in the due course of study period. The objective of ethics during research is to make sure that the researcher adheres to the expected procedure in the data collection and analysis in addition to recommending the study findings. According to Frenrich & Ferrell (2018) value and judgment are critical when making ethical considerations during the research process. On the other hand, unethical tendencies are pervasive and comprise violating non- disclosure commitments with the parties who avail information to the researcher, breaking participants' confidentiality, misinterpretation of findings, lying people and avoiding legal responsibility. As such, involvement was voluntary and the participants were free to refuse or withdraw without notice during the study period. Identification was not necessary from the participants to avoid tracking the answers to individuals. In addition, the researcher committed to the participants of confidentiality by assuring that the study was meant for academic reasons. In the same vein, the researcher asked for permission from the concerned authority to carry out the study at specified times to limit clashing with the respondents' time frames. Moreover, the researcher in addition sought authorization from the Africa Nazarene University, School of Business and also from NACOSTI.

## **CHAPTER FOUR**

### **DATA ANALYSIS AND FINDINGS**

#### **4.1 Introduction**

The main objective of this study was to determine the effect of Monitoring and Evaluation process on performance of private residential building projects in Nairobi County. This chapter thus presents the profiles of the study respondents, descriptive and inferential statistics, tests of hypotheses and discussion of the results.

#### **4.2 Respondents Response Rate**

The study sample size was 526 respondents drawn from 780 Engineering, Architectural, Quantity Surveying and construction firms in Nairobi County. Following the administration of the questionnaires, 274 questionnaires were filled and returned giving a response rate of 52.09%. The response rate for the survey was realized due to factors that entailed prior engagement between the researcher and the respondents. The researcher is in the field of quantity surveying and is responsible for overseeing construction of buildings in Nairobi County and specifically Langata Sub County. The researcher is a Registered and practicing Quantity Surveyor and interacts with the various professionals involved in building and construction i.e architects, quantity surveyors, engineers and building contractors in the course of her work and therefore getting questionnaire filled was not a very major problem despite the fact that the various professionals in the construction industry works under strict schedules and their availability may be limiting. The researcher also used drop and pick method of data collection that further aided in collection of data. Personal phone calls were made to follow-up on the filling up of questionnaires. The researcher also converted the questionnaire to a Google document which enabled the respondents to fill in the data through their e mails. In regard to key informant interviews, 8 professionals; two (2) NCA 1 Registered Contractors, two (2) Quantity Surveyors, two (2) Engineers and two (2) Architects) who were among the 526 targeted respondents were interviewed because they deal with M&E processes.

The interviews were used to elicit information on M&E processes from the management perspective. These response rates were considered to be high enough to enable the researcher avoid biases and draw study conclusions from the findings. This was in line with Kothari (2018) who posited that a response rate of 50% is adequate for analysis. Orodho and Kombo (2017)

asserted that when cross – sectional studies of survey design are conducted at the individual level; 50% response rate is acceptable. Therefore, the response rate obtained in this study was adequate for analysis and reporting. The return rate was as presented in Table 4.1.

**Table 4.1: Instrument Response Rate**

	<b>Frequency</b>	<b>Percentage</b>
<b>Response</b>	274	52.09
<b>Non response</b>	252	47.91
<b>Total</b>	<b>526</b>	<b>100.0</b>

**Source: Research data**

Table 4.1 shows that the average response rate was 52.09%. The low response rate was due to the fact that the various professionals (Architects, Engineers, Quantity Surveyors and Registered Building Contractors) operate under tight work schedules and getting time with them to answer the questionnaires was not easy.

**4.3. Descriptive Analysis of the Respondents**

This section presents a brief description of the demographic characteristics of sampled respondents involved in this study. This will give a better understanding of the respondents included in the study. The study was interested in capturing the demographic characteristics of the respondents who participated in the study. The study sought to draw information from the respondents on distribution by gender, age, level of education area of specialization and the length of time the respondents were engaged in construction projects. Distribution by gender was important to inform how disaggregated the respondent’s groups under consideration were distributed between the two genders since none of the two gender categories was granted preferential consideration within the selection of the respondents. Distribution of respondents by age group was done to ascertain how respondents were evenly distributed since an individual age was not a consideration in the selection of respondents. Age groups were classified into six categories. Distribution of respondents by Level of Education was considered important because level of Education would most likely have an impact on the monitoring and evaluation processes in the construction projects. It had five options of Primary, Secondary, college certificate, and Diploma and university Bachelor’s degree. Distribution of respondents by level of service was done to indicate how long the respondents had worked in their respective construction projects. The results of the demographic characteristics are discussed below:

**Table 4.2: Gender**

<b>Gender</b>	<b>Frequency (F)</b>	<b>Percentage (%)</b>
<b>Male</b>	186	67.8
<b>Female</b>	88	32.2
<b>Total</b>	<b>274</b>	<b>100.0</b>

**Source: Research data**

Findings in Table 4.2 show that 67.8% (186) of the staff were male while 32.2% (88) were female. This shows that the organizations have observed the one third gender rule in recruitment although males outnumber females in construction industry in Nairobi County, Kenya. A possible explanation for the gender disparities may be due to gender roles whereby culturally, women are responsible for the family, which affects their career growth, whilst their male counterparts devote their time to productive work or leisure. According to Santos & Van Phu (2019) women with responsibilities for housework and childcare have less energy available for remunerated work than men have, and this affects their job opportunities and productivity. Construction is a traditionally male-dominated sector due to its perceived demand of physical strength and other risks (Norberg, 2021). Distribution by gender was important to inform how disaggregated the respondents were distributed between the two gender since none of the two gender categories was granted preferential consideration within the selection of the respondents.

**Table 4.3: Age bracket**

<b>Age Bracket</b>	<b>Frequency (F)</b>	<b>Percentage (%)</b>
Below 30	65	23.7
30 – 39 years	93	34.0
40 – 49 years	56	20.3
50 – 59 years	14	5.1
60 – 69 years	10	3.4
70 and above years	36	13.5
<b>Total</b>	<b>274</b>	<b>100.0</b>

**Source: Research data**

Findings in Table 4.3 show that 34% (93) of the staff were aged between 30-39 years, 23.7% (65) below 30 years, 20.3% (56) between 40-49 years, 13.5% (36) more than 70 years, 5.1% (14) between 50-59 years and 3.4% (10) between 60-69 years. Distribution of respondents by age



group was done to ascertain that the various professional involved in building and construction were evenly distributed in respect to the defined age bracket, since an individual age was not a consideration in the selection of respondents. Age groups were classified into five categories. The results further showed that the majority of the staff were relatively young and energetic hence able to work effectively and collaboratively to achieve organization goals. The results concur with the study of Gachuma (2018) who observed that majority of professionals in quantity surveying firms in Kenya were young and energetic.

**Table 4.4: Number of Years worked in the Company**

Number of years	Frequency (F)	Percentage (%)
6-10 years	157	57.2
11– 15 years	84	30.5
16– 20 years	9	3.4
21 – 25 years	14	5.1
Above 25 years	10	3.8
<b>Total</b>	<b>274</b>	<b>100.0</b>

**Source: Research data**

Findings in Table 4.4 show that 57.2% (157) of the staff had worked in the current organization for between 6-10 years, 30.5% (84) for 11-15 years, 5.1% (14) for 21-25 years, 3.8% (10) above 25 years and 3.4% (9) for 16-20 years. This shows that the respondents have worked in the construction industry for considerable number of years hence suitable to answer questions regarding monitoring and evaluation processes in the organization. The results further showed that majority of the respondents had worked in their organizations for below 15 years (87.7%), which may be attributed to challenges of retention of professional staff in Kenya’s construction industry where the professionals (architects, quantity surveyors, engineers) are preferring to work in countries abroad due to little work and few prospects in Kenya. The results concur with the findings of Cannon (2017) who observed that the majority of professionals working in Kenya’s engineering firms had worked in the construction industry for below 15 years.

**Table 4.5: Area of specialization**

Area of specialization	Frequency (F)	Percentage (%)
------------------------	---------------	----------------

Engineer	57	21
Architect	74	27
Quantity Surveyor	55	20
NCA 1 Registered Contractor	86	32
<b>Total</b>	<b>274</b>	<b>100.0</b>

**Source: Research data**

Findings in Table 4.5 show that 21% (57) of the respondents worked in engineering consulting firms, 27% (74) in architectural firms, 20% (55) in quantity surveying firms and 32% (86) worked in NCA 1 registered building contractors' firms. Distribution of respondents by area of specialization was done to indicate which professionals were involved in building and construction of private residential building projects in Nairobi County, Kenya. The results further showed that all the professionals involved in building construction were well represented in the study.

**Table 4.6: Level of Education**

<b>Level of Education</b>	<b>Frequency (F)</b>	<b>Percentage (%)</b>
Master's degree	22	6.8
Bachelor's degree	99	36.3
Diploma	85	31.2
Certificate	70	25.7
<b>Total</b>	<b>274</b>	<b>100.0</b>

**Source: Research data**

Findings in Table 4.6 show that 43.1% (121) of the staff had attained university education, 31.2% (85) had attained college education while 25.7% (70) had attained technical college education. Distribution of respondents by Level of Education was considered important because level of Education would most likely have an impact on the performance of private residential building projects. The results implied that all staff had attained higher education and were qualified to work in the construction industry. The same research tool was administered to all the employees in the different levels of management.

**Table 4.7: Job Position**

<b>Job position</b>	<b>Frequency (F)</b>	<b>Percentage (%)</b>
Top management	37	13.6
Middle management	103	37.6
Low/Entry level	134	48.8
<b>Total</b>	<b>274</b>	<b>100.0</b>

**Source: Research data**

Findings in Table 4.7 show that 37.6% (103) of the staff worked under middle level management, 48.8% (134) were under low/entry level and 13.6% (37) were under top level management. Distribution of respondents by job position was considered important to ensure that all the levels of management who were familiar with project monitoring and evaluation in construction projects were well represented. This results further showed that all the management levels were well represented in the study.

**4.4 Descriptive Statistics of Responses on Monitoring and Evaluation Processes**

This section presents the results of descriptive statistics of responses on monitoring and evaluation which were categorized to consist of utilization of M&E results, M & E planning, stakeholder engagement and capacity building. Questionnaire items were measured on a 5-point Likert-type scale, ranging from 1 = Strongly Disagree; 2=Disagree; 3= Neutral; 4= Agree and 5= Strongly Agree. The responses were analysed using mean scores and standard deviations. According to Taherdoost (2019), the means were interpreted as follows:

- Strongly Disagree = 1.00-1.80
- Disagree= 1.81-2.60
- Neutral= 2.61-3.40
- Agree= 3.41-4.20
- Strongly Agree= 4.21-5.00

**4.4.1 Effect of Monitoring and Evaluation Planning on Performance of Private Building Projects in Nairobi County**

This section presents the research findings in line with the first research objective which was “To determine the effect of monitoring and evaluation planning on performance of private

building projects in Nairobi County, Kenya.” The findings are presented descriptively and inferentially.

#### 4.4.1.1 Descriptive Statistics for M&E Planning

Respondents were asked to tick on the degree to which they agreed/disagreed with statements related to M & E Planning in their organization. Findings are presented in Table 4.8.

**Table 4.8: Results of descriptive statistics on M & E Planning**

	1	2	3	4	5	Total	Mean	Std. Dev.
	F (%)	F (%)	F (%)	F (%)	F (%)	F (%)		
There is M&E Budgetary considerations during planning process	10 (3.6)	18 (6.6)	26 (9.5)	85 (31.0)	135 (49.3)	274 (100)	4.16	0.951
M&E approaches are normally predetermined during planning	8 (2.9)	25 (9.2)	38 (14.0)	89 (32.7)	112 (41.2)	272 (100)	4.00	1.005
Baseline surveys are normally factored in during the M & E planning process	14 (5.1)	21 (7.7)	28 (10.2)	46 (16.8)	165 (60.2)	274 (100)	4.19	1.001
The frequency of the M & E is normally determined during the planning process	8 (2.9)	11 (4.0)	33 (12.1)	41 (15.0)	180 (65.9)	273 (100)	4.37	1.081
M&E planning project-planning processes have contributed to the project performance	13 (4.8)	13 (4.8)	22 (8.1)	43 (15.8)	182 (66.7)	273?? (100)	4.35	1.073
M&E planning has led to accurate, evidence-based reporting that informs management and decision-making to guide and improve project/programme implementation	9 (3.3)	18 (6.6)	19 (6.9)	21 (7.7)	207 (75.5)	274 (100)	4.46	1.075
M&E planning has provided opportunities for stakeholder feedback, especially beneficiaries of the projects	9 (3.3)	16 (5.8)	34 (12.4)	29 (10.6)	186 (67.9)	274 (100)	4.34	1.077
M&E planning has helped my organization in coming up with sound and well-informed decisions	20 (7.4)	18 (6.6)	20 (7.4)	30 (11.0)	184 (67.6)	272?? (100)	4.25	1.118
There has been timely and reliable M&E planning that provides information to support project/programme implementation	16 (5.8)	20 (7.3)	11 (4.0)	36 (13.1)	191 (69.7)	274 (100)	4.35	1.206
My organization’s projects implementation has been enhanced through M&E planning	17 (6.2)	15 (5.5)	15 (5.5)	21 (7.7)	206 (75.2)	274 (100)	4.40	1.155
<b>Overall composite mean and Std. Deviation</b>							<b>4.28</b>	<b>1.071</b>

**Source: Research data**

Statement (1), there is M&E budgetary considerations during planning process had a mean of 4.16 (SD=0.951). The results show that out of the 274 respondents, 10 (3.6%) strongly disagreed,

18 (6.6%) disagreed, 26 (9.5%) were neutral, 85 (31%) agreed and 135 (49.3%) strongly agreed. The mean was 4.16 which indicate that the respondents agreed that there was M&E budgetary considerations during planning process which could positively affect the performance of private building projects in Nairobi County. The mean index for this statement was 4.16 with a standard deviation of 0.951 which was lower than composite mean of 4.28 and standard deviation of 1.071. When this mean index was compared to the composite mean index on M & E Planning, it was found to be lower meaning that the variable had little contribution to M & E Planning of private residential building projects.

Statement (2), M&E approaches were normally predetermined during planning had a mean of 4.00 (SD=1.015) signifying agreement. The results show that out of the 272 respondents, 8(2.9%) strongly disagreed, 25(9.2%) disagreed, 38(14.0%) were neutral, 89(32.7%) agreed and 112(41.2%) strongly agreed. The mean was 4.00 which indicate that the respondents agreed that M&E approaches were normally predetermined during planning which could positively affect the performance of private building projects in Nairobi County. The mean index for this statement was 4.00 with a standard deviation of 1.005 which was lower than composite mean of 4.28 and standard deviation of 1.071. When this mean index was compared to the composite mean index on M & E Planning, it was found to be lower meaning that the variable had little contribution to M & E Planning of private residential building projects.

Statement (3), baseline surveys are normally factored in during the M & E planning process had a mean of 4.19 (SD=1.001) which shows high level of agreement. The results show that out of the 274 respondents, 14(5.1%) strongly disagreed, 21(7.7%) disagreed, 28(10.2%) neutral, 46(16.8%) agreed and 165(60.2%) strongly agreed. The mean was 4.19 which indicate that the respondents agreed that baseline surveys are normally factored in during the M & E planning process which could positively affect the performance of private building projects in Nairobi County. The mean index for this statement was 4.19 with a standard deviation of 1.001 which was lower than composite mean of 4.28 and standard deviation of 1.071. When this mean index was compared to the composite mean index on M & E Planning, it was found to be lower meaning that the variable had little contribution to M & E Planning of private residential building projects.

Statement (4), the frequency of the M & E is normally determined during the planning process had a mean of 4.37 (SD=1.040). This shows that the respondents agreed with the agreement. The results show that out of the 273 respondents, (2.9%) strongly disagreed, 11(4.0%) disagreed, 33(12.1%) neutral, 41(15.0%) agreed and 180(65.9%) strongly agreed. The mean was 4.37 which indicated that the respondents agreed that the frequency of the M&E is normally determined during the planning process and could strongly affect the performance of private building projects in Nairobi County. The mean index for this statement was 4.37 with a standard deviation of 1.081 which was higher than composite mean of 4.28 and standard deviation of 1.071. When this mean index was compared to the composite mean index on M & E Planning, it was found to be higher meaning that the variable had high contribution to M & E Planning of private residential building projects.

Statement (5), M&E planning project-planning processes have contributed to the project performance had a mean of 4.35 (SD=0.973). This shows that the respondents agreed with the agreement. The results show that out of the 273 respondents, 13(4.8%) strongly disagreed, 13(4.8%) disagreed, 22(8.1%) neutral, 43(15.8%) agreed and 182(66.7%) strongly agreed. The mean was 4.35 which indicate that the respondents agreed that the frequency of the M&E planning project-planning processes have contributed to the project performance. The mean index for this statement was 4.35 with a standard deviation of 1.073 which was higher than composite mean of 4.28 and standard deviation of 1.071. When this mean index was compared to the composite mean index on M & E Planning, it was found to be higher meaning that the variable had high contribution to M & E Planning of private residential building projects.

Statement (6), M&E planning has led to accurate, evidence-based reporting that informs management and decision-making to guide and improve project/programme implementation had a mean of 4.46 (SD=1.035). The results show that out of the 274 respondents, 9(3.3%) strongly disagreed, 18(6.6%) disagreed, 19(6.9%) neutral, 21(7.7%) agreed and 207(75.5%) strongly agreed. The mean was 4.46 which showed that the respondents agreed that M&E planning has led to accurate, evidence-based reporting that informs management and decision-making to guide and improve project/programme implementation. The mean was 4.46 which indicate that the respondents agreed that the frequency of the M&E planning project-planning processes have

contributed to the project performance. The mean index for this statement was 4.46 with a standard deviation of 1.075 which was higher than composite mean of 4.28 and standard deviation of 1.071. When this mean index was compared to the composite mean index on M & E Planning, it was found to be higher meaning that the variable had high contribution to M & E Planning of private residential building projects.

Statement (7), M&E planning has provided opportunities for stakeholder feedback, especially beneficiaries of the projects had a mean of 4.34 (SD=1.037). The results show that out of the 274 respondents, 9(3.3%) strongly disagreed, 16(5.8%) disagreed, 34(12.4%) neutral, 29(10.6%) agreed and 186(67.9%) strongly agreed. The mean was 4.34 which showed that the respondents agreed that M&E planning has led to accurate, evidence-based reporting that informs management and decision-making to guide and improve project/programme implementation. The mean was 4.34 which showed that the respondents agreed that M&E planning had provided opportunities for stakeholder feedback, especially beneficiaries which could have positive effects on the performance of private building projects in Nairobi County. The mean index for this statement was 4.34 with a standard deviation of 1.077 which was higher than composite mean of 4.28 and standard deviation of 1.071. When this mean index was compared to the composite mean index on M & E Planning, it was found to be higher meaning that the variable had high contribution to M & E Planning of private residential building projects.

Statement (8), M&E planning has helped my organization in coming up with sound and well-informed decisions had a mean of 4.25 (SD=1.118). The results show that out of the 272 respondents, 20(7.4%) strongly disagreed, 18(6.6%) disagreed, 20(7.4%) neutral, 30(11.0%) agreed and 184(67.6%) strongly agreed. The mean was 4.25 which affirmed that M&E planning had helped organizations in coming up with sound and well-informed decisions which could positively affect the performance of private building projects in Nairobi County. The mean index for this statement was 4.25 with a standard deviation of 1.018 which was lower than composite mean of 4.28 and standard deviation of 1.071. When this mean index was compared to the composite mean index on M & E Planning, it was found to be lower meaning that the variable had little contribution to M & E Planning of private residential building projects.

Statement (9), there has been timely and reliable M&E planning that provides information to support project/programme implementation had a mean of 4.35 (SD=1.206). The findings indicate that out of the 274 respondents, 16(5.8%) strongly disagreed, 20(7.3%) disagreed, 11(4.0%) neutral, 36(13.1%) agreed and 191(69.7%) strongly agreed. The mean was 4.35 which show that the respondents agreed that there had been timely and reliable M&E planning that provided information to support project/programme implementation which could positively affect the performance of private building projects in Nairobi County. The mean index for this statement was 4.35 with a standard deviation of 1.206 which was higher than composite mean of 4.28 and standard deviation of 1.077. When this mean index was compared to the composite mean index on M & E Planning, it was found to be higher meaning that the variable had high contribution to M & E Planning of private residential building projects.

Statement (10), my organization's projects implementation has been enhanced through M&E planning had a mean of 4.40 (SD=1.155). The findings indicate that out of the 274 respondents, 17(6.2%) strongly disagreed, 15(5.5%) disagreed, 15(5.5%) were neutral, 21(7.7%) agreed and 206(75.2%) strongly agreed. The mean was 4.40 which indicate that organizations' projects implementation had been enhanced through M&E planning as shown by agreement with the statement which could have positive effects on the performance of private building projects in Nairobi County. The mean index for this statement was 4.40 with a standard deviation of 1.155 which was higher than composite mean of 4.28 and standard deviation of 1.077. When this mean index was compared to the composite mean index on M & E Planning, it was found to be higher meaning that the variable had high contribution to M & E Planning of private residential building projects.

Monitoring and Evaluation planning was one of the independent variables of the study. The results of the study indicate that monitoring and evaluation planning contributes to the performance of construction projects. The results concur with the study of Agyekum (2019) who reported that monitoring and evaluation planning should be given critical attention in achieving project success. Additionally, the results of this study are supported by Tekkwo (2019) who reported that monitoring and evaluation planning as a management function, indeed has influence on project performance. Similarly, the results concur with the findings of Atwa and Mudi (2019) who reported that that there was a considerable positive connection between M&E



planning and performance of projects. From the results, monitoring and evaluation planning helps the project team to forecast the project's needs which helps to define the scope of the project and design objectives that are relevant, measurable and achievable. In addition, monitoring and evaluation planning helps to estimate the costs required by the projects and to assemble relevant personnel, plant and equipment and materials needed for the entire project. M&E planning also enables the management to make informed decisions, come up with ways of evaluating the project success, how to correct deviations and finally how to provide feedback to the relevant stakeholders. These results are further supported by Hussein (2020) who opined that M&E plans help define a project's scope, establish interventions when things go wrong, and give everyone an idea of how those interventions affect the rest of the project. This way, when problems inevitably arise, a quick and effective solution can be implemented. The results of this study indicated that M&E Budgetary considerations, baseline surveys and frequency of the M & E were normally predetermined during planning and were normally factored in during the M & E planning process. Further, M&E planning project-planning processes had contributed to the project performance, accurate and evidence-based reporting that informed management and decision-making to guide and improve project/programme implementation.

This was supported by interviewers who explained:

*M&E plans assist in defining a project's scope, establishing interventions in the event of a problem, and letting everyone know how those interventions will affect the remainder of the project. In this way, an immediate and efficient fix may be put into place when issues eventually develop. (Respondents, Interview, February 12, 2023).*

#### **4.4.1.2 Inferential Statistics for M & E Planning and Performance of Construction Projects**

Correlation between M & E Planning and Performance of Construction Projects was computed by means of Pearson`s correlational analyses and Table 4.9 shows the statistical outputs. The total scores were calculated as summation of individual scores on every item by respondents at 95 percent level of confidence. The correlation analysis results are shown in Table 4.9

**Table 4.9 Correlation between M & E Planning and Performance of Construction Projects**

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**Correlations**

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		Performance of Construction Projects	M&E Planning
Performance of Construction Projects	Pearson Correlation	1	.525**
	Sig. (2-tailed)		.000
	N	274	274
M&E Planning	Pearson Correlation	.525**	1
	Sig. (2-tailed)	.000	
	N	274	274

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

The findings as shown in Table 4.9 show that there is a positive and significant correlation between M & E Planning and Performance of Construction Projects ( $r=0.525$ ). The P-Value= $0.000 < 0.05$  implying that there existed significant association between M & E Planning and performance of private residential building projects in Nairobi County, therefore leading to the rejection of null hypothesis and acceptance of alternative hypothesis, thus the research results conclude that there exists significant correlation between M & E Planning and performance of private residential building projects in Nairobi County. The model sought to determine how M & E Planning as predictor significantly or insignificantly influenced sustainability of performance of private residential building projects. Moreover, simple linear regression was adapted to examine how M & E Planning influences performance of private residential building projects. Regression model summary results were as displayed in Table 4.10.

**Table 4.10: Simple Regression Results for Effect of M & E Planning on Performance of Construction Projects**

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.458 <sup>a</sup>	.410	.407	.72233

a. Predictors: (Constant), M&E Planning

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	37.716	1	37.716	72.286	.000 <sup>b</sup>
	Residual	141.919	272	.522		
	Total	179.635	273			

a. Dependent Variable: Performance of Construction Projects

b. Predictors: (Constant), M&E Planning

Coefficients						
Model		Unstandardized Coefficients		Standardized	t	Sig.
		B	Std. Error	Coefficients		
1	(Constant)	1.989	.123		16.223	.000
	M&E Planning	.345	.041	.458	8.502	.000

a. Dependent Variable: Performance of Construction Projects

The model summary of the results of simple regression analysis presented in Table 4.10 indicate that M & E Planning explain 41% of the variance in Performance of Construction Projects ( $R^2=0.410$ ). This shows that 59% of the variance in Performance of Construction Projects was explained by factors not in the study. Further, the ANOVA ( $F$ -test statistic) ( $F = 72.286$ ,  $p = 0.000$ ) shows the fitness of the regression model, which means that M & E Planning was a significant predictor of Performance of Construction Projects. The standardised beta coefficients showed that M & E Planning was a significant positive predictor of Performance of Construction Projects ( $\beta = 0.458$ ,  $p=0.000$ ). This implies that Performance of Construction Projects increased when the firms involved in the construction of private residential buildings in Nairobi County undertook M & E Planning in their organisations. The study findings show that the firms involved in the construction of private residential buildings in Nairobi County that carry out M & E Planning are likely to achieve higher Organizational Performance. The coefficient data shows that holding other factors constant, Performance of Construction Projects would stand at 1.989. A unit rise in the M & E Planning would result to 0.345 change in performance of private residential building projects in Nairobi County, given that other factors were held constant. The substituted model is: Model:  $Y = 1.989 + 0.345X_1 + \varepsilon$  where,

$Y$  = performance of private residential building projects,

$X_1$  = M & E Planning

$\varepsilon$  = Error term.

The study findings show that the firms involved in the construction of private residential buildings in Nairobi County that carry out M & E Planning are likely to achieve higher Organizational Performance and thus the hypothesis which states that there is no significant relationship between Monitoring and evaluation planning and performance of private building projects in Nairobi County, Kenya is rejected.

#### **4.4.2 Effect of Stakeholders' Engagement on Performance of Private Building Projects in Nairobi County**

This section presents the research findings in line with the first research objective which was “examine the effect of stakeholders' engagement on performance of private building projects in Nairobi County, Kenya.” The findings are presented descriptively and inferentially.

##### **4.4.2.1 Descriptive Statistics for Stakeholders' Engagement**

Respondents were asked to tick on the degree to which they agreed/disagreed with statements related to Stakeholder Engagement in their organization. Findings are presented in Table 4.11.

**Table 4.11: Results of descriptive statistics on Stakeholder Engagement**

	1	2	3	4	5	Total	Mean	Std. Dev.
	F (%)	F (%)	F (%)	F (%)	F (%)	F (%)		
Involvement of different stakeholders in planning activities of the my organization has led to taking of quality decisions	10 (3.6)	23 (8.4)	28 (10.2)	98 (35.8)	115 (42.0)	274 (100)	4.04	0.967
Stakeholders participation has enhanced quality assurance of services offered by my organization	14 (5.1)	24 (8.8)	29 (10.6)	95 (34.7)	112 (40.9)	274 (100)	3.97	0.988
Different stakeholders support the activities of my organization	15 (5.5)	24 (8.8)	31 (11.4)	95 (34.9)	107 (39.3)	272 (100)	3.94	1.089
My organization's construction activities consider the local needs of the people	14 (5.1)	15 (5.5)	22 (8.1)	55 (20.1)	167 (61.2)	273 (100)	4.27	1.079
There is trust from different stakeholders in the activities of my organization	13 (4.7)	10 (3.6)	12 (4.4)	43 (15.7)	196 (71.5)	274 (100)	4.47	1.173
Stakeholders monitor efficiency in the procurement and supply of various goods and services in the my organization	22 (8.0)	26 (9.5)	16 (5.8)	83 (30.3)	127 (46.4)	274 (100)	3.97	1.083
Monitoring by different stakeholder has led to accountable use of resources	18 (6.6)	12 (4.4)	21 (7.7)	44 (16.1)	179 (65.3)	274 (100)	4.29	1.190
Stakeholders act as checks and balances in the use of resources by the my organization	13 (4.7)	16 (5.8)	13 (4.7)	45 (16.4)	187 (68.2)	274 (100)	4.38	1.245
The stakeholders ensure that the my organization fulfils its role	13 (4.7)	22 (8.0)	28 (10.2)	48 (17.5)	163 (59.5)	274 (100)	4.19	1.223
There is timely stakeholder feedback about performance of my organization	23 (8.4)	17 (6.2)	10 (3.6)	42 (15.3)	182 (66.4)	274 (100)	4.25	1.026
There is increased prominence of stakeholder voice	24 (8.8)	13 (4.7)	25 (9.1)	53 (19.3)	159 (58.0)	274 (100)	4.13	1.224
Public views influence activities of the company	21 (7.7)	11 (4.0)	12 (4.4)	63 (23.0)	167 (60.9)	274 (100)	4.26	1.260
Attitudes of stakeholders are put in consideration when implementing programmes of the company	21 (7.7)	15 (5.5)	19 (6.9)	51 (18.6)	168 (61.3)	274 (100)	4.20	1.300
<b>Overall composite mean and Std. Deviation</b>							<b>4.18</b>	<b>1.157</b>

Statement (1), involvement of different stakeholders in planning activities of the organization has led to taking of quality decisions had a mean of 4.04 (SD=0.967). The findings indicate that out of the 274 respondents, 10(3.6%) strongly disagreed, 23(8.4%) disagreed, 28(10.2%) were

neutral, 98(35.8%) agreed and 115(42.0%) strongly agreed with the statement. The mean was 4.04 which indicate that involvement of different stakeholders in planning activities of the organization has led to taking of quality decisions which could have positive effects on the performance of private building projects in Nairobi County. The mean index for this statement was 4.04 with a standard deviation of 0.967 which was lower than composite mean of 4.18 and standard deviation of 1.157. When this mean index was compared to the composite mean index on stakeholder engagement, it was found to be lower meaning that the variable had little contribution to stakeholder engagement of private residential building projects.

Statement (2), stakeholders' participation has enhanced quality assurance of services offered by my organization had a mean of 3.97 (SD=0.988). The findings indicate that out of the 274 respondents, 14(5.1%) strongly disagreed, 24(8.8%) disagreed, 29(10.6%) were neutral, 95(34.7%) agreed and 112(40.9%) strongly agreed with the statement. The mean of 3.97 indicates that stakeholders' participation has enhanced quality assurance of services offered by their organizations which could have positive effects on the performance of private building projects in Nairobi County. The mean index for this statement was 3.97 with a standard deviation of 0.988 which was lower than composite mean of 4.18 and standard deviation of 1.157. When this mean index was compared to the composite mean index on stakeholder engagement, it was found to be lower meaning that the variable had little contribution to stakeholder engagement of private residential building projects.

Statement (3), different stakeholders support the activities of my organization had a mean of 3.94 (SD=1.089). The findings indicate that out of the 272 respondents, 15(5.5%) strongly disagreed, 24(8.8%) disagreed, 31(11.4%) were neutral, 95(34.9%) agreed and 107(39.3%) strongly agreed with the statement. The mean was 3.94 which indicates that different stakeholder's support the activities of their organization which could have positive effects on the performance of private building projects in Nairobi County. The mean index for this statement was 3.94 with a standard deviation of 1.089 which was lower than composite mean of 4.18 and standard deviation of 1.157. When this mean index was compared to the composite mean index on stakeholder engagement, it was found to be lower meaning that the variable had little contribution to stakeholder engagement of private residential building projects.

Statement (4), my organization's construction activities consider the local needs of the people had a mean of 4.27 (SD=1.079). The findings show that out of the 273 respondents, 14(5.1%) strongly disagreed, 15(5.5%) disagreed, 22(8.1%) were neutral, 55(20.1%) agreed and 167(61.2%) strongly agreed with the statement. The mean was 4.27 which indicate that organization's construction activities considered the local needs of the people which could positively affect the performance of private building projects in Nairobi County. The mean index for this statement was 4.27 with a standard deviation of 1.079 which was higher than composite mean of 4.28 and standard deviation of 1.157. When this mean index was compared to the composite mean index on stakeholder engagement, it was found to be higher meaning that the variable had high contribution to stakeholder engagement of private residential building projects.

Statement (5), there is trust from different stakeholders in the activities of my organization had a mean of 4.47 (SD=1.073). The findings show that out of the 274 respondents, 13(4.7%) strongly disagreed, 10(3.6%) disagreed, 12(4.4%) were neutral, 43(15.7%) agreed and 196(71.5%) strongly agreed with the statement. The mean was 4.47 which show that there was trust from different stakeholders in the activities of organizations which could positively affect the performance of private building projects in Nairobi County. The mean index for this statement was 4.47 with a standard deviation of 1.173 which was higher than composite mean of 4.28 and standard deviation of 1.157. When this mean index was compared to the composite mean index on stakeholder engagement, it was found to be higher meaning that the variable had high contribution to stakeholder engagement of private residential building projects.

Statement (6), stakeholders monitor efficiency in the procurement and supply of various goods and services in the organization had a mean of 3.97(SD=1.283). The findings show that out of the 274 respondents, 22(8.0%) strongly disagreed, 26(9.5%) disagreed, 16(5.8%) were neutral, 83(30.3%) agreed and 127(46.4%) strongly agreed with the statement. The mean of 3.97 shows that stakeholders monitor efficiency in the procurement and supply of various goods and services in the organization which could positively affect the performance of private building projects in Nairobi County. The mean index for this statement was 3.97 with a standard deviation of 1.083 which was lower than composite mean of 4.18 and standard deviation of 1.157. When this mean index was compared to the composite mean index on stakeholder engagement, it was found to

be lower meaning that the variable had little contribution to stakeholder engagement of private residential building projects.

Statement (7), monitoring by different stakeholder has led to accountable use of resources had a mean of 4.29 (SD=1.190). The results indicate that out of the 274 respondents, 18(6.6%) strongly disagreed, 12(4.4%) disagreed, 21(7.7%) were neutral, 44(16.1%) agreed and 179(65.3%) strongly agreed with the statement. The mean was 4.29 which show that monitoring by different stakeholder had led to accountable use of resources which could positively affect the performance of private building projects in Nairobi County. The mean index for this statement was 4.29 with a standard deviation of 1.190 which was higher than composite mean of 4.28 and standard deviation of 1.157. When this mean index was compared to the composite mean index on stakeholder engagement, it was found to be higher meaning that the variable had high contribution to stakeholder engagement of private residential building projects.

Statement (8), stakeholders act as checks and balances in the use of resources by the organization had a mean of 4.38 (SD=1.245). The results indicate that out of the 274 respondents, 13(4.7%) strongly disagreed, 16(5.8%) disagreed, 13(4.7%) were neutral, 45(16.4%) agreed and 187(68.2%) strongly agreed with the statement. The mean was 4.38 which is indicative of the fact that stakeholders act as checks and balances in the use of resources by the organization which could positively affect the performance of private building projects in Nairobi County. The mean index for this statement was 4.38 with a standard deviation of 1.245 which was higher than composite mean of 4.28 and standard deviation of 1.157. When this mean index was compared to the composite mean index on stakeholder engagement, it was found to be higher meaning that the variable had high contribution to stakeholder engagement of private residential building projects.

Statement (9), the stakeholders ensure that the organization fulfils its role had a mean of 4.19 (SD=1.223). The results indicate that out of the 274 respondents, 13(4.7%) strongly disagreed, 22(8.0%) disagreed, 28(10.2%) were neutral, 48(17.5%) agreed and 163(59.5%) strongly agreed with the statement. The mean was 4.19 which show that stakeholders ensured that the organization fulfilled its role which could positively affect the performance of private building projects in Nairobi County. The mean index for this statement was 4.19 with a standard deviation



of 1.223 which was higher than composite mean of 4.28 and standard deviation of 1.157. When this mean index was compared to the composite mean index on stakeholder engagement, it was found to be higher meaning that the variable had high contribution to stakeholder engagement of private residential building projects.

Statement (10), there is timely stakeholder feedback about performance of my organization had a mean of 4.25 (SD=1.126). The results indicate that out of the 274 respondents, 23(8.4%) strongly disagreed, 17(6.2%) disagreed, 10(3.6%) were neutral, 42(15.3%) agreed and 182(66.4%) strongly agreed with the statement. The mean was 4.25 which show that there was timely stakeholder feedback about performance of the organizations. This could have positive effects on the performance of private building projects in Nairobi County. The mean index for this statement was 4.25 with a standard deviation of 1.226 which was higher than composite mean of 4.18 and standard deviation of 1.157. When this mean index was compared to the composite mean index on stakeholder engagement, it was found to be higher meaning that the variable had high contribution to stakeholder engagement of private residential building projects.

Statement (11), there is increased prominence of stakeholder voice had a mean of 4.13 (SD=1.224). The results indicate that out of the 274 respondents, 24(8.8%) strongly disagreed, 13(4.7%) disagreed, 25(9.1%) were neutral, 53(19.3%) agreed and 159(58.0%) strongly agreed with the statement. The mean was 4.13 which can be deduced that there was increased prominence of stakeholder voice which could positively affect the performance of private building projects in Nairobi County. The mean index for this statement was 4.13 with a standard deviation of 1.024 which was lower than composite mean of 4.18 and standard deviation of 1.157. When this mean index was compared to the composite mean index on stakeholder engagement, it was found to be lower meaning that the variable had low contribution to stakeholder engagement of private residential building projects.

Statement (12), public views influence activities of the company had a mean of 4.26 (SD=1.260). The results indicate that out of the 274 respondents, 21(7.7%) strongly disagreed, 11(4.0%) disagreed, 12(4.4%) were neutral, 63(23.0%) agreed and 167(60.9%) strongly agreed with the statement. The mean was 4.26 which indicated that public views influence activities of the company which could positively affect the performance of private building projects in Nairobi

County. The mean index for this statement was 4.26 with a standard deviation of 1.260 which was higher than composite mean of 4.18 and standard deviation of 1.157. When this mean index was compared to the composite mean index on stakeholder engagement, it was found to be higher meaning that the variable had high contribution to stakeholder engagement of private residential building projects.

Statement (13), attitudes of stakeholders are put in consideration when implementing programmes of the company had a mean of 4.20 (SD=1.300). The results indicate that out of the 274 respondents, 21(7.7%) strongly disagreed, 15(5.5%) disagreed, 19(6.9%) were neutral, 51(18.6%) agreed and 168(61.3%) strongly agreed with the statement. The mean was 4.20 which show that attitudes of stakeholders were put in consideration when implementing programmes of the company. This could significantly affect the performance of private building projects in Nairobi County. The mean index for this statement was 4.20 with a standard deviation of 1.300 which was higher than composite mean of 4.18 and standard deviation of 1.157. When this mean index was compared to the composite mean index on stakeholder engagement, it was found to be higher meaning that the variable had high contribution to stakeholder engagement of private residential building projects

Stakeholder engagement was one of the independent variables of the study. The results of the study indicate that stakeholder engagement contributes to the performance of construction projects. The results concur with the study of Alqaisi (2018) who reported that lack or weakness of effective planning for all aspects of the project, including managing the expectations of stakeholders and identifying ways of communicating with them, causes major problems in the project, which result into project closure at times. Additionally, the results of this study are supported by Mambwe (2020) who found that stakeholder engagement in construction projects should be enhanced as this would significantly contribute to performance of projects in-terms of cost. Involvement of different stakeholders in planning activities leads to taking of quality decisions and enhances quality assurance of services offered by an organization.

A construction company's construction activities should consider the local needs of the people and there should be trust from different stakeholders in the activities of the organization. Stakeholders should monitor efficiency in the procurement and supply of various goods and

services used by the construction companies. The construction companies should provide adequate feedback to the stakeholders about the progress of the construction companies. Stakeholders should also be involved throughout the stages of project scheduling in order to ensure that project produces required outcomes as set by concerted efforts. The results were further supported by the study of Githinji, Ogolla and Kitheka (2020) which established that involvement of stakeholders in project identification was significantly and positively related to project performance. The study further observed that organization respect for stakeholders' concerns was an influencing factor in project identification. Monitoring of construction companies by different stakeholder leads to accountable use of resources as the different stakeholders' act as checks and balances in the use of resources by the organization which ensures that the construction companies are fulfilling their roles. This was supported by interviewers who explained:

*Stakeholder engagement enables businesses to proactively take into account the wants and needs of everyone who has an interest in company, which can strengthen relationships and build trust. A project's potential opponents can be identified by organizations through effective stakeholder engagement. It is possible to better understand the motivations, influences, and behaviors of individuals who are opposed by knowing who supports and opposes the project. (Respondents, Interview, February 12, 2023).*

#### **4.4.2.2 Inferential Statistics for Stakeholder Engagement and Performance of Construction Projects**

Correlation between Stakeholder Engagement and Performance of Construction Projects was computed by means of Pearson`s correlational analyses and Table 4.12 shows the statistical outputs. The total scores were calculated as summation of individual scores on every item by respondents at 95 percent level of confidence. The correlation analysis results are shown in Table 4.12

**Table 4.12 Pearson Correlation between Stakeholder Engagement and Performance of Construction Projects**

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Correlations
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		Performance of Construction Projects	Stakeholder Engagement
Performance of Construction Projects	Pearson Correlation	1	.563**
	Sig. (2-tailed)		.000
	N	274	274
Stakeholder Engagement	Pearson Correlation	.563**	1
	Sig. (2-tailed)	.000	
	N	274	274

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

The findings as shown in Table 4.12 show that there is a positive and significant correlation between Stakeholder Engagement and Performance of Construction Projects ( $r=0.563$ ). The P-Value= $0.000 < 0.05$  implying that there existed significant association between Stakeholder Engagement and performance of private residential building projects in Nairobi County, therefore leading to the rejection of null hypothesis and acceptance of alternative hypothesis, thus the research results conclude that there exists significant correlation between Stakeholder Engagement and performance of private residential building projects in Nairobi County. The model sought to determine how Stakeholder Engagement as predictor significantly or insignificantly influenced sustainability of performance of private residential building projects. Moreover, simple linear regression was adapted to examine how Stakeholder Engagement influences performance of private residential building projects. Regression model summary results were as displayed in Table 4.13.

**Table 4.13: Simple Regression Results for Effect of Stakeholder Engagement on Performance of Construction Projects**

<b>Model Summary</b>				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.502 <sup>a</sup>	.252	.249	.70288

a. Predictors: (Constant), Stakeholder Engagement

**ANOVA<sup>a</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	45.255	1	45.255	91.601	.000 <sup>b</sup>
	Residual	134.380	272	.494		
	Total	179.635	273			

a. Dependent Variable: Performance of Construction Projects

b. Predictors: (Constant), Stakeholder Engagement

Model		Coefficients <sup>a</sup>			t	Sig.
		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta		
1	(Constant)	1.741	.135		12.932	.000
	Stakeholder Engagement	.393	.041	.502	9.571	.000

a. Dependent Variable: Performance of Construction Projects

The model summary of the results of simple regression analysis presented in Table 4.13 indicate that Stakeholder Engagement explain 25.2% of the variance in Performance of Construction Projects ( $R^2=0.252$ ). This shows that 74.8% of the variance in Performance of Construction Projects was explained by factors not in the study. Further, the  $F$ -test statistic ( $F = 91.601$ ,  $p = 0.000$ ) shows the fitness of the regression model, which means that Stakeholder Engagement was a significant predictor of Performance of Construction Projects. The standardised beta coefficients showed that Stakeholder Engagement was a significant positive predictor of Performance of Construction Projects ( $\beta = 0.502$ ,  $p=0.000$ ). This implies that Performance of Construction Projects increased when the firms involved in the construction of private residential buildings in Nairobi County undertook Stakeholder Engagement in their organisations. The study findings show that the firms involved in the construction of private residential buildings in Nairobi County that carry out Stakeholder Engagement are likely to achieve higher Organizational Performance. The coefficient data shows that holding other factors constant, Performance of Construction Projects would stand at 1.741. A unit rise in the Stakeholder Engagement would result to 0.393 change in performance of private residential building projects in Nairobi County, given that other factors were held constant. The substituted model is: Model:  $Y = 1.741 + 0.393X_1 + \epsilon$  where,

Y = performance of private residential building projects,

X 1 = Stakeholder Engagement

$\varepsilon$  = Error term.

The study findings show that the firms involved in the construction of private residential buildings in Nairobi County that carry out Stakeholder Engagement are likely to achieve higher Organizational Performance. Thus, the hypothesis which states that there is no significant relationship between Stakeholders' engagement and performance of private building projects in Nairobi County, Kenya is rejected.

#### 4.4.3 Effect of Capacity Building on Performance of Private Building Projects in Nairobi County

This section presents the research findings in line with the first research objective which was “to assess the effect of capacity building on performance of private building projects in Nairobi County, Kenya.” Descriptive and inferential statistics are presented.

##### 4.4.3.1 Descriptive Statistics for Capacity Building

Respondents were asked to tick on the degree to which they agreed/disagreed with statements related to capacity building in their organization. Findings are presented in Table 4.14.

**Table 4.14: Results of Descriptive Statistics on the Responses of Capacity Building**

	1	2	3	4	5	Total	Mean	Std. Dev.
	F (%)	F (%)	F (%)	F (%)	F (%)	F (%)		
Formal training to stakeholders improves client acceptance	10 (3.6)	20 (7.3)	33 (12.0)	99 (36.1)	112 (40.9)	274 (100)	4.03	0.826
Formal training to stakeholders creates timely delivery	7 (2.6)	13 (4.7)	20 (7.3)	68 (24.8)	166 (60.6)	274 (100)	4.36	1.287
Formal training to stakeholders improves cost effectiveness	8 (2.9)	17 (6.2)	24 (8.8)	71 (25.9)	154 (56.2)	274 (100)	4.26	1.076

Informal training to stakeholders improves their acceptance	14 (5.1)	12 (4.4)	26 (9.5)	73 (26.6)	149 (54.4)	274 (100)	4.21	0.954
Training on work break down structures have been conducted	8 (2.9)	12 (4.4)	24 (8.8)	66 (24.1)	164 (59.9)	274 (100)	4.34	1.040
Training on project conceptualization have been conducted	9 (3.3)	28 (10.2)	24 (8.8)	56 (20.4)	157 (57.3)	274 (100)	4.18	1.043
Training on environmental Scanning have been conducted	8 (2.9)	12 (4.4)	24 (8.8)	51 (18.6)	179 (65.3)	274 (100)	4.39	1.285
<b>Overall composite mean and Std. Deviation</b>							<b>4.25</b>	<b>1.016</b>

Statement (1), formal training to stakeholders improves client acceptance had a mean of 4.03 (SD=0.826). The results indicate that out of the 274 respondents, 10(3.6%) strongly disagreed, 20(7.3%) disagreed, 33(12.0%) were neutral, 99(36.1%) agreed and 112(40.9%) strongly agreed with the statement. The mean was 4.03 which show that formal training to stakeholders improved client acceptance which could affect the performance of private building projects in Nairobi County. The mean index for this statement was 4.03 with a standard deviation of 0.826 which was lower than composite mean of 4.25 and standard deviation of 1.016. When this mean index was compared to the composite mean index on capacity building, it was found to be lower meaning that the variable had low contribution to capacity building of private residential building projects.

Statement (2), formal training to stakeholders creates timely delivery had a mean of 4.36 (SD=0.887). The results indicate that out of the 274 respondents, 7(2.6%) strongly disagreed, 13(4.7%) disagreed, 20(7.3%) were neutral, 68(24.8%) agreed and 166(60.6%) strongly agreed with the statement. The mean was 4.36 which shows that formal training to stakeholders creates timely delivery which could enhance the performance of private building projects in Nairobi County. The mean index for this statement was 4.36 with a standard deviation of 1.287 which was higher than composite mean of 4.25 and standard deviation of 1.016. When this mean index was compared to the composite mean index on capacity building, it was found to be higher meaning that the variable had high contribution to capacity building of private residential building projects.

Statement (3), formal training to stakeholders improves cost effectiveness had a mean of 4.26 (SD=1.076). The results indicate that out of the 274 respondents, 8(2.9%) strongly disagreed, 17(6.2%) disagreed, 24(8.8%) were neutral, 71(25.9%) agreed and 154(56.2%) strongly agreed with the statement. The mean was 4.26 which indicated that formal training to stakeholders improved cost effectiveness which could enhance the performance of private building projects in Nairobi County. The mean index for this statement was 4.36 with a standard deviation of 1.076.

which was higher than composite mean of 4.25 and standard deviation of 1.016. When this mean index was compared to the composite mean index on capacity building, it was found to be higher meaning that the variable had high contribution to capacity building of private residential building projects.

Statement (4), informal training to stakeholders improves their acceptance had a mean of 4.21 (SD=0.954). The results indicate that out of the 274 respondents, 14(5.1%) strongly disagreed, 12(4.4%) disagreed, 26(9.5%) were neutral, 73(26.6%) agreed and 149(54.4%) strongly agreed with the statement. The mean was 4.21 which show that informal training to stakeholders improved their acceptance and could thus enhance the performance of private building projects in Nairobi County. The mean index for this statement was 4.21 with a standard deviation of 0.954 which was lower than composite mean of 4.25 and standard deviation of 1.016. When this mean index was compared to the composite mean index on capacity building, it was found to be lower meaning that the variable had low contribution to capacity building of private residential building projects

Statement (5), training on work break down structures have been conducted had a mean of 4.34 (SD=1.040). The results indicate that out of the 274 respondents, 8(2.9%) strongly disagreed, 12(4.4%) disagreed, 24(8.8%) were neutral, 66(24.1%) agreed and 164(59.9%) strongly agreed with the statement. The mean was 4.34 which show that training on work break down structures had been conducted which could significantly influence the performance of private building projects in Nairobi County. The mean index for this statement was 4.34 with a standard deviation of 1.040 which was higher than composite mean of 4.25 and standard deviation of 1.016. When this mean index was compared to the composite mean index on capacity building, it was found



to be higher meaning that the variable had high contribution to capacity building of private residential building projects.

Statement (6), training on project conceptualization have been conducted had a mean of 4.18 (SD=1.043). The results indicate that out of the 274 respondents, 9(3.3%) strongly disagreed, 28(10.2%) disagreed, 24(8.8%) were neutral, 56(20.4%) agreed and 157(57.3%) strongly agreed with the statement. The mean was 4.18 which indicate that training on project conceptualization have been conducted which could significantly influence the performance of private building projects in Nairobi County. The mean index for this statement was 4.18 with a standard deviation of 1.043 which was lower than composite mean of 4.25 and standard deviation of 1.016. When this mean index was compared to the composite mean index on capacity building, it was found to be lower meaning that the variable had low contribution to capacity building of private residential building projects

Statement (7), training on environmental scanning have been conducted had a mean of 4.39 (SD=1.285). The results indicate that out of the 274 respondents, 8(2.9%) strongly disagreed, 12(4.4%) disagreed, 24(8.8%) were neutral, 51(18.6%) agreed and 179(65.3%) strongly agreed with the statement. The mean was 4.39 which indicate that training on environmental scanning have been conducted that training on project conceptualization have been conducted which could significantly influence the performance of private building projects in Nairobi County. The mean index for this statement was 4.39 with a standard deviation of 1.040 which was higher than composite mean of 4.25 and standard deviation of 1.285. When this mean index was compared to the composite mean index on capacity building, it was found to be higher meaning that the variable had high contribution to capacity building of private residential building projects.

Capacity building was one of the independent variables of the study. The results of the study indicate that capacity building contributes to the performance of construction projects. The results concur with the study of Tengan and Aigbavboa (2018) who found that effective capacity building plays a critical role in construction project implementation given the needed attention by the project implementers/team by providing technical capacity building and providing a conducive project environment. The study results also concur with the results of Shihemi (2017) The monitoring and evaluation teams in the construction firms had been trained on monitoring

and evaluation and hence the construction project had effective M&E human resource capacity. The skills of the staff conducting M&E of construction and building projects was good which resulted to project performance of the building and construction projects. Formal training to stakeholders improves client acceptance, creates timely delivery and improves cost effectiveness.

Similarly, Amolo (2021) opined that project management team and policy makers should integrate M&E capacity to enhance performance of construction projects and to suggest appropriate policies for strengthening M&E capacity building to boost effective implementation and performance of construction projects. Capacity building enables construction organizations and their leaders to develop competencies and skills that can make them more effective and sustainable, thus increasing the potential for construction project success. This was supported by interviewers who explained:

*An excessive reliance on outside experts as knowledge, resources, and solutions to construction projects problems is deliberately reduced via capacity building initiatives. Capacity building promotes staff members to address construction projects difficulties on their own by limiting the development of a dependent relationship on outsiders. (Respondents, Interview, February 12, 2023).*

#### **4.4.3.2 Inferential Statistics for Capacity Building and Performance of Construction**

##### **Projects**

The findings as shown in Table 4.15 show that there is a positive and significant correlation between Capacity Building and Performance of Construction Projects ( $r=0.566$ ). The P-Value= $0.000 < 0.05$  implying that there existed significant association between Capacity Building and performance of private residential building projects in Nairobi County, therefore leading to the rejection of null hypothesis and acceptance of alternative hypothesis, thus the research results conclude that there exists significant correlation between Capacity Building and performance of private residential building projects in Nairobi County. The model sought to determine how Capacity Building as predictor significantly or insignificantly influenced sustainability of performance of private residential building projects. Moreover, simple linear regression was adapted to examine how Capacity Building influences performance of private residential building projects. Regression model summary results were as displayed in Table 4.16.

**Table 4.15 Pearson Correlation between Capacity Building and Performance of Construction Projects**

		<b>Correlations</b>	
		Performance of Construction Projects	Capacity Building
Performance of Construction Projects	Pearson Correlation	1	.566**
	Sig. (2-tailed)		.000
	N	274	274
Capacity Building	Pearson Correlation	.566**	1
	Sig. (2-tailed)	.000	
	N	274	274

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

**Table 4.16: Simple Regression Results for Effect of Capacity Building on Performance of Construction Projects**

<b>Model Summary</b>				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.401 <sup>a</sup>	.161	.158	.74434

a. Predictors: (Constant), Capacity Building

<b>ANOVA<sup>a</sup></b>						
Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	28.934	1	28.934	52.222	.000 <sup>b</sup>
1	Residual	150.701	272	.554		
	Total	179.635	273			

a. Dependent Variable: Performance of Construction Projects

b. Predictors: (Constant), Capacity Building

<b>Coefficients<sup>a</sup></b>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
	(Constant)	1.896	.154		12.277	.000
1	Capacity Building	.406	.056	.401	7.226	.000

a. Dependent Variable: Performance of Construction Projects

The model summary of the results of simple regression analysis presented in Table 4.16 indicate that Capacity Building explain 16.1% of the variance in Performance of Construction Projects (R square=0. 161). This shows that 83.9% of the variance in Performance of Construction Projects was explained by factors not in the study. Further, the *F*-test statistic ( $F = 52.222$ ,  $p = .001$ ) shows the fitness of the regression model, which means that Capacity Building was a significant predictor of Performance of Construction Projects. The standardised beta coefficients showed that Capacity Building was a significant positive predictor of Performance of Construction Projects ( $\beta = 0.401$ ,  $p = 0.000$ ). This implies that Performance of Construction Projects increased when the firms involved in the construction of private residential buildings in Nairobi County undertook Capacity Building in their organisations. The study findings show that the firms involved in the construction of private residential buildings in Nairobi County that

carry out Capacity Building are likely to achieve higher Organizational Performance. The coefficient data shows that holding other factors constant, Performance of Construction Projects would stand at 1.896. A unit rise in the Capacity Building would result to 0.406 change in performance of private residential building projects in Nairobi County, given that other factors were held constant. The substituted model is: Model:  $Y = 1.896 + 0.406X_1 + \varepsilon$  where,

Y = performance of private residential building projects,

X1 = Capacity Building

$\varepsilon$  = Error term.

The study findings show that the firms involved in the construction of private residential buildings in Nairobi County that carry out Capacity Building are likely to achieve higher Organizational Performance thus the hypothesis that states that there is no significant relationship between capacity building and performance of private building projects in Nairobi County, Kenya is rejected.

#### **4.4.4 Effect of Utilization of M&E Results on Performance of Private Building Projects in Nairobi County**

This section presents the research findings in line with the fourth research objective which was “to establish the effect of utilization of M&E results on performance of private building projects in Nairobi County, Kenya.” It contains sections on descriptive and inferential statistics.

##### **4.4.4.1 Descriptive Statistics for Utilization of M&E Results**

Respondents were asked to tick on the degree to which they agreed/disagreed with statements related to Utilization of M&E Results in their organization. Findings are presented in Table 4.17.

**Table 4.17: Results of descriptive statistics on the responses of Utilization of M&E****Results**

	1	2	3	4	5	Total	Mean	Std. Dev.
	F (%)	F (%)	F (%)	F (%)	F (%)	F (%)		
The use of M&E results helps to obtain accurate data on the project progress	12 (4.4)	11 (4.0)	24(8.8)	43 (15.7)	184 (67.2)	274 (100)	4.37	1.154
The use of M&E results helps in giving the management an accurate data (information) of the project progress	9 (3.3)	20 (7.3)	18 (6.6)	62 (22.6)	165 (60.2)	274 (100)	4.29	1.125
The use of M&E results allows the management to identify the variation of the projects from the project management plan	14 (5.1)	11 (4.0)	22 (8.0)	46 (16.8)	181 (66.1)	274 (100)	4.35	1.334
Stakeholders were actively involved in the dissemination of M&E findings	16 (5.9)	19 (7.0)	20 (7.3)	54 (19.8)	164 (60.1)	273 (100)	4.21	0.860
The use of M&E results enables the project manager and the management in making strategic decision regarding corrective actions are taken to correct the project	13 (4.8)	13 (4.8)	21 (7.7)	43 (15.8)	182 (66.9)	272 (100)	4.35	1.176
M&E results improved the design of the project	20 (7.3)	32 (11.7)	18 (6.6)	50 (18.3)	153 (56)	273 (100)	4.04	1.073
M&E results improved the quality of project interventions such as literacy and numeracy lessons	11 (4.0)	29 (10.6)	27 (9.9)	95 (34.7)	112 (40.9)	274 (100)	3.98	1.101
M&E results improved use of financial and material resources of the project	12 (4.4)	22 (8.1)	19 (7.0)	47 (17.2)	173 (63.4)	273 (100)	4.28	1.233
The use of M & E results allows the project managers and the management to evaluate the progress of activities against the plan	8 (2.9)	11 (4.0)	19 (6.9)	56 (20.4)	180 (65.7)	274 (100)	4.42	1.424
<b>Overall composite mean and Std. Deviation</b>							<b>4.27</b>	<b>1.125</b>

**Source: Research data**

Statement (1), the use of M&E results helps to obtain accurate data on the project progress had a mean of 4.37 (SD=0.854). The results indicate that out of the 274 respondents, 12(4.4%) strongly disagreed, 11(4.0%) disagreed, 24(8.8%) were neutral, 43(15.7%) agreed and 184 (67.2%) strongly agreed with the statement. The mean was 4.37 which indicated that use of M&E results helped to obtain accurate data on the project progress which could significantly influence

the performance of private building projects in Nairobi County. The mean index for this statement was 4.37 with a standard deviation of 1.154 which was higher than composite mean of 4.27 and standard deviation of 1.125. When this mean index was compared to the composite mean index on utilization of M&E results, it was found to be higher meaning that the variable had high contribution to utilization of M&E results of private residential building projects.

Statement (2), the use of M&E results helps in giving the management an accurate data (information) of the project progress had a mean of 4.29 (SD=0.801). The results indicate that out of the 274 respondents, 9(3.3%) strongly disagreed, 20(7.3%) disagreed, 18(6.6%) were neutral, 62 (22.6%) agreed and 165(60.2%) strongly agreed with the statement. The mean was 4.29 which indicated that use of M&E results helped in giving the management an accurate data (information) of the project progress. This could go on to significantly influence the performance of private building projects in Nairobi County. The mean index for this statement was 4.29 with a standard deviation of 1.201 which was higher than composite mean of 4.27 and standard deviation of 1.125. When this mean index was compared to the composite mean index on utilization of M&E results, it was found to be higher meaning that the variable had high contribution to utilization of M&E results of private residential building projects.

Statement (3), the use of M&E results allows the management to identify the variation of the projects from the project management plan had a mean of 4.35 (SD=1.334). The results indicate that out of the 274 respondents, 19(7.0%) strongly disagreed, 11(4.0%) disagreed, 22(8.0%) were neutral, 46(16.8%) agreed and 181(66.1%) strongly agreed with the statement. The mean was 4.35 which indicated that the use of M&E results allows the management to identify the variation of the projects from the project management plan. This could go on to significantly influence the performance of private building projects in Nairobi County. The mean index for this statement was 4.35 with a standard deviation of 1.334 which was higher than composite mean of 4.27 and standard deviation of 1.125. When this mean index was compared to the composite mean index on utilization of M&E results, it was found to be higher meaning that the variable had high contribution to utilization of M&E results of private residential building projects.

Statement (4), stakeholders were actively involved in the dissemination of M&E findings had a mean of 4.21 (SD=0.860). The results indicate that out of the 273 respondents, 16(5.9%) strongly

disagreed, 11(4.0%) disagreed, 20(7.3%) were neutral, 54(19.8%) agreed and 164(60.1%) strongly agreed with the statement. The mean was 4.21 which show that stakeholders were actively involved in the dissemination of M&E findings. This could go on to significantly influence the performance of private building projects in Nairobi County. The mean index for this statement was 4.21 with a standard deviation of 0.860 which was lower than composite mean of 4.27 and standard deviation of 1.125. When this mean index was compared to the composite mean index on utilization of M&E results, it was found to be lower meaning that the variable had low contribution to utilization of M&E results of private residential building projects.

Statement (5), the use of M&E results enables the project manager and the management in making strategic decision regarding corrective actions are taken to correct the project had a mean of 4.35 (SD=1.076). The results indicate that out of the 272 respondents, 13(4.8%) strongly disagreed, 13(4.8%) disagreed, 21(7.7%) were neutral, 43(15.8%) agreed and 182(66.9%) strongly agreed with the statement. The mean was 4.35 which can be concluded that use of M&E results enabled the project manager and the management in making strategic decision regarding corrective actions are taken to correct the project which could significantly influence the performance of private building projects in Nairobi County. The mean index for this statement was 4.35 with a standard deviation of 1.176 which was higher than composite mean of 4.27 and standard deviation of 1.125. When this mean index was compared to the composite mean index on utilization of M&E results, it was found to be higher meaning that the variable had high contribution to utilization of M&E results of private residential building projects.

Statement (6), M&E results improved the design of the project had a mean of 4.04 (SD=1.073). The results indicate that out of the 273 respondents, 20(7.3%) strongly disagreed, 32(11.7%) disagreed, 18(6.6%) were neutral, 50(18.3%) agreed and 153(56%) strongly agreed with the statement. The mean was 4.04 which indicate that M&E results improved the design of the project which could enhance the performance of private building projects in Nairobi County. The mean index for this statement was 4.04 with a standard deviation of 0.860 which was lower than composite mean of 4.27 and standard deviation of 1.073. When this mean index was compared to the composite mean index on utilization of M&E results, it was found to be lower meaning that the variable had low contribution to utilization of M&E results of private residential building projects.



Statement (7), M&E results improved the quality of project interventions such as literacy and numeracy lessons had a mean of 3.98(SD=1.301). The results show that out of the 274 respondents, 11(4.0%) strongly disagreed, 29(10.6%) disagreed, 27(9.9%) were neutral, 95(34.7%) agreed and 112(40.9%) strongly agreed with the statement. The mean was 3.98 which indicate that M&E results improved the quality of project interventions such as literacy and numeracy lessons and could enhance the performance of private building projects in Nairobi County. The mean index for this statement was 3.98 with a standard deviation of 1.101 which was lower than composite mean of 4.27 and standard deviation of 1.073. When this mean index was compared to the composite mean index on utilization of M&E results, it was found to be lower meaning that the variable had low contribution to utilization of M&E results of private residential building projects.

Statement (8), M&E results improved use of financial and material resources of the project had a mean of 4.27(SD=1.233). The results show that out of the 273 respondents, 12(4.4%) strongly disagreed, 22(8.1%) disagreed, 19(7.0%) were neutral, 47(17.2%) agreed and 47(17.2%) strongly agreed with the statement. The mean was 4.28 which demonstrated that M&E results improved use of financial and material resources of the project and could enhance the performance of private building projects in Nairobi County. The mean index for this statement was 4.28 with a standard deviation of 1.233 which was higher than composite mean of 4.27 and standard deviation of 1.125. When this mean index was compared to the composite mean index on utilization of M&E results, it was found to be higher meaning that the variable had high contribution to utilization of M&E results of private residential building projects.

Statement (9), the use of M&E results allows the project managers and the management to evaluate the progress of activities against the plan had a mean of 4.42(SD=1.424). The results show that out of the 274 respondents, 8(2.9%) strongly disagreed, 11(4.0%) disagreed, 19(6.9%) were neutral, 56(20.4%) agreed and 180(65.7%) strongly agreed with the statement. The mean was 4.42 which showed that use of M&E results allowed the project managers and the management to evaluate the progress of activities against the plan. This could enhance the performance of private building projects in Nairobi County. The mean index for this statement was 4.42 with a standard deviation of 1.424 which was higher than composite mean of 4.27 and

standard deviation of 1.125. When this mean index was compared to the composite mean index on utilization of M&E results, it was found to be higher meaning that the variable had high contribution to utilization of M&E results of private residential building projects.

Utilization of M&E Results was one of the independent variables of the study. The results of the study indicate that capacity building contributes to the performance of construction projects. The results concur with the study of Sayyed (2021) who found that data dissemination influences performance of infrastructure building projects in education sector. Similarly, Mohan (2019) contended that an effective monitoring and evaluation system ought to have effective data dissemination and approach. Additionally, the result concurs with the findings of Winiko (2018) who found that utilization of M&E results had a significant positive influence on performance of digital education technology project in Malawi. On the other hand, the results are contrary to the findings of Mutekhele (2018) who reported that data dissemination and use had no significant influence on performance of educational building infrastructural projects. Utilization of M&E results has a significant positive influence on performance of construction projects. M&E results in construction projects can help stakeholders and the community understand what the building construction project is doing, how well it is meeting its objectives and whether there are ways that progress can be improved. Sharing results of a construction project can help ensure social, financial and political support and help the construction project establish or strengthen the network of individuals and organizations with similar goals of working with the various stakeholders. When a construction project publicizes positive results, it gets public recognition to stakeholders who have worked to make the program a success. This was supported by interviewers who explained:

*The construction project's management and stakeholders can better understand the program's performance by using M&E results to determine how effectively the construction project is accomplishing its goals and whether there is room for improvement. Utilization of M&E results make sure that the construction project team is productive and that the stated goals are met by keeping an eye on how well the various duties associated with a building project are being carried out. The budget can be calculated at any time based on the amount of time that has passed thanks to the results of monitoring and evaluation (Respondents, Interview, February 09, 2023).*

#### 4.4.4.2 Inferential Statistics for Utilization of M&E Results and Performance of Construction Projects

The findings as shown in Table 4.18 show that there is a positive and significant correlation between utilization of M&E results and Performance of Construction Projects ( $r=0.546$ ). The P-Value= $0.000 < 0.05$  implying that there existed significant association between utilization of M&E results and performance of private residential building projects in Nairobi County, therefore leading to the rejection of null hypothesis and acceptance of alternative hypothesis, thus the research results conclude that there exists significant correlation between utilization of M&E results and performance of private residential building projects in Nairobi County. The model sought to determine how utilization of M&E results as predictor significantly or insignificantly influenced sustainability of performance of private residential building projects. Moreover, simple linear regression was adapted to examine how utilization of M&E results influences performance of private residential building projects. Regression model summary results were as displayed in Table 4.19.

**Table 4.18 Pearson Correlation between M&E Results and Performance of Construction Projects**

		Correlations	
		Utilization of M&E Results	Performance of Construction Projects
Utilization of M&E Results	Pearson Correlation	1	.546**
	Sig. (2-tailed)		.000
	N	274	274
Performance of Construction Projects	Pearson Correlation	.546**	1
	Sig. (2-tailed)	.000	
	N	274	274

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

**Table 4.19: Simple Regression Results for Effect of M&E Results on Performance of Construction Projects**

#### Utilization of M&E Results and Performance of Construction Projects

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate

1	.361 <sup>a</sup>	.130	.127	.75783
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a. Predictors: (Constant), Utilization of M&E Results

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	23.425	1	23.425	40.788	.000 <sup>b</sup>
1	Residual	156.210	272	.574		
	Total	179.635	273			

a. Dependent Variable: Performance of Construction Projects

b. Predictors: (Constant), Utilization of M&E Results

Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
	(Constant)	2.095	.144		14.595	.000
1	Utilization of M&E Results	.320	.050	.361	6.387	.000

a. Dependent Variable: Performance of Construction Projects

The model summary of the results of simple regression analysis presented in Table 4.19 indicate that Utilization of M&E Results explain 13% of the variance in Performance of Construction Projects ( $R^2=0.130$ ). This shows that 87% of the variance in Performance of Construction Projects was explained by factors not in the study. Further, the  $F$ -test statistic ( $F = 40.788$ ,  $p = 0.000$ ) shows the fitness of the regression model, which means that Utilization of M&E Results was a significant predictor of Performance of Construction Projects. The standardised beta coefficients showed that Utilization of M&E Results was a significant positive predictor of performance of construction projects ( $\beta = 0.361$ ,  $p=0.000$ ). This implies that performance of construction projects improved when there was utilization of M&E results in the private residential building projects in Nairobi County, Kenya. The study findings show that firms involved in building construction, that utilize M&E results are likely to achieve higher Organizational Performance. The coefficient data shows that holding other factors constant, Performance of Construction Projects would stand at 2.095. A unit rise in the Utilization of M&E Results would result to 0.320 change in performance of private residential building projects in

Nairobi County, given that other factors were held constant. The substituted model is: Model:  
 $Y = 2.095 + 0.320X_1 + \varepsilon$  where,

Y = performance of private residential building projects,

X1 = Utilization of M&E Results

$\varepsilon$  = Error term.

The study findings show that firms involved in building construction, that utilize M&E results are likely to achieve higher Organizational Performance. And thus the hypothesis that states that there is no significant relationship between use of M&E results and performance of private building projects in Nairobi County, Kenya is rejected.

**Table 4.20: Results of Descriptive Statistics on Performance of Construction Projects**

	1	2	3	4	5	Total	Mean	Std. Dev.
	F (%)	F (%)	F (%)	F (%)	F (%)	F (%)		
The building projects are of quality standards	9 (3.3)	19 (6.9)	33 (12.0)	94 (34.3)	119 (43.4)	274 (100)	4.08	1.224
There is cost effectiveness in undertaking the building projects	8 (2.9)	12 (4.4)	15 (5.5)	58 (21.2)	181 (66.1)	274 (100)	4.43	1.063
The process involved in the carrying out of the building projects is efficient.	8 (2.9)	15 (5.5)	17 (6.2)	58 (21.2)	176 (64.2)	274 (100)	4.38	1.134
The general level of satisfaction with the building projects is high.	10 (3.6)	9 (3.3)	16 (5.8)	48 (17.5)	191 (69.7)	274 (100)	4.46	1.204
Projects have been delivered within budget	6 (2.2)	11 (4.0)	19 (6.9)	36 (13.1)	202 (73.7)	274 (100)	4.52	1.157
Project have been delivered within time scheduled	8 (2.9)	15 (5.5)	17 (6.2)	58 (21.2)	176 (64.2)	274 (100)	4.38	1.134
<b>Overall composite mean and Std. Deviation</b>							<b>4.38</b>	<b>1.134</b>

**Source: Research data**

Statement (1), the building projects are of quality standards had a mean of 4.08 (SD=1.224). The results indicate that out of the 274 respondents, 9(3.3%) strongly disagreed, 19(6.9%) disagreed, 33(12.0%) were neutral, 94(34.3%) agreed and 119(43.4%) strongly agreed with the statement. The mean was 4.08 which show that there was high performance of private building projects in Nairobi County indicated by quality standards. The mean index for this statement was 4.08 with a standard deviation of 1.224 which was lower than composite mean of 4.38 and standard deviation of 1.134. When this mean index was compared to the composite mean index on

performance of construction projects, it was found to be lower meaning that the variable had low contribution to performance of construction projects of private residential building projects.

Statement (2), there is cost effectiveness in undertaking the building projects had a mean of 4.43 (SD=1.063). The results indicate that out of the 274 respondents, 8(2.9%) strongly disagreed, 12(4.4%) disagreed, 15(5.5%) were neutral, 58(21.2%) agreed and 181(66.1%) strongly agreed with the statement. The mean was 4.43 which showed that there was high performance of private building projects in Nairobi County indicated by high-cost effectiveness. The mean index for this statement was 4.43 with a standard deviation of 1.063 which was higher than composite mean of 4.38 and standard deviation of 1.134. When this mean index was compared to the composite mean index on performance of construction projects, it was found to be higher meaning that the variable had high contribution to performance of construction projects of private residential building projects.

Statement (3), the process involved in the carrying out of the building projects is efficient had a mean of 4.38 (SD=1.076). The results indicate that out of the 274 respondents, 8(2.9%) strongly disagreed, 15(5.5%) disagreed, 17(6.2%) were neutral, 58(21.2%) agreed and 176(64.2%) strongly agreed with the statement. The mean was 4.38 which show that there was high performance of private building projects in Nairobi County due to efficient building processes. The mean index for this statement was 4.38 with a standard deviation of 1.134 which was equal to the composite mean of 4.38 and standard deviation of 1.134. When this mean index was compared to the composite mean index on performance of construction projects, it was found to be equal meaning that the variable had high contribution to performance of construction projects of private residential building projects.

Statement (4), the general level of satisfaction with the building projects is high had a mean of 4.46 (SD=1.204). The results indicate that out of the 274 respondents, 10(3.6%) strongly disagreed, 9(3.3%) disagreed, 9(3.3%) were neutral, 9(3.3%) agreed and 191(69.7%) strongly agreed with the statement. The mean was 4.46 which showed that there was high performance of private building projects in Nairobi County due to general level of satisfaction with the building projects as shown by high level of satisfaction. The mean index for this statement was 4.46 with a standard deviation of 1.204 which was higher than the composite mean of 4.38 and

standard deviation of 1.134. When this mean index was compared to the composite mean index on performance of construction projects, it was found to be higher meaning that the variable had high contribution to performance of construction projects of private residential building projects.

Statement (5), projects have been delivered within budget had a mean of 4.52 (SD=1.057). The results indicate that out of the 274 respondents, 6(2.2%) strongly disagreed, 11(4.0%) disagreed, 19(6.9%) were neutral, 36(13.1%) agreed and 202(73.7%) strongly agreed with the statement. The mean was 4.52 which showed that there was high performance of private building projects in Nairobi County evidenced by adherence to budgets. The mean index for this statement was 4.46 with a standard deviation of 1.157 which was higher than the composite mean of 4.38 and standard deviation of 1.134. When this mean index was compared to the composite mean index on performance of construction projects, it was found to be higher meaning that the variable had high contribution to performance of construction projects of private residential building projects.

Statement (6), project have been delivered within time scheduled had a mean of 4.38 (SD=1.181). The results indicate that out of the 274 respondents, 8(2.9%) strongly disagreed, 15(5.5%) disagreed, 17(6.2%) were neutral, 17(6.2%) agreed and 176(64.2%) strongly agreed with the statement. The mean was 4.38 which show that there was high performance of private building projects in Nairobi County indicated by timely delivery. The mean index for this statement was 4.38 with a standard deviation of 1.134 which was equal to the composite mean of 4.38 and standard deviation of 1.134. When this mean index was compared to the composite mean index on performance of construction projects, it was found to be equal meaning that the variable had high contribution to performance of construction projects of private residential building projects.

Performance of construction projects was the dependent variables of the study. The results of the study indicated that the building projects are of quality standards, there is cost effectiveness in undertaking the building projects and the process involved in the carrying out of the building projects is efficient. Further, the general level of satisfaction with the building projects is high and projects have been delivered within budget and delivered within time scheduled. The results agree with the study by Kaniaru (2014) who found that majority of residential buildings were completed within stipulated cost budget and time frame and were of good quality. The researcher

also identified four main factors affecting performance of construction projects in Mombasa County which were project manager’s competence, aggressive competition during tendering, time allocated to projects and client’s interference during construction. Similarly, the results of this study are supported by the findings of Njeru (2022) who found that performance reviews and capacity building enhanced the performance of road construction projects through employees’ feedback sessions, target setting and reviews as well as adequate resourcing of the project team. On the other hand, the results of the current study are contrary to the results of Rahman (2012) who found that 92% of construction projects were overrun by costs and only 8% of the projects were completed within the contract duration. The study further reported that major contributors of this poor performance include design and documentation issues, inefficient monitoring and evaluation, financial resource management and project management and contract administration issues.

#### 4.5.1 Pearson Correlation for the Combined Effect of Monitoring and Evaluation

##### Processes

##### on Performance of Private Residential Building Projects

**Table 4.21 Pearson Correlation**

		<b>Correlations</b>	
		Performance of Construction Projects	M&E Planning
Performance of Construction Projects	Pearson Correlation	1	.525**
	Sig. (2-tailed)		.000
	N	274	274
M&E Planning	Pearson Correlation	.525**	1
	Sig. (2-tailed)	.000	
	N	274	274
Stakeholder Engagement	Pearson Correlation	.563**	1
	Sig. (2-tailed)	.000	
	N	274	274



Capacity Building	Pearson Correlation	.566**	1
	Sig. (2-tailed)	.000	
	N	274	274
Utilization of M&E Results	Pearson Correlation	.546**	
	Sig. (2-tailed)	.000	
	N	274	

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

The findings as shown in Table 4.21 shows that there as positive and significant correlation between M & E Planning Results and Performance of Construction Projects ( $r=0.525$ ,  $p<0.005$ ). As such, **H01**: There is no significant relationship between planning for Monitoring and evaluation and performance of private building projects in Nairobi County, Kenya was rejected.

The findings show that there as positive and significant correlation between Stakeholders' engagement and Performance of Construction Projects ( $r=0.563$ ,  $p<0.005$ ). Consequently, **H02**: There is no significant relationship between Stakeholders' engagement and performance of private building projects in Nairobi County, Kenya was also rejected.

The findings also show that there as positive and significant correlation between capacity building and performance of construction projects ( $r=0.566$ ,  $p<0.005$ ). Based on these findings, **H03**: There is no significant relationship between capacity building and performance of private building projects in Nairobi County, Kenya was rejected.

Lastly, the findings show that there as positive and significant correlation between utilization of M&E results and performance of construction projects ( $r=0.546$ ,  $p<0.005$ ). As such, **H04**: There is no significant relationship between use of M&E results and Performance of private building projects in Nairobi County, Kenya was also rejected.

#### 4.5.2 Multivariate Regression Analysis

The study went on to undertake multivariate regression analysis. The findings were presented in Tables 4.22 to 4.24.

**Table 4.22: Model Summary**

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Model Summary
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Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.574 <sup>a</sup>	.330	.320	.66900

a. Predictors: (Constant), Capacity Building, M&E Planning, Utilization of M&E Results , Stakeholder Engagement

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	59.241	4	14.810	33.091	.000 <sup>b</sup>
1	Residual	120.394	269	.448		
	Total	179.635	273			

a. Dependent Variable: Performance of Construction Projects

b. Predictors: (Constant), Capacity Building, M&E Planning, Utilization of M&E Results , Stakeholder Engagement

Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
	(Constant)	1.172	.166		7.037	.000
	Utilization of M&E Results	.120	.051	.135	2.337	.002
1	M&E Planning	.150	.052	.199	2.864	.005
	Stakeholder Engagement	.188	.058	.241	3.269	.001
	Capacity Building	.174	.060	.172	2.882	.004

a. Dependent Variable: Performance of Construction Projects

The model summary of the regression results presented in Table 4.22 indicate that Monitoring and evaluation processes (Utilization of M&E Results, M & E Planning, Stakeholder Engagement and Capacity Building) explained 33 % of the variance in Performance of Construction Projects (R squared = 0.330). This means that 67% of the variance in Performance of Construction Projects was explained by other factors not in the study. Further, the *F*-test statistic ( $F = 33.091$ ,  $p = 0.000$ ) shows the fitness of the regression model, which means that Monitoring and evaluation processes (Utilization of M&E Results, M & E Planning, Stakeholder Engagement and Capacity Building) are significant predictors of Performance of Construction Projects.

The standardised beta coefficients showed that Utilization of M&E Results ( $\beta = 0.135$ ,  $p = 0.002$ ), Capacity Building ( $\beta = 0.172$ ,  $p = .004$ ), Stakeholder Engagement ( $\beta = 0.241$ ,  $p = .001$ ) and M & E Planning ( $\beta = 0.199$ ,  $p = .005$ ), were significant positive predictors of Organization Performance. This implies that Performance of Construction Projects increased when the firms involved in the construction of private residential buildings in Nairobi County undertook Utilization of M&E Results, Stakeholder Engagement, Capacity Building and M & E Planning therefore the hypothesis that states that there is no significant relationship between the combined effect of monitoring and evaluation processes on performance of private residential building projects in Nairobi County, Kenya is rejected.

Hypothesis one to four tested the effect of each of the independent variables (monitoring and evaluation planning, utilization of M&E results, capacity building and stakeholders' engagement) on the dependent variable. Hypothesis five sought to examine the combined effect of the independent variables (monitoring and evaluation planning, utilization of M&E results, capacity building and stakeholders' engagement) on the dependent variable (performance of private residential building projects). The *F*-test statistic ( $F = 33.091$ ,  $p = 0.000$ ) shows the fitness of the regression model, which means that Monitoring and evaluation processes (Utilization of M&E Results, M & E Planning, Stakeholder Engagement and Capacity Building) are significant predictors of Performance of Construction Projects.

## **CHAPTER FIVE**

### **DISCUSSIONS, CONCLUSIONS, AND RECOMMENDATIONS**

#### **5.1 Introduction**

This chapter presents the discussions of major findings and conclusions. It also suggests recommendations and suggestions for future research.

## **5.2 Discussions of Findings**

The section presents discussion of the study variables.

### **5.2.1 Discussion on M & E Planning and Performance of Private Residential Building Projects**

The results from Pearson correlation and regression analysis established that M & E Planning was a significant positive predictor of Performance of Construction Projects. The results indicated that monitoring and evaluation planning contributed to a positive performance of the construction project. The results further indicated that an increase in a unit of monitoring and evaluation planning resulted to an increase in the performance of the construction projects. The results concur with the findings of Agyekum (2019) who found that M&E planning had a positive statistically significant relationship with construction projects success criteria. Similarly, the results concur with the findings of Hussein (2020) which also found that firms' monitoring and evaluation planning positively and significantly affected relationship with project performance. The research came to a conclusion that "adequately planned M&E facilitates the team undertaking a project to get a better understanding of the target population's needs which helps to define the scope of the project and design objectives that are relevant, measurable and achievable.", Hubert and Mulyungi (2018) on a study on "effect of M&E planning on the performance of projects in Rwanda" disclosed a positive correlation between M&E planning and performance of projects. Effective M&E planning had a statistically positive influence on performance of projects. Locally, Atwal and Mudi (2019) on a study investigating M&E planning on performance of projects dealing with water supply in Kakamega county, Kenya showed that there was a considerable positive connection between M&E planning and performance of projects dealing with water in the county. Every project needs resources. Monitoring and evaluation planning helps to forecast the resources needed in the project in order to realize project success. The information collected through monitoring and evaluation planning also reveals gaps during the implementation process. Without M&E, it wouldn't be clear what areas need to be a priority. Resources could easily be wasted in one area that isn't the source of the issue. Monitoring and evaluation helps prevent that waste.

### **5.2.2 Discussion on Stakeholder Engagement and Performance of Private Residential Building Projects**

The results from Pearson correlation and regression analysis demonstrated that stakeholder engagement had a statistically positive significant relationship on performance of construction projects. The results of the current study are in agreement with the results of Mambwe (2020) on a study on the impact of stakeholder engagement on performance of construction projects in Zambia who found a strong and positive correlation between stakeholder engagement and project schedule and also between stakeholder engagement and project specifications. The findings are also supported by the findings by Githinji et al. (2020) that show that participation of stakeholders in identifying projects was found to significantly and positively linked to project performance and at the same time was seen that firms respect for stakeholders' issues was a crucial factor influencing project identification and stakeholders' participation. Planning of projects was found to significantly and positively linked to project performance. Furthermore, the findings agree with the study by Mwanza (2020) that observed that project stakeholders' culture had a bold positive significant impact on construction projects performance in Kakamega County, Kenya. The findings of the current study are further supported by Omondi and Kinoti (2020) who opined that stakeholder participation at project identification, project planning, project implementation and project monitoring significantly influenced the performance of road construction projects.

Stakeholder engagement is an integral part of all construction projects. Effective engagement with stakeholders allows construction companies to identify groups who may not support the construction project. Knowing who does and does not support the project allows for an opportunity to better understand the motivations, influences and behaviors of those who are in opposition. Stakeholders should check in throughout the course of the project to make sure that their construction project is not causing any harm to society. Project management team needs to sensitize the relevant stakeholders on the significance of them participating in the project lifecycle. Building construction projects should embrace stakeholder participation which positively improve project performance.

### **5.2.3 Discussion on Capacity Building and performance of private residential building projects**

The results from Pearson Correlation and regression analysis indicated that capacity building is a significant predictor of performance of construction projects. The results of the current study are in agreement with the findings of Imasaja (2017) who investigated the effects of capacity development strategies on the performance of the department for international development in Kenya and found a strong positive relationship between Capacity Building and organization performance. Similarly, Tengan and Aigbavboa (2018) on a study on the role of M&E in construction project management in South Africa found that when given the necessary attention by the project implementers/team through the provision of adequate resources, the development of technical capacity, and the creation of a supportive project environment, effective M&E plays a critical role in the implementation of construction projects. Additionally, the study agreed with the study by Watson (2018) that underlines the importance of project implementers in project implementation. It also affirms the report by the World Bank (2019) that highlights the importance of enhanced capacity among human resources. Furthermore, the findings corroborate the study by Shihemi (2017) that points out that training had a significant influence on the project performance since when M&E teams had received training, the building project had enough M&E human resource capacity. The analysis came to the conclusion that because M&E teams had received training, the building project had enough M&E human resource capacity.

### **5.2.4 Discussion on Utilization of M&E Results and Performance of Private Residential Building Projects**

The Pearson Correlation and regression results showed that utilization of M&E results was a significant positive predictor of organizational performance. The results are in agreement with the findings of Winiko (2018) whose results revealed a considerable and favorable influence of the dissemination of M&E findings. Winiko (2018) study also reported that the Malawian initiative using digital education technologies performed significantly better when M&E results were used. In spite of being a crucial component of the digital education technology project, research suggested that the company focus on capacity building programs for disseminating M&E outcomes. The findings of the current study are also contrary to the findings of Mutekhele (2018) who found that dissemination of data and utilization had no significant effect on performance of educational building infrastructural projects in Kenya. The study proposed that

implementation committees to comprise more young minds for purposes of innovations and application of emerging technologies and more focus be availed on building their capacity for M&E function. The use of M&E results helps construction projects team and the management to obtain accurate data on the project progress which enables the management in making strategic decision regarding corrective actions taken to correct the project deviations. Use of M&E results enables the management to identify the variation of the projects from the project management plan. Stakeholders should be actively involved in the dissemination of M&E findings and M&E results improves the design of the project, quality of project interventions such as literacy and numeracy lessons and use of financial and material resources of the project.

### **5.3 Conclusions**

The researcher comes to the conclusion that construction performance is improved by monitoring and assessment. As opposed to evaluation, which looks at the relevance, effectiveness, efficiency, and impact of activities in the context of predetermined objectives, monitoring involves continuous assessment of programs based on early, detailed information on the progress or delay of the ongoing assessed activities. The accomplishment of organizational goals will come from continuous monitoring and evaluation. Communication between various stakeholders is improved by monitoring and evaluation efforts. As a result, stakeholders are better able to comprehend any problems with the project's execution.

Through monitoring, data is gathered that shows areas for improvement or issues that need to be addressed with resources. What areas require prioritization would not be obvious in the absence of M&E. A single area that isn't the problem's root cause could readily waste resources. An M&E plan includes all the steps, components, and activities that must take place from the project planning phase until the project achieves its goal and has the desired impact. It aids in the definition, implementation, tracking, and improvement of a monitoring and evaluation strategy within a particular project or a group of related projects. A successful project requires having people with the right skills, knowledge and availability to deliver the project and ensure its longer-term sustainability. By assessing its capacity and putting the necessary systems, procedures, and employees in place, an organization can use its resources to the fullest extent possible to complete the project. When done well, stakeholder engagement enhances relationships between parties, fosters and maintains project support, collects data for the

organization, lowers the risk of conflict or other construction issues, and improves the organization's image.

This study concludes that M&E is vital in all phases of the project cycle, if a construction project's M&E is properly carried out, it will give the management an accurate data (information) of the project progress and allow the management to identify the variation of the projects from the project management plan. M&E also aids in improving project management performance as they concentrate on enlisting all stakeholders through an informed monitoring and evaluation system, resulting in synergy and excellent output in the development of construction projects. M&E planning contributes to the project performance by helping firms involved in building and construction to come up with sound and well-informed decisions that provide information to support project/programme implementation. Involvement of different stakeholders in planning activities of organizations leads to taking of quality decisions which enhances quality assurance of services offered by firms involved in building and construction which further improves trust from different stakeholders in the activities of the organizations. Formal training to stakeholders improves client satisfaction and ensures timely delivery of projects. Based on the findings, the study concludes that the practice of monitoring and evaluation of firms involved in building construction in Nairobi County, was adequate to assess the performance of construction projects. This is due to factors such as adequate utilization of M & E results, effective M & E planning, adequate capacity building and stakeholders' engagement

#### **5.4 Recommendations of the Study**

The study has implications to management policy and practice. Results of this research will help inform the construction firms to appreciate the benefits of monitoring and evaluation on construction projects. This knowledge will enable the investors / owners of the construction firms to come up with strategic policies that promote conduct and action that will support realization of above board performance in the construction projects. The national government being an interested party in the industry, the research will assist policy makers appreciate the importance of M&E in construction firms in the country and set up conducive environment for the industry.

In addition, it will contribute significantly to the construction industry and will help the various professionals in the construction industry to recognize benefits of M&E in construction projects.



In essence, construction experts will hence be in a position to align the need of M&E in their firms and how to get better in future. The research will provide a feeling of understanding into the improvements to undertake when developing M&E programs. As such, the study will help in formulating how the other organizations cannot imitate the M&E systems hence providing the firm an advantage over the competitors.

Based on the findings that M&E planning has the highest correlation with project performance, it is here by recommended that a well thought out M&E plan needs to be in place and be fully implemented if project performance is to enhanced.

From the findings, it shows that stakeholders' engagement requires enhancement of relationships between parties, fostering and maintaining project support, collecting data for the organization, lowering the risk of conflict or other construction issues, and improving the organization's image which will result to enhance construction projects performance. This study therefore recommends that stakeholders' engagement, is a must for M&E.

The findings depicted that capacity building significantly influenced the level of performance of construction projects. This study recommends that to enhance capacity building requires the firms in the construction industry to have formal training to stakeholders which will improve client acceptance, create timely delivery, improve cost effectiveness and improve the organizations acceptance which will result to improvement in project performance.

The findings depicted that utilization of M&E results significantly influenced the level of performance of construction projects. The study recommends that the firms in the construction industry should utilize M&E results which will help to obtain accurate data on the project progress.

## **5.5 Contribution to the Body of Knowledge.**

	<b>Objectives</b>	<b>Contribution to the Body of Knowledge</b>
1.	To determine the effect of monitoring and evaluation planning on performance of private building projects in Nairobi County, Kenya.	The findings depicted that monitoring and evaluation planning significantly influenced the level of performance of construction projects and could explain about 27.6% percent of the total variance in Performance of Construction Projects. To achieve the 72.4%, findings indicate that involvement of different stakeholders in planning activities of the construction companies requires taking quality decisions which enhances quality assurance of services offered by firms thus resulting to enhanced construction projects performance.
2.	To examine the effect of stakeholders' engagement on performance of private building projects in Nairobi County, Kenya.	The findings depicted that stakeholders' engagement significantly influenced the level of performance of construction projects and could explain about 31.7% percent of the total variance in Performance of Construction Projects. To achieve the 68.3%, findings indicate that stakeholder engagement requires enhancement of relationships between parties, fostering and maintaining project support, collecting data for the organization, lowering the risk of conflict or other construction issues, and improving the organization's image which will result to enhance construction projects performance.
3	To assess the effect of capacity building on performance of private building projects in Nairobi County, Kenya.	The findings depicted that capacity building significantly influenced the level of performance of construction projects and could explain about 34% percent of the total variance in Performance of Construction Projects. To achieve the 66%, findings indicate that to enhance capacity building requires the firms in the construction industry to have formal training to stakeholders which will improve client acceptance, create timely delivery, improve cost effectiveness and improve the organizations acceptance which will result to improvement in project performance.

4.	To establish the effect of utilization of M&E results on performance of private building projects in Nairobi County, Kenya.	The findings depicted that utilization of M&E results significantly influenced the level of performance of construction projects and could explain about 29.8% percent of the total variance in Performance of Construction Projects. To achieve the 70.2%, findings indicate that to enhance utilization of M&E Results in the firms in the construction industry requires use of M&E results which will help to obtain accurate data on the project progress. The management should also identify the variation of the projects from the project management plan and enable the project manager and the management in making strategic decision regarding corrective actions taken to correct the project. This will have an overall effect of improvement of project performance.

### 5.6 Areas for Further Study

This study contributes to the understanding of the relationship between monitoring and evaluation and performance of construction projects. Thus, a similar study on the variables of the current study can be conducted in other organizations operating in Kenya for comparison purposes. Lastly, a similar study can be carried out to investigate effect of a moderating or mediating variable on the relationship between monitoring and evaluation and performance of construction projects. The study has revealed that monitoring and evaluation planning, stakeholders' engagement, capacity building and utilization of M&E results contribute to 35.1 % to performance of construction projects. Therefore, another study should be carried to establish the other monitoring and evaluation processes contributing to 64.9% of performance of construction projects.

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## APPENDIX I: QUESTIONNAIRE

### PART I: Personal and Demographic Data

#### SECTION ONE

Please complete the following section which asks for information concerning you and your work. Kindly answer all the questions.

1. Gender (*Please tick*): Male  Female
2. Age: Below 30  30 – 39  40 - 49  50 - 59  Above 60
3. Marital status: Single  Married  Other (*Please specify*): \_\_\_\_\_
4. Number of years worked in the Company: 5 years and below  6 – 10   
11 – 15  16-20  21-25  Above 25
5. Area of specialization
6. Please select the highest level of educational qualification you hold from below  
Bachelor's degree   
Master's degree   
Diploma   
Certificate
7. Your current designation (*Please tick as appropriate*).  
Senior Management Staff   
Middle Level Management   
Entry Level

### PART II: Performance of private residential buildings projects in Nairobi County

The statements presented below describe aspects of Monitoring and evaluation in Construction Companies in Nairobi County. Please indicate the extent to which you agree that each of the statements describes your company by ticking '√' in the appropriate box (from 1 to 5); where: 1= Strongly Disagree (SD); 2 = Disagree (D); 3 = Neutral (N); 4 = Agree (A); 5 = Strongly Agree (SA)

#### Utilization of M&E Results

<b>Statement</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
The use of M&E results helps to obtain accurate data on the project progress					
The use of M&E results has helps in giving the management an accurate data (information) of the project progress					
The use of M&E results allows enables the management to identify the variation of the projects from the project management plan					
Stakeholders were actively involved in the dissemination of M&E findings					
The use of M&E results enables the project manager and the management in making strategic decision regarding corrective actions are taken to correct the project					
M&E results improved the design of the project					
M&E results improved the quality of project interventions such as literacy and numeracy lessons					
M&E results improved use of financial and material resources of the project					
The use of M & E results allows the project managers and the management to evaluate the progress of activities against the plan					

### **M & E Planning**

<b>Statement</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
There is M&E Budgetary considerations during planning process					
M & E approaches are normally predetermined during planning					
Baseline surveys are normally factored in during the M & E planning process					
The frequency of the M & E is normally determined during the planning process					
M&E planning project-planning processes have contributed to the project performance					
M&E planning has led to accurate, evidence-based reporting that informs management and decision-making to guide and improve project/programme implementation					
M&E planning has provided opportunities for stakeholder feedback, especially beneficiaries of the projects					
M&E planning has helped my organization in coming up with sound and well-informed decisions					
M&E planning has helped my organization in coming up with sound and well-informed decisions					
There has been timely and reliable M&E planning that provides information to support project/programme implementation					
Monitoring and evaluation planning has been critical in enhancing better project implementation of in my organization's projects					

My organization's projects implementation has been enhanced through M&E planning					
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### Stakeholder Engagement

	Statement	1	2	3	4	5
1	Involvement of different stakeholders in planning activities of the my organization has led to taking of quality decisions					
2	Stakeholders participation has enhanced quality assurance of services offered by my organization					
3	Different stakeholders support the activities of my organization					
4	My organization's construction activities consider the local needs of the people					
5	There is trust from different stakeholders in the activities of my organization					
6	Stakeholders monitor efficiency in the procurement and supply of various goods and services in the my organization					
7	Monitoring by different stakeholder has led to accountable use of resources					
8	Stakeholders act as checks and balances in the use of resources by the my organization					
9	The stakeholders ensure that the my organization fulfils its role					
10	There is timely stakeholder feedback about performance of my organization					
11	There is increased prominence of stakeholder voice					
12	Public views influence activities of the company					
13	Attitudes of stakeholders are put in consideration when implementing programmes of the company					

### Capacity Building

	Statement	1	2	3	4	5
	Formal training to stakeholders improves client acceptance					
	Formal training to stakeholders creates timely delivery					
	Formal training to stakeholders improves cost effectiveness					
	Informal training to stakeholders improves their acceptance					
	Training on work break down structures have been conducted					
	Training on project conceptualization have been conducted					
	Training on environmental Scanning have been conducted					

### Performance of Construction Projects

Statement	1	2	3	4	5
The building projects are of quality standards					
There is cost effectiveness in undertaking the building projects					
The process involved in the carrying out of the building projects is efficient.					
The general level of satisfaction with the building projects is high.					
Projects have been delivered within budget					
Project have been delivered within time scheduled					

**APPENDIX II: INTERVIEW GUIDE FOR M&E TEAM AND PROJECT COORDINATORS**

The purpose of this interview is to collect information on the influence of M&E processes on the performance of construction projects in Kenya. The information collected will be used for academic purposes only and will be handled with confidentiality and academic professionalism it deserves. Your willingness to participate in this interview will be very much appreciated.

**Dissemination and use of Data**

- a. Were M&E results for construction projects shared to stakeholders?

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- b. Why is it important to share M&E results to stakeholders?

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- c. How were the Monitoring and Evaluation results of the project used?

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**Planning for Monitoring and Evaluation**

- a. Why was it important to plan for monitoring and evaluation of the construction projects?

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- b. What challenges if any were faced during the planning of Monitoring and evaluation of the construction?

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**Capacity Building**

- a. Has your organization capacity built your skills?  
.....  
...  
.....  
....
  
- b. Please tell me the frequency (in terms of months) capacity building has been carried out  
.....  
.....
  
- c. List the areas that were capacity built.....  
.....  
....  
.....  
....
  
- d. Was capacity building effective?  
.....

**Stakeholders Engagement**

- a. In what ways has construction projects achieved their objectives due to stakeholder engagement.....  
.....  
.....
  
- b. What challenges if any were faced during the stakeholders' engagement of the construction projects?  
.....  
.....

.....  
.....

c. Why is it important to engage the stakeholders during construction?

.....  
.....  
.....  
.....

## APPENDIX III: RESEARCH AUTHORIZATION



*2<sup>nd</sup>, Dec, 2023*

E-mail: [researchwriting.mba.anu@gmail.com](mailto:researchwriting.mba.anu@gmail.com)

Tel. 0202711213

*Our Ref:* 12J03EMBA039

The Director.

National Commission for Science, Technology  
and Innovation (NACOSTI),

P. O. Box 30623, 00100

Nairobi. Kenya Dear

Sir/Madam:

### **RE: RESEARCH AUTHORIZATION FOR: JOSPHINE WAWIRA WANJIRA**

Ms Josphine is a postgraduate student at Africa Nazarene University in the Master of Monitoring and Evaluation program.

In order to complete his program, Ms Josphine is conducting research entitled: **“Monitoring and Evaluation process on performance of private residential building projects in Nairobi county Kenya; a case of selected private building projects.”**



Any assistance offered to her will be highly appreciated. Yours Faithfully,

A handwritten signature in blue ink, appearing to read 'Wanjiru Nderitu', enclosed in a faint blue rectangular box.

**DR. Wanjiru Nderitu,**

**MME, Coordinator,**

**School of Business,**

**Africa Nazarene University**

# APPENDIX III: RESEARCH PERMIT

 <p>REPUBLIC OF KENYA</p>	 <p><b>NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY &amp; INNOVATION</b></p>
Ref No: <b>528506</b>	Date of Issue: <b>02/December/2023</b>
<b>RESEARCH LICENSE</b>	
	
<p><b>This is to Certify that Ms.. Josphine Wawira Wanjira of Africa Nazarene University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Nairobi on the topic: MONITORING AND EVALUATION PROCESS ON PERFORMANCE OF PRIVATE RESIDENTIAL BUILDING PROJECTS IN NAIROBI COUNTY KENYA; A CASE OF SELECETED PRIVATE BUILDING PROJECTS for the period ending : 02/December/2024.</b></p>	
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