PROJECT INTEGRATION MANAGEMENT ON PERFORMANCE OF NATIONAL HOUSING CORPORATION PROJECTS IN KENYA

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Project Integration Management on Performance of National Housing Corporation Projects in Kenya

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DECLARATION

This thesis is my original work and has not been presented for a degree in any other University.

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DEDICATION

This reseach study is dedicated to my loving family,My wife Hellen Chepkwony and my beloved children Brian and Gedion for understanding, support,encouragement, patience and perseverance they gave me during the entire period of my study.Indeed you are my inspiration.

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ABBREVIATIONS AND ACRONYMS

CBO	Community Based Organization
CDF	Cosituence Development Fund.
ECI	Early Contract Involvements
EWB	Engineers Without Bounders
GOK	Government of Kenya
IFMIS	Integrated Financial Management Information System
KMO	Kaiser-Meyer Olkin
KNBS	Kenya National Breau of Statistics
MOPW	Ministry of Public Works
NGO	Non-Governmental Organization
NHC	National Housing Corporation
P.F.I	Private Finance Initiative
PMBOK	Project Management Body of Knowledge
PMI	Project Management Institute
SD	Stardard Deviation
SPSS	Statistical Package for Social Science
TQM	Total Quality Management
USAID	United States Agency for International Development
VI F	Value Inflation Factor
WBS	Work Breakdown Structure

DEFINITION OF OPERATIONAL TERMS

Community Participation	Refer to involving the community in sharing a common understanding, awerness, decision making concerning the project (Mwangi, 2018).
Disclosure and Reporting	A process that ensures release of financial and non financial project reports weather quantitative or qualitative reports through voluntary or via formal channels that contain relevant and reliable information that supports organizational decision making (Fashina et al., 2020)
Housing Construction Project	Refers to a coordinated industry of housing unit in a particular area, typically involving the construction of residential structures to provide shelter for a define population (UN-Habitat,2021).
Mortgage	A legal agreement that converys the conditions rights of ownership on asset or property by its owner (mortagago) to a lender (the mortgagee) as a security for loan (Yakubu at el., 2020)
Performance	Acomplex series of actions that intergrates skills and knowledge to produce a valuable result (Desmon, 2022)
Project cost	Refers to budget assigned to project activities and tasks in order to deliver the out put of a project(Gibby & Hayton, 2017)
Project Feasibility	Process of analyzing and evaluating the technical feasibility in terms of favorable legal framework, project technical feasibility and stakeholder involvement (PMI, 2020).
Project Integration Management	A process that consist of set of coordinated and controlled activities with start and finish dates

	undertaken to achieve an objective conforming to specific requirements including the constraits of time and resources (Lukale, 2018).
Project Schedule	Is a project management tool that communicates what work of the project needs to be performed, which resources of an organization will perform the work assigned for the project work (Marissa, 2019).
Project Scope Manageemnt	Process that involves comprehensive plan outlining the tasks and resources needed for successful project completion (PMI, 2021)

ABSTRACT

Housing is a key social and economic right for all human beings. Housing shortage in Kenya, particularly in urban areas, is a serious concern and is characterized by rapid urbanization as a result of natural population growth and rural–urban migration. The study assessed project integration management on performance of National Housing Corporation (NHC) projects in Kenya. The general objective of this study was to examine the influence of project integration management on performance of National Housing Corporation projects in Kenya. The specific objectives of the study were project scope management, project time management, project cost management, and disclosure and reporting. The study was anchored on the Theory of Constraints, General Systems Theory, Community Participation Theory, Competence Theory, and Goal Setting Theory. The study adopted a positivism research philosophy and a cross-sectional research design. The target population for the study was 425 projects, comprising all projects undertaken by the National Housing Corporation from 2013 to 2021, and this was the unit of observation. A sample of 203 projects was used for this study, and this was the unit of analysis. Primary data was collected using structured self-administered questionnaires, while secondary data was collected from publications, annual reports, books, research dissertations, and the internet. Pre-testing of data collection instruments was done using Cronbach's alpha and factor analysis for dimension reduction to determine the validity and reliability of the tests. The data collected was analyzed using descriptive statistics and inferential statistics, including correlation and regression analysis. Findings showed that project scope management, project time management, project cost management, and project disclosure and reporting had a positive and significant relationship with performance of National Housing Corporation projects in Kenya. Community participation was also found to positively and significantly moderate performance, and project scope management, project time management, project cost management, and project disclosure and reporting were found to positively and significantly predict performance of NHC projects in Kenya. The study concluded that effective community participation throughout the project lifecycle enhances project success, while proper management of project scope, time, and cost helps prevent scope creep, improves scheduling accuracy, and ensures financial control. The study also concluded that continuous disclosure and reporting promotes transparency, strengthens coordination among project teams, and ensures all stakeholders remain aligned throughout the project cycle. This study recommends that project managers should strengthen project integration management practices to improve project performance, ensure construction quality standards, enhance stakeholder satisfaction, and increase successful project delivery. It also recommends that policymakers address regulatory bottlenecks and inconsistencies that hinder the performance of NHC in Kenya.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Projects are bounded by time and are expected to be completed within the stipulated time plan, covering a predetermined scope, within the planned budget, and meeting the quality specifications set by the client or customer (Abdilahi et al., 2020). The successful completion of construction projects within budget constraints has become a persistent challenge faced by the Housing Corporation in Kenya. The National Housing Corporation (NHC) has been entrusted with the responsibility of providing affordable and sustainable housing solutions in Kenya. Housing plays a significant role in revitalizing economic growth in any country globally. The National Housing Corporation has continued to supply houses; however, demand continues to outstrip supply (KNBS, 2021).

The housing crisis in developing nations is rapidly spiraling into unmanageable levels. Perhaps the most telling indicator of this challenge is the increasing growth of slums and overpopulated residential areas around cities in developing countries (Fisher, 2020). From a global perspective, there is a massive shortage of housing, with the current deficit standing at 40%, and projections indicate continued shortages by 2030. The world will require approximately 96,000 homes per day to accommodate the ever-increasing demand for housing. Currently, this situation is particularly severe in Sub-Saharan Africa (UN-Habitat, 2021).

Project integration management involves the coordination of all project aspects, including stakeholder demands, customer expectations, and project activities, to successfully implement a project. Project integration management practices contribute to the effective and efficient implementation of projects. Project integration management is one of the ten knowledge areas of project management (PMBOK, 2021). In today’s environment of disruptive technology, rising software solutions, increasing risk ambiguity, and high client and stakeholder expectations, managing projects has become more complex than ever. Consequently, for a project

manager, synchronizing the different aspects of project resources and processes often becomes overwhelming.

Project integration management enhances project success, and many organizations use it as a standard practice because it helps project managers oversee project complexity, manage project resources, and control risks (PMI, 2021). It focuses on the individual procedures during the execution process of a project (Martin & Chelule, 2018). Project integration management is a collection of processes required to ensure that various elements of a project are properly executed and well coordinated (Hirpa, 2022). Project integration management helps managers coordinate, plan, and ensure that all processes within a project run effectively and that project team members stay on track toward their final goals. Integration management is the practice of ensuring that every part of the project is coordinated. Project management is an integrative undertaking that requires each project process to be appropriately aligned and connected with other processes to facilitate coordination (Hafton, 2019).

Project integration management involves coordinating the various project knowledge areas, anticipating and addressing issues, and making daily decisions that are in the best interest of the entire project (Kerzner, 2025). Project managers working in the construction industry should have integration in mind as a springboard for achieving project success. Project integration management is vital in all project work, as proper integration ensures that all project processes run smoothly and produce key deliverables such as the project charter, project scope management plan, and overall project plan (Chan et al., 2019). Project scope management describes the procedures and elements of work required to ensure project success by clearly defining what is included and excluded in a project (PMI, 2021). Project time management ensures that the project is completed within the time allocated during the planning process. Project cost management ensures that the project is completed within the approved budget. Project cost management entails cost estimation, cost budgeting, and cost control processes (Kamau, 2020).

Project performance metrics focus on project impact at a specific point in time or over a fixed period (Kavitu et al., 2018). The value or impact of a project should not exceed the cost of the intervention. Project performance is directly related to the potential success of a project. A project is considered successfully implemented if it is completed within the planned schedule, achieves its intended purpose, meets the defined quality standards, and attains its goals and objectives as identified during scope development (Kirimi & Munyori, 2019). Project performance is evaluated differently by stakeholders based on their varying expectations and may be assessed in relation to actual quality, customer satisfaction, and the number of deliverables achieved (Martin & Chelule, 2018).

Once a construction project has commenced, unforeseen circumstances may jeopardize the achievement of planned project objectives with respect to scope, cost, and time (Yakubu et al., 2019). Several methods are used to estimate project costs, including analogous estimation, bottom-up estimation, activity-based costing, and parametric modeling (Kavita et al., 2018). Project time refers to the actual duration estimated for the execution and completion of the project scope of work and consists of two main components: scheduling and schedule control (Pluto, 2020). Project scheduling is essential for determining when work should be carried out and for communicating resource requirements at any specific time during project execution (PMI, 2021).

Project scope defines what needs to be done, who will perform the work, where it will be carried out, and how contract performance will be evaluated (Pluto, 2020). Scope management is critical in construction projects, as effective scope control requires prioritizing tasks to enable proper planning and resource allocation without creating disorder. Scope establishes the boundaries of project work and identifies the uniqueness of a project’s products, services, and results (Hafton, 2019). The scope provides an overview of stakeholder requirements related to a project. Quality represents the aspect of project scope requirements intended to fully satisfy project stakeholders. Quality can be assured by identifying and eliminating factors that cause poor project performance. Over time, quality practices have become embedded

within the three variables of the iron triangle and are influenced by the balance among cost, time, and scope (Mishra, 2019).

It is a well-established fact that construction projects often fail to be implemented exactly as planned due to various factors. These include operating in open or underground environments, exposure to environmental influences, project complexity, inflation, technical challenges, and legal disputes, among others. Experienced project managers understand that while a project may proceed as planned, deviations from the original plan are inevitable (Murithi, 2018). Therefore, construction projects require continuous monitoring, progress tracking, and systematic management of all relevant activities and information to ensure successful completion (PMI, 2021). A project is considered complete and successful when it has passed through the entire project lifecycle, which includes project initiation, planning, execution, control, and finally project completion or closure (Kabirifa & Mojtahedi, 2019).

1.1.1 Global Perspective of Project Integration Management

Global perspective studies acknowledge the importance of applying project integration management approaches in enhancing housing project performance. In most developed economies such as Germany and the United States of America (USA), effective planning, advanced construction management technologies, and highly skilled manpower have been identified as key drivers of successful housing project performance (Desmon, 2022). In contrast, in emerging economies such as India and Brazil, challenges including project delays, cost overruns, poor project quality, and customer dissatisfaction have been reported. These challenges are largely attributed to the inappropriate application of project integration management approaches and practices (Hirpa, 2020). Findings from emerging economies therefore underscore the need for a holistic approach to project integration management to ensure effective project execution.

Studies on housing construction projects in Poland indicate that project integration management is coordinated from the project inception stage. Proper project integration management approaches and thorough planning preparation are well

articulated, helping to avoid unnecessary problems and mistakes during the housing construction implementation stage (Sobieraj & Metelski, 2023). Similarly, housing construction reports in Malaysia indicate that housing project challenges are often complex due to regulatory requirements, budget constraints, community dynamics, and the need to ensure long-term affordability and sustainability of projects (Latif et al., 2020).

The development of infrastructure projects such as housing, roads, and airports often fails to achieve desired performance outcomes due to poor project integration management. This is particularly evident where project managers fail to adequately articulate and integrate the perspectives and needs of all stakeholders involved in a project (Shabbir, et al., 2023). In Brazil, the housing construction sector has experienced increasing levels of complexity due to several emerging issues, including the growing number of project participants, supply chain challenges, the emergence of new technological options for housing, and the adoption of innovative procurement methods (Pluto, 2020).

1.1.2 Regional Perspective of Project Integration Management

Project failure in developing economies is higher than in developed economies. In their quest for development, third-world economies undertake numerous projects, including roads, housing, dams, plants, pipelines, industries, theatres, e-government services, telecommunications, ICT, and other infrastructure developments. However, many large projects financed by the World Bank and the International Monetary Fund have either partially or totally failed. For example, the Cameroon–Chad pipeline project, which was financed by the World Bank, was abandoned before completion after consuming approximately USD 4.2 billion (Mekongo Mballa, 2025). Such project abandonment results in stakeholder disillusionment, particularly because these projects are funded through taxpayers' money and external loans that are ultimately repaid by citizens at high interest rates. Delays are common in construction projects, and the extent of these delays varies considerably from one project to another (PMI, 2021).

In Tanzania, Nduguru et al. (2020) conducted a study to investigate factors contributing to delays and cost overruns in construction projects. The findings revealed that construction projects are characterized by frequent delays and disruptions, leading to conflicts associated with cost overruns, time overruns, and adverse social consequences. These challenges highlight the critical need to strengthen project integration management practices for housing projects within the Sub-Saharan Africa region, where weak coordination and inadequate integration of project activities continue to undermine project performance.

Similarly, in Uganda, several housing projects have been reported to experience unmet objectives, budget overruns, time overruns, unachieved client needs, and failure to meet project scope specifications. Nyamwaro (2017) attributes the high rate of project failure to poor management capacity in project supervision, inadequate coordination of project activities, and limited community involvement during the project inception stage.

1.1.3 Local Perspective of Project Integration Management

Under Vision 2030 and the Big Four Agenda, the Kenyan government recognizes the housing construction industry as a major sector in accelerating the country's economic development (GoK, 2020). The government has committed to providing adequate, affordable, and quality housing to its citizens, particularly low-income population groups. To support this goal, the government has sensitized developers to move down-market by offering tax incentives for housing units costing less than KES 1.6 million (KIPPRA, 2022). This commitment is further reinforced by the inclusion of the right to adequate housing in the 2010 Constitution of Kenya.

Despite these policy commitments, several projects in Kenya have failed to be completed within the estimated time, scope, budget, or a combination of these constraints (Mwangi, 2018). A study by Wabwile and Ruguru (2023) on project planning and management practices in low-cost housing revealed frequent schedule overruns caused by financial constraints, political interference, legal disputes, outdated construction laws and regulations, and high inflation rates. Delays in housing construction have significant repercussions for all contracting parties. For

project owners, delays result in loss of revenue due to delayed use of facilities, while contractors incur higher overhead costs due to extended work periods, increased material prices resulting from inflation, and rising labor costs (Gitau & Sang, 2020).

According to Gerull (2023), delays in housing construction projects are a common occurrence in developing countries such as Kenya and significantly affect project performance. Project integration management approaches are often weakened by fragmented operational practices, making coordination and effective management difficult. These views are supported by Kagiri and Wanaina (2017) in their study on time and cost overruns in power projects in Kenya. Reports by the Ministry of Transport and Infrastructure have also attributed the collapse of housing structures to poor project supervision and failure to adhere to established construction procedures (Wabwile & Ruguru, 2023). Despite the high level of professional training among project consultants in Kenya's construction industry, many projects fail to meet required standards, as evidenced by cost overruns, delayed completion, poor workmanship, building collapses, high maintenance costs, client dissatisfaction, and non-functional structures (Mwangi, 2018).

Further evidence of project performance challenges is observed in large infrastructure projects. The expansion of Kisumu International Airport Phase Two (road works), which was scheduled for completion within fifteen months, took twenty-five months and experienced significant cost overruns due to scope changes and price variations (Mwangi, 2018). Additionally, several road construction projects have been completed with poor workmanship. Mugo and Moronge (2018) found that public sector building projects exceeded planned completion time by an average of 209.8%, with some projects extending up to 481% beyond the expected duration. The Ministry of Public Works reports an average project completion rate of 36% between 2005 and 2011, with delays attributed to inadequate funding, delayed payments, slow decision-making, additional works, and delayed engagement of subcontractors. Murithi (2018) similarly identified inadequate resources, contractor non-performance, and delayed payments as major factors affecting project completion in Kenya.

1.1.4 Project Performance

Project performance refers to a set of principles or standards by which project success can be evaluated (PMI, 2021). Measuring project performance is important because it indicates whether an institution is likely to achieve its set goals. Many projects are initiated with high expectations of success but eventually experience total failure. Project failure is often attributed to poor planning and ineffective execution processes, which lead to significant losses in time, capital, and other resources (Ampofo, 2025). Project performance therefore plays a critical role in determining both project success and the overall performance of an institution. For organizations operating in the construction industry, effective project performance management is necessary to avoid losses and enhance competitiveness (Elizabeth, 2020).

To effectively manage project outcomes, organizations must adopt appropriate project performance management tools. Companies need to develop tools such as indicator tracking systems in order to compete in an increasingly complex global environment (Fisher, 2020). Performance metrics vary depending on the definition, context, and purpose of performance evaluation. This variation creates challenges in identifying suitable methodologies for selecting key performance indicators (KPIs) that align with competitive strategies and operational environments.

Kabirifa and Mojtahedi (2019), in their qualitative study on the identification and categorization of KPIs, established a relationship between systematic performance indicators, project management practices, and project success. Performance indicators should provide unbiased and objective assessments of project outcomes (Yakubu et al., 2019). Lukale (2018) and Kabirifa and Mojtahedi (2019) recommend incorporating stakeholder satisfaction and benefit realization as additional measures of project performance. Their studies note that a project may be completed within the planned time and budget and meet all technical requirements, yet still fail to satisfy key stakeholder expectations, particularly those of customers.

Stakeholder satisfaction is therefore an important measure of project success in construction and building projects. Due to the technical nature of construction projects, key stakeholders may not clearly articulate their expectations and preferences at the project's inception (Ampofo, 2025). Consequently, project managers have a responsibility to ensure that stakeholders are actively involved at every stage of the project to facilitate continuous clarification of expectations and preferences (Mugo & Moronge, 2018).

1.1.5 National Housing Corporation

The National Housing Corporation (NHC) was established in 1953 by the Central Housing Board (CHB) under the colonial government in Kenya. It was intended to serve as the principal medium through which the government could promote the development of housing for local Africans (GOK, 2020). The Corporation was mandated to provide low-cost housing schemes to stimulate the building construction industry and to conduct housing research. Over the years, the National Housing Corporation has assisted many citizens and county governments in Kenya to develop decent and affordable housing through various schemes, including tenant purchase, outright sale, rural and peri-urban housing, and rental housing. However, the efforts of the National Housing Corporation to achieve this mandate have been constrained by several macroeconomic challenges, notably high interest rates on construction and long-term financing, unfavorable national economic performance, and inflationary pressures (GOK, 2020).

Despite the significant efforts made by the Kenyan government to encourage housing provision, housing demand in the country remains far from being met (Luvai & Mugai, 2024). Housing remains an important area of interest in Kenya, considering that the cumulative housing deficit has surpassed two million units, with projections indicating a continued increase (World Bank, 2017). In addition, rapid urban population growth has negatively affected housing availability, with an estimated 61% of the population residing in urban informal settlements (Lukale, 2018). Housing projects aimed at resettling populations living in informal settlements have a significant positive impact on social welfare and the broader Kenyan economy,

particularly through job creation opportunities within the housing construction sector (World Bank, 2017).

1.2 Statement of the Problem

KNBS reported in 2020 that there is a substantial and growing need for housing in Kenya, particularly in urban areas, due to sustained population growth. Rapid urbanization has intensified this demand, resulting in a significant gap between housing supply and demand, which is estimated to exceed 2.0 million units, with an annual increase of approximately 200,000 units (KNBS, 2019). In response, the government committed to constructing 50,000 residential units annually for low- and middle-income earners to address this deficit. However, by the end of 2021, the five-year plan had achieved the construction of only 431 units, representing a mere 0.8% of the intended target. As a result, nearly 60% of urban households in Kenya continue to reside in informal settlements and struggle to afford monthly rent as low as USD 10 (GOK, 2020).

The housing challenge in Kenya is further exacerbated by a high population growth rate of 2.5% per annum and an urbanization rate of 4.3%, both of which surpass the global averages of 1.2% and 2.0%, respectively. Developers face significant challenges in meeting the growing housing demand due to inadequate access to credit, high financing costs, and limited purchasing power among citizens (Mwangi, 2018). The persistent housing shortage has therefore intensified affordability challenges as demand continues to outstrip supply. Although the construction sector plays a critical role in the economy, housing projects implemented by the National Housing Corporation (NHC) have recorded below-average performance. Concerns regarding construction quality have been raised, with an audit by the Architectural Association of Kenya (2022) revealing that 4,879 housing buildings across the 47 counties are at risk of collapse, of which 860 are located in Nairobi City.

These inefficiencies and quality concerns have serious implications, including a reduced number of successful housing projects, client dissatisfaction arising from delayed completion, and poor-quality outputs resulting from substandard workmanship. Such challenges highlight the need for improved project management

practices within public housing projects. Prior research acknowledges the importance of project integration management in enhancing housing construction project outcomes; however, significant gaps remain in both theory and practice.

Theoretically, existing studies on project integration management present conflicting findings. While some studies report a strong positive relationship between project integration management and project outcomes (Matheka & Mugai, 2024; Mwangi, 2018; Mohamed & Nyangau, 2020; Martin & Chelule, 2020), others report negligible or insignificant effects (Wabwile & Ruguru, 2023; Kanyaru & Musembi, 2023; Kibugi & Muchelule, 2021). These inconsistencies underscore the need for a comprehensive theoretical model to clarify the relationship between project integration management and the performance of National Housing Corporation projects in Kenya.

Conceptually, prior studies also lack uniformity in defining and operationalizing project integration management. Some studies narrowly focus on quality, customer satisfaction, and the number of successful projects delivered (Chenge et al., 2020; Chepngeno & Kwasira, 2020), while others adopt broader conceptualizations. This lack of consistency limits the comparability and generalizability of findings. Furthermore, much of the existing research has focused on road and electrification projects, which are non-housing projects and often conducted outside the Kenyan context (Chan & Adabre, 2019; Chileshe et al., 2020), thereby failing to adequately address Kenya’s unique housing challenges. In addition, many studies have relied on descriptive research designs that do not capture long-term trends (Ngacho, 2017)

scope management, project time management, project cost management, and disclosure and reporting, using a cross-sectional research design. The study will generate both quantitative and qualitative insights by overcoming methodological limitations observed in prior studies. By focusing exclusively on housing construction projects implemented by the National Housing Corporation in Kenya, the study aims to provide context-specific evidence and actionable recommendations to inform policy and practice. Ultimately, addressing these gaps will contribute to

improved project efficiency, enhanced adherence to construction standards, and better housing outcomes in developing countries.

1.3 Objective of the Study

1.3.1 General Objective of the Study

The general objective of the study was to investigate the influence of project integration management on performance of National Housing Corporation Projects in Kenya.

1.3.2 Specific Objectives of the Study

i. To examine the influence of project scope management on performance of National Housing Corporation Projects in Kenya
ii. To analyse the influence of time management on the performance of National Housing Corporation projects in Kenya.
iii. To determine the influence of project cost management on the performance of National Housing Corporation Projects in Kenya.
iv. To identify the influence of disclosure and reporting on the performance of National Housing Corporation Projects in Kenya.
v. To asses the moderating role of community participation on the relationship between project management integration management and performance of National Housing Corporation Projects in Kenya.

1.4 Research Hypothesis

H_{01}: Project scope management has no significant influence on the performance of National Housing Corporation Projects in Kenya

H_{02}: Project time management has no significant influence on the performance of National Housing Corporation Projects in Kenya

H_{04}: Project cost management has no significant influence on the performance of National Housing Corporation projects in Kenya.

H_{03}: Disclosure and reporting has no significant influence on the performance of National Housing Corporation Projects in Kenya.

H_{04}: Community participation does not have a moderating influence on the relationship between project integration management and performance of National Housing Corporation Projects in Kenya.

1.5 Justification of the Study

The performance of National Housing Corporation (NHC) projects in Kenya remains a significant and critical concern, particularly given the Corporation's role in fulfilling the constitutional right to adequate and decent housing and advancing the Vision 2030 development agenda. Despite the fundamental role played by NHC in housing provision, many construction projects fail to meet established performance criteria set by construction practitioners (Kamau et al., 2023). While some projects achieve partial success, a significant proportion experience delays, exceed allocated timeframes, fall below quality standards, and result in customer dissatisfaction. This persistent underperformance underscores the need for deeper investigation into the underlying causes. Notably, the role of project integration management has often been acknowledged but remains insufficiently examined within the Kenyan context.

Existing literature presents conflicting perspectives regarding the primary causes of project underperformance. Kanyaru and Musembi (2023) identify inadequate project scope planning as the central challenge, while Luvai and Mugai (2024) attribute project failure to deficiencies in contractors' technical expertise. Other scholars highlight factors such as inadequate resource allocation, weak regulatory enforcement, and poor organizational structures and practices (Ngugi & Mugo, 2020). However, limited studies have examined how specific project integration management constructs namely project scope management, project time management, project cost management, and project disclosure and reporting critically influence the performance of National Housing Corporation projects in Kenya. Furthermore, the moderating role of community participation in this relationship remains largely unexplored, creating a key research gap that this study seeks to address.

This study adopts a cross-sectional research design and regression analysis to assess the effect of project integration management variables on the performance of National Housing Corporation projects in Kenya, while also testing the moderating role of community participation. By doing so, the study provides empirical evidence on which project integration management practices yield the greatest improvements in project scope, time, cost management, and disclosure and reporting. The methodological rigor of the study ensures that the findings are statistically reliable and practically actionable, offering valuable insights for policymakers, project managers, and construction industry practitioners.

1.5.1 Public Sector

The study findings enlighten the public sector on project integration management tools, techniques, and methodologies that enhance effective and efficient project delivery. The application of these practices improves efficiency in the use of public resources and fosters transparency and accountability in projects undertaken by public institutions. Consequently, this supports improved service delivery and better management of public development initiative.

1.5.2 Policy Makers

This study is important to policymakers in the construction industry, as the findings provide opportunities to review and revise existing policies that are outdated or ineffective in addressing construction-related challenges. The results support policymakers in Kenya to make proactive and informed decisions aimed at improving the timely delivery and overall performance of construction projects. The government, as a key policymaker, is better positioned to strengthen the construction industry by offering appropriate regulatory and institutional support where necessary.

1.5.3 Academicians and Researchers

The study is valuable to academicians and researchers in the field of project management who seek to advance knowledge in this area. The findings enhance understanding of project integration management and reveal additional dimensions of

project failure. By providing empirical evidence, the study contributes to the existing body of knowledge and supports future research efforts aimed at addressing persistent gaps in project performance.

1.5.4 Stakeholders

The findings of this study benefit project stakeholders by providing insights into project integration management and its role in achieving project success. The study equips stakeholders with knowledge on how projects can be effectively coordinated, planned, and executed to ensure completion within the planned time, budget, and quality standards.

1.6 The Scope of the Study

Several factors have been identified as influencing the performance of housing construction projects. This study focused on the impacts and outcomes arising from the application of project integration management practices on housing construction projects undertaken by the National Housing Corporation (NHC) in Kenya. Specifically, the study assessed the influence of project integration management on the performance of National Housing Corporation projects, focusing on key dimensions including project scope management, project time management, project cost management, and disclosure and reporting.

The unit of observation comprised all housing projects undertaken by the National Housing Corporation in Kenya between 2013 and 2021. The study was conducted across all 47 county governments in Kenya, with a target population of 425 projects implemented by the National Housing Corporation during the study period. In addition, the study sought to identify the challenges encountered in the application of project integration management processes within National Housing Corporation projects in Kenya.

1.7 Limitation of the Study

Limitations are restrictions or challenges arising from theoretical or methodological considerations that may reduce the credibility and generalizability of research

findings. During the course of the study, several limitations were encountered, each presenting unique challenges to the data collection process while also offering valuable methodological insights. One major limitation was gatekeeper resistance, particularly from construction site managers who expressed concern about the purpose of the research, especially because the study focused on National Housing Corporation projects, a government parastatal. This challenge was addressed by providing official documentation to demonstrate institutional legitimacy, including an introductory letter from JKUAT and a research permit from NACOSTI.

Another limitation encountered was respondents' reluctance to provide information due to fear of victimization by management, with some participants perceiving the study as an investigation. To mitigate this challenge, the researcher built respondents' confidence by clearly explaining that the study was strictly for academic purposes and by assuring them of confidentiality and anonymity of the information provided. Additionally, costs related to scheduling appointments, meeting respondents, and data collection posed a challenge. This limitation was managed through proper planning to minimize rescheduling of appointments and by mobilizing resources from well-wishers to reduce the financial burden associated with data collection.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter covers literature review, theoretical frame work, theories, models empirical review, critic of existing literature relevant to this study, summary and research gap of the study.

2.2 Theoretical Framework

According to Saunders (2009) a theory is a set of cohesive statements that are widely accepted as valid and can be used to explain and predict a class of phenomena. A theory logically emerges from the documentation of previous research in a given problem area by identifying relevant theoretical foundations related to the study. The theoretical framework assists the researcher in analyzing and selecting an appropriate research design. This study was anchored on the Theory of Constraints, Contingency Theory, General Systems Theory, Participatory Theory, and Goal-Setting Theory.

2.2.1 Theory of Constraints

This study was anchored on the Theory of Constraints (TOC), a set of managerial ideas developed by Goldratt in 1984. The theory posits that every system is limited by at least one constraint that prevents it from fully achieving its objectives. TOC provides a useful framework for understanding how project managers can manage organizations effectively by adopting systems thinking and structured management approaches (Kavita et al., 2018). The theory emphasizes that project performance is not determined by all factors equally, but rather by the most critical constraint within the system. In construction projects, these constraints often arise from complex interactions among multiple stakeholders, resources, and processes. As noted by PMI (2021), TOC focuses on three key levels: organizational mindset, system constraints, and stakeholder needs, all of which are central to managing complexity in construction project environments.

The Theory of Constraints requires the identification, monitoring, and management of constraints that limit system performance. Its procedures and processes emphasize removing barriers that prevent different components of a system from functioning as an integrated whole. Similar to the weakest link in a chain, every system has a bottleneck that governs its overall output and performance (Goldratt, 1984). Whether recognized or not, constraints inevitably restrict system outcomes; however, once properly identified and managed, they provide a clear pathway to meaningful and sustainable improvement. Effective constraint management enables organizations to focus resources on areas that generate the greatest performance gains. As argued by Gitau and Sang (2020), managing constraints forms the foundation for continuous improvement and long-term organizational growth.

Drawing from the Theory of Constraints, this study highlights the importance of identifying and addressing limitations that hinder housing project performance. Housing construction projects often face uncertainty arising from competing demands related to budget, scope, and project completion timelines, which project managers and supervisors perceive as critical success requirements (Chan et al., 2018). These competing commitments frequently create bottlenecks that complicate project coordination and execution. The theory therefore suggests that project managers and stakeholders must collaborate to manage these constraints effectively. This can be achieved through proper coordination of project activities, clear definition of tasks and subtasks, and systematic integration of project processes (PMI, 2021). By applying TOC principles, the study seeks to explain how appropriate project integration management practices can enhance the performance of National Housing Corporation projects in Kenya.

2.2.2 Contingency Theory

Contingency Theory, proposed by Fiedler (1958), posits that there is no single best way to organize or manage an organization. Instead, the most effective course of action depends on the internal and external conditions surrounding the organization, as well as the specific environmental factors that shape organizational requirements and investment decisions (Fiedler, 1958). The theory emphasizes that managerial

effectiveness is contingent upon situational variables rather than universal principles. Consequently, managers are required to carefully assess prevailing circumstances before making decisions. Effective decision-making therefore involves aligning management approaches with situational demands. This perspective underscores the importance of flexibility and adaptability in organizational and project management.

In construction projects, each project is characterized by unique levels of complexity, size, and environmental conditions, and must therefore be managed according to its specific characteristics at a given time (Hirpa, 2022). Contingency Theory is relevant to this study as it provides a framework for understanding how project performance can be achieved within specified time, cost, and quality requirements outlined in project contracts. The theory explains the interaction and interrelationship between organizations and their operating environments (Karimi & Munyori, 2019). It further suggests that organizational structure and leadership style are contingent upon both internal and external constraints, with leadership effectiveness influenced by task characteristics and subordinate capabilities. In emphasizing the need to adopt management and leadership practices that best fit specific project conditions, Contingency Theory supports the use of adaptive project integration management approaches tailored to the unique demands of housing construction projects.

2.2.3 General System Theory

The General Systems Theory originated from the work of Ludwig von Bertalanffy in 1955, with later contributions by scholars such as Margaret McLeod. The theory conceptualizes an organization as an open system that continuously interacts with its external environment (Margaret et al., 2012). According to von Bertalanffy, a system is a set of interrelated and interdependent components that function together as a complex whole. An open system interacts with its environment through inputs, transformation processes, and outputs. For example, a functioning car comprises several interdependent parts, and the removal of a single critical component, such as the carburetor, renders the entire system non-functional. This analogy illustrates how the effectiveness of a system depends on the coordinated functioning of all its parts.

General Systems Theory is closely related to cybernetics, which focuses on communication, control, and feedback mechanisms in both living and non-living systems (von Bertalanffy, 1955). The core emphasis of the theory is on how systems regulate behavior and process information to achieve predefined objectives. From a project management perspective, a project can be viewed as a system in which inputs such as resources, labor, and information are transformed into outputs, including completed structures or services. These outputs are then released into the environment and evaluated based on performance criteria. Every project is therefore dependent on both its internal components and the external environment in which it operates. This perspective highlights the need for effective coordination and management of all project processes to ensure compliance with the triple constraints of scope, time, and cost, ultimately leading to successful project performance (PMI, 2020).

To fully understand a system, it is essential to examine the interactions among its internal components as well as its relationship with the external environment. The various elements within and surrounding an organization interact to influence how the organization operates and how strategies are implemented (Chileshe et al., 2020). From a systems perspective, many project failures can be attributed to reductionist approaches that focus on isolated components rather than the system as a whole. Such partial approaches overlook the complex, dynamic, and interconnected nature of modern organizations. In the context of this study, the National Housing Corporation can be viewed as a system comprising multiple interdependent departments, teams, and professionals with diverse competencies working toward a common organizational objective. General Systems Theory therefore guides this study in understanding how different project management components interact and how their interrelationships influence the performance of housing construction projects undertaken by the National Housing Corporation in Kenya.

2.2.4 Community Participatory Theory

Community Participatory Theory was formally introduced by Robert Chambers in the early 1980s through the Rapid Rural Appraisal methodology. The theory is

strongly influenced by development theories and is considered complex and diverse due to its multiple theoretical positions. It advocates for inclusive modes of participation and represents a shift away from the global, top-down development strategies that dominated earlier development initiatives toward more locally sensitive and people-centered approaches. In simple terms, participation focuses on involvement in decision-making processes (Pluto, 2020). Over the past two decades, the application of participatory approaches has become a mandatory component of project design for many donor organizations. Participation encompasses both theory and practice related to the direct involvement of citizens or community groups affected by or interested in a particular decision or action. The theory emphasizes that marginalized and poor communities should be actively involved in development decision-making, implementation, and benefit-sharing processes (Mugo & Moronge, 2018).

In practice, various community stakeholders perceive that they have a legitimate stake in government and county-level projects. However, differences often arise between stakeholder interests and project objectives, leading to conflicting actions that may or may not align with the project manager's vision, mission, or goals. This makes it essential for project managers to understand, manage, and harmonize stakeholder needs and expectations. Effective project completion therefore requires deliberate integration of community participation within the project management process. In this study, community participatory theory is applied to assess how community participation and stakeholder involvement influence the performance of National Housing Corporation projects in Kenya. The theory views organizations as social constructs formed through interactions among multiple stakeholders, whose collective actions significantly shape project outcomes (Kweyu, 2018).

2.2.5 Goal Setting Theory

Goal-Setting Theory was developed by Edwin Locke (1968), building on earlier motivational studies by Kurt Lewin. The theory explains that a goal is an objective that an individual consciously intends to achieve, and goal setting involves deliberately establishing performance levels to attain desired outcomes (Murithi,

2018). According to the theory, when actual performance falls short of desired goals, individuals or teams are motivated to either adjust their strategies or increase their effort. This process helps drive continuous performance improvement. The theory further asserts that the relationship between goals and performance remains positive as long as certain conditions are met. These conditions include commitment to the goal, possession of the necessary abilities, absence of conflicting goals, and availability of feedback.

Goal-Setting Theory is grounded in the assumption that human actions are purposeful and directed by consciously defined goals. Dissatisfaction with current performance levels often triggers the decision to set new or more challenging goals. Locke and Latham emphasize that effective goal attainment depends on factors such as goal clarity, specificity, difficulty, acceptance, commitment, and continuous feedback (Elizabeth, 2020). Clearly defined and challenging goals help focus attention, mobilize effort, and encourage persistence in task execution. In organizational settings, well-structured goals provide a benchmark against which performance can be measured. This makes goal setting a critical tool for improving individual and organizational performance.

In the construction industry, where project failure remains a common challenge, Goal-Setting Theory provides a useful framework for understanding the relationship between goal setting and project performance. The theory highlights a direct relationship between goal difficulty, effort, and performance, suggesting that higher performance targets lead to improved outcomes when properly managed. Over time, organizations can develop competencies, allocate resources efficiently, and refine funding strategies that enhance performance outcomes (Mwangi, 2018). The theory also emphasizes that project management and implementation are inherently goal-driven processes. Consequently, Goal-Setting Theory is relevant to this study as it explains how clearly defined project goals can enhance the performance of National Housing Corporation projects in Kenya.

2.3 Conceptual Framework

A conceptual framework is a system of concepts, assumptions, beliefs, and theories that supports and informs a research study (Zikmund, 2010). It provides a visual representation of the relationships among key variables in a study, particularly the independent and dependent variables. In this study, the conceptual framework comprised three main categories of variables: the independent variable, the dependent variable, and the moderating variable. The independent variable consisted of project integration management approaches employed by project managers in National Housing Corporation projects in Kenya. The dependent variable was project performance, while the moderating variable was community participation.

The independent variable was measured using four key dimensions: project scope management, project time management, project cost management, and disclosure and reporting. Project performance, which formed the dependent variable, was assessed based on project success criteria such as quality, customer satisfaction, and the number of successful projects delivered. Community participation was included as a moderating variable to examine its influence on the relationship between project integration management and project performance. As illustrated in Figure 2.1, the conceptual model proposes that project scope management, project time management, project cost management, and project disclosure and reporting directly influence project performance, with community participation moderating these relationships.

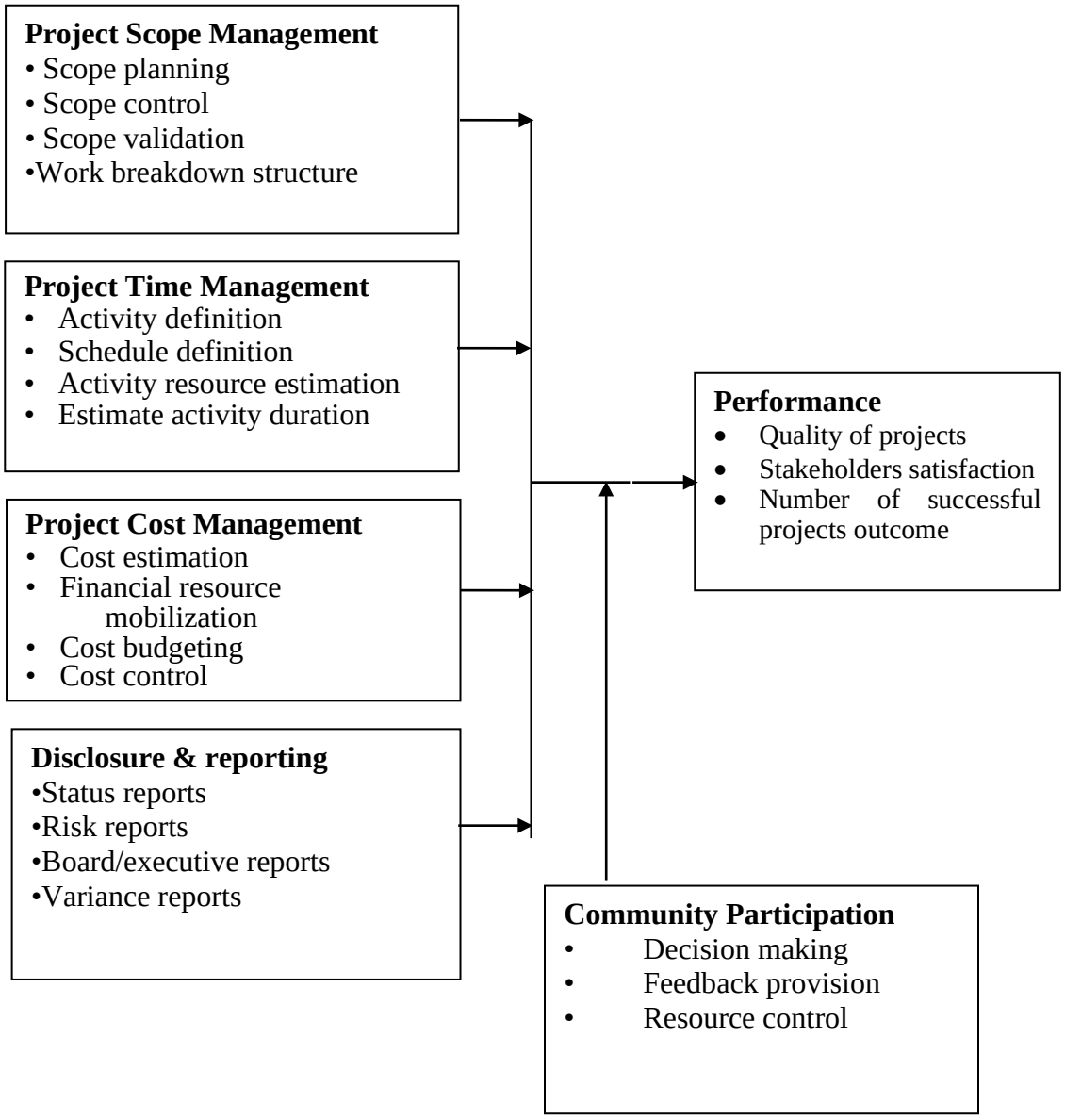

Figure 2.1: Conceptual Framework

2.3.1 Project Scope Management

According to Fashina et al. (2020) project scope refers to the definition of what a project is intended to accomplish, or more specifically, a detailed description of the expected end result. Project scope is often referred to as the scope of work and represents a clear statement of what has been agreed to be performed or achieved in a particular project. It outlines the project's functions, features, data, and content, and clearly expresses the desired final product to be delivered. One important component of project scope is the quality of the final output, which is closely linked to the amount of time allocated to individual tasks. Certain project activities require adequate time to be completed successfully, while excessive time allocation may result in schedule overruns. In large projects, quality has a direct and significant impact on both project time and cost, and vice versa. Scope management therefore refers to the skills and processes used by project managers to define the work that must be carried out to achieve project objectives (PMI, 2021).

Project scope has been widely identified as a major contributor to project failure. Pluto (2020) notes that scope change is one of the most significant factors leading to project underperformance, as project requirements are often altered either before project commencement or midway through the project life cycle. In many cases, such changes are not accompanied by corresponding adjustments to completion timelines or budgets. Mosha (2018) further argues that changes in project scope are traditionally viewed as having negative impacts on project performance and should ideally be avoided through effective planning and scheduling. However, in practice, scope changes are often inevitable, particularly in complex projects that involve multi-stage and iterative processes. When such changes occur, they tend to negatively affect project completion time and overall performance.

Scope management also plays a critical role in balancing the trade-offs inherent in the project management iron triangle of scope, time, and cost. When project scope is fixed, project costs are largely influenced by schedule availability. Similarly, when time constraints are fixed, the scope of the final product becomes dependent on the available budget and resources (PMI, 2021). Project management scholars widely

recognize these trade-off dynamics, noting that scope-constrained projects are bounded by performance criteria related to deliverables. Key inputs in scope definition include the project agreement, stakeholder workshops, organizational process assets, expert judgment, product analysis, and alternative development techniques. A clearly defined scope and work breakdown structure require stakeholder commitment and satisfaction, as well as formal verification of scope through official acceptance of project deliverables.

According to Mugo and Moronge (2018), the scope verification process relies on several key inputs, including the project management plan, requirements documentation, requirements traceability matrix, and validated deliverables. Inspection is the primary technique used to verify scope, ensuring that deliverables meet agreed specifications. The main outputs of scope verification include accepted deliverables, approved change requests, and updated project documents. A well-defined project scope also supports effective control and tracking of project activities. Scope control involves monitoring both product scope and project scope status, using inputs such as work performance information, requirements documentation, and organizational process assets. These processes collectively ensure that scope changes are properly managed and that project objectives are achieved efficiently.

2.3.2 Project Time Management

According to PMI (2021), project time refers to the duration from project inception to completion. Time is one of the most frequently overlooked aspects of project management in developing projects, regardless of their size or complexity, as evidenced by missed deadlines and incomplete deliverables. Effective schedule control requires careful identification of project activities, accurate estimation of task durations, proper sequencing of activities, and appropriate allocation of human and material resources. Project time is commonly examined from two perspectives: planned project time and actual project completion time. When the actual completion time exceeds the planned duration, the project is considered to have experienced a

time overrun or schedule delay. Delays are events that disrupt project delivery processes and often postpone scheduled activities.

Kweyu (2018) notes that time performance can be assessed using three main measures: construction time, speed of construction, and time variation. Time is required to produce project deliverables and is estimated using various project time estimation techniques. One common approach involves identifying tasks required to produce deliverables through a work breakdown structure (WBS). The effort required for each task is estimated and aggregated to determine the total project duration. Task prioritization and dependency relationships significantly influence overall project length. Schedule time is a non-recoverable resource, and any restriction on time often results in increased costs or reduced scope. To shorten project duration, project managers may allocate additional resources, as increased resource input can accelerate task completion (Matheka & Mugai, 2024).

Time performance has significant financial implications for all project stakeholders. For owners, delays result in lost revenue, delayed returns on investment, cash flow challenges, extended interest payments, potential loss of clients or tenants, and negative market perceptions. Users of constructed facilities also experience financial impacts similar to those faced by owners. Kanyaru and Musembi (2023) found that contractors' management capability significantly influences both time and cost performance in building construction projects. Their findings identified major risks affecting project schedules, including high inflation and material price increases, design changes by owners, defective designs, adverse weather conditions, delayed payments, and poor workmanship. Late payment was identified as the most significant cause of delays in global construction projects, while design-related factors were dominant in large infrastructure projects such as stadia.

Project calendar or schedule management involves defining project activities, sequencing those activities, and allocating appropriate time durations. According to Pluto (2020), project scheduling is the process of developing, maintaining, and coordinating project timelines, resources, milestones, and outputs. Defining project activities involves identifying tasks and subtasks required to produce deliverables.

Activity sequencing establishes logical relationships among activities and determines their execution order (PMI, 2021). Chan et al., (2019) explain that estimating activity duration involves calculating the time required to complete tasks using predetermined resources. Key inputs to this process include resource requirements, historical data, resource calendars, organizational culture, enterprise environmental factors, and organizational structure. Accurate scheduling is therefore critical for improving project performance and ensuring timely project completion.

2.3.3 Project Cost Management

According to Elizabeth (2020), project cost includes all the overall costs that are incurred in a project from the start of the project to its completion. It covers the tender sum, construction costs, costs that arise from variation and modification during construction, as well as costs that arise from legal claims such as litigation and arbitration. When the actual project cost exceeds the budgeted cost, the project is said to have experienced cost overrun, cost increases, or budget overrun. Kweyu (2018) emphasizes the need to consider cost performance on a project, which can be measured in terms of unit cost or as a percentage of variation over the overall cost. Most projects have a definite budget, and the approximation of project cost or resources depends on many variables, including work packages such as labor rates and other controlling influence factors that create cost variance. Resources cover a broad area and can be classified as tangible and intangible types of resources (Kabirifar & Mojitahedi, 2019).

These resources include, but are not limited to, financial resources, human resources, goodwill, reputation, expertise, and material resources. Lack of resources can create conflicts among various stakeholders of the project, which may lead to poor project performance. Budget limitation in a project is considered one of the greatest constraints to the performance of construction projects. Projects can often compensate for lack of technical capacity through training and outsourcing, but they cannot be compensated for lack of money (PMI, 2021). Resources are critical for the smooth implementation of projects, as they include the people, equipment, and

suppliers used to complete project tasks. Activity resource estimation indicates how much of a resource is needed in terms of labour and materials (Mwangi, 2018).

Gitau and Sang (2020) observed that financial resources for construction projects should be estimated realistically at the planning stage of project execution, and resources for each function should be separated. Each project should have two separate budget lines: one for project implementation and another for monitoring and evaluation purposes, as agreed in advance. Monitoring and evaluation costs associated with projects can be identified relatively easily and should be charged directly to the respective project budgets agreed upon by partners through inclusion in the project budget. Annual work plans (AWP) signed by partners, as well as sourcing and securing financial resources for construction projects or programs, may pose additional costs. Wrong estimation of resources is hypothesized to negatively affect the project schedule, which in turn affects timely project completion. To achieve accurate cost estimation, it is necessary to understand the types of project costs involved in a project.

Management should estimate costs using analogy, group consensus, or mathematical relationships. All project stakeholders prefer accurate cost and time estimates, although they also understand the inherent uncertainty present in all projects. Inaccurate estimates lead to false expectations and customer dissatisfaction (PMI, 2021). Accuracy improves with greater effort, but this raises the question of whether the additional time and cost are justified. Project estimation therefore becomes a trade-off between improved accuracy and the cost of achieving it. Cost and time estimates are the lifeline for controlling a project because they serve as standards for comparing actual performance with planned performance throughout the project lifecycle. Project estimates are important as they support sound decision-making in scheduling work and determining whether a project is worth undertaking (Murithi, 2018).

2.3.4 Disclosure and Reporting

Disclosure and reporting according to Project Management Book of Knowledge (PMBOOK, 2017) as the process that ensures that the project reports are available in

a timely manner and contains relevant and reliable information that supports the organization's decision-making processes. The importance of disclosure and reporting governance component is to ensure that projects, programmers and portfolios are aligned with corporation objectives and stakeholders' expectations (Maria, 2018). The organization projects' control system performance indicators should provide the reliable information, required for decision making by the different governance levels: Executive board level, contextual level, and individual project level

Pinyarat et al., (2018) indicates that all project stakeholders who have a legitimate interest in project information should have access to all necessary reports of a project being implemented. Effective reporting requires a culture of open and honest disclosure. A project member's unwillingness to report the correct status of a troubled project is an important contributor to project failure. Maria, (2018) notes that fault responsibility and time urgency had significant impacts on an individual's willingness to disclose unfavorable news. Alliance (2017) further notes that the that executives should view favorable status reports without skepticism with the Project Management this improve the accuracy of project reporting.

2.3.5 Community Participation

Mwangi (2018) defines community participation as the involvement of people in a project to solve their problems. According to PMI (2021), participation means having a share in or taking part in activities, while emphasizing the rights of individuals and the choices they make in the process of participation. The concept of community participation in development gained prominence in the 1970s, and since then, literature on the subject has expanded significantly. The involvement of local people in development projects has become a common phenomenon that nearly all organizations acknowledge. However, related literature indicates that there is limited scope for local people's participation in decision-making, management, and supervision of many community-based development projects (Elizabeth, 2020). Contemporary development scholars therefore advocate for the inclusion of

community participation, arguing that the stated objectives of development projects cannot be fully achieved unless people are actively involved.

Mugo and Moronge (2018) note that community participation in the construction of development projects involves directing each participant toward a specific goal that is shared within the development process. This form of involvement is often referred to as popular participation and is considered a positive approach to managing activities that directly affect communities (Murithi, 2018). The Kenya Development Plan of 1989–1993 adopted the theme Participation for Progress and emphasized harnessing the energies of individuals and various socio-economic institutions within the economy. Pluto (2020) observes that community participation in Kenya has evolved through a long process of economic reforms, with community projects playing a major role in providing public services. Evidence suggests that reciprocal relationships among stakeholders increase participation in development projects by creating platforms for new relationships and enhancing mutual appreciation of differing views (Hirpa, 2022). Participation should, however, be voluntary, and people should not be forced to engage in projects that affect their human rights and fundamental principles (Abdilahi et al., 2020).

Community participation occurs at various stages of a project. These stages include needs assessment, which involves expressing opinions on priorities, desired improvements, and goals while negotiating with implementing agencies. The planning stage involves formulation of objectives and setting of goals, while mobilization focuses on raising awareness, establishing, or supporting community organizational structures. Training involves participation in formal learning activities to enhance skills related to communication, construction, maintenance, and financial management. Implementation entails engagement in management activities, contribution of materials or cash, and payment of service or membership fees within community organizations (PMI, 2021). Hafton (2019) emphasizes that inclusive participation, including that of persons with disabilities and the elderly, helps projects achieve time, cost, and quality objectives while minimizing conflicts. Participatory development is therefore viewed as a critical approach for sustaining development

efforts, as communities are no longer mere beneficiaries but key stakeholders in project management and implementatio.

2.3.6 Performance of Projects

Performance refers to undertaking a complex series of actions that integrate skills and knowledge to produce a valuable result. Project performance has been defined as the degree of achievement of a given effort or undertaking in relation to the prescribed goals and objectives that form the project parameters (Chan et al., 2023). Suitable performance measures and measurement frameworks should have a few but relevant indicators that are directly linked to critical project objectives. These measures should provide accurate and reliable information and should incorporate both financial and non-financial dimensions. In construction projects, success largely depends on the effectiveness of performance management systems. Proper performance measurement therefore plays a central role in determining the overall success of a construction project.

Luvai and Mugai (2024) note that one of the principal reasons for poor performance in the construction industry is the inappropriate selection and application of procurement systems. They further identify key performance criteria for construction projects as financial stability, progress of work, quality standards, health and safety practices, availability of resources, relationships with consultants, management capability, claims, and contractual disputes. Poor alignment of these factors often leads to underperformance in construction projects. Effective procurement and management practices are therefore essential for improving project outcomes. Addressing these performance criteria holistically enhances efficiency and project success.

According to Kamau (2020), critical project performance categories include people, cost, time, quality, safety, health and environment, client satisfaction, and communication. Anderson et al. (2021) further emphasize that effective control systems are essential for identifying factors that affect construction project performance. Marissa (2019) observes that Early Contractor Involvement (ECI) and Early Supplier Involvement (ESI) reduce constructability-related performance

challenges such as delays, claims, wastage, and rework. Fashina et al. (2020) argue that effective scope management practices, particularly control of contract documentation quality and response to variations, are vital for maintaining project performance. Together, these practices contribute significantly to improving construction project outcomes.

Project success attributes, as perceived by project management teams, are derived from project management activities that receive consistent and careful attention (Kieti, 2020). For a project to be considered successful, all project activities and tasks must be effectively managed throughout all phases, regardless of incremental changes in scope, schedule, or cost. Although the time spent on activities and their impact on deliverables may vary across the project lifecycle, effective coordination remains essential. Once appropriate success factors are identified and validated, a foundation for informed project monitoring is established. The availability of quantified performance indicators allows project managers to rely on historical data to keep projects within organizational capacity limits.

Project stakeholders are individuals, groups, or organizations actively involved in a project or whose interests may be positively or negatively affected by project decisions and outcomes (PMI, 2021). In public construction projects, stakeholders typically include government agencies, project designers, contractors, and the beneficiary community. Chepngeno and Kwasira (2020) emphasize that stakeholder involvement is crucial for project sustainability, as sustainability cannot be achieved without their support. Stakeholder interests may be similar, overlapping, or conflicting, and project implementing agencies must harmonize these interests to achieve project success. Hassan and Adeleke (2019) stress the importance of recognizing even negatively affected stakeholders. Chenge et al. (2020) further note that from the client’s perspective, project success is derived from product characteristics and performance areas that support competitive positioning, indicating that client satisfaction is a key indicator of project performance.

2.4 Empirical Review

2.4.1 Project Scope Management

According to Chepngeno and Kwasira (2020) findings from their study on the influence of project planning practices on the implementation of Constituency Development Fund (CDF) projects reveal that project scope planning is a major project management area that determines the success of projects implemented across different geographical areas. The study emphasizes that clearly defined project scope enhances effective coordination and execution of project activities. Mwizi and Moronge (2018) supplement these findings by noting that project scope management, project time management, project cost management, and project quality management consistently influence the performance of construction projects. Proper scope planning ensures that project objectives, deliverables, and boundaries are clearly understood by all stakeholders. This clarity minimizes misunderstandings and reduces the likelihood of project failure. Consequently, scope management remains a critical determinant of successful project implementation.

Hassan and Adeleke (2019) note that poor scope definition is widely recognized by industry practitioners as one of the leading causes of project failure. Inadequate scope definition adversely affects project cost, schedule, and operational performance. Project scope planning involves determining and documenting specific project goals, deliverables, tasks, costs, and deadlines. When these elements are not clearly defined, projects are exposed to scope creep and uncontrolled changes. Such weaknesses often result in time overruns, increased costs, and compromised quality. Effective scope planning therefore provides a foundation for controlling project execution and performance.

Chan et al. (2020) investigated factors affecting demand for affordable housing in Malaysia using a literature review and a survey of residents in six apartment complexes in Penang, Malaysia. The study employed a Likert scale to identify and rank factors influencing affordable housing demand. The findings revealed several critical factors, including transportation accessibility, repayment ability, consumer limitations, neighborhood characteristics, security, and debt capacity. Pricing of

affordable housing emerged as one of the most significant determinants of housing demand. These findings highlight the importance of aligning project scope with affordability considerations. Proper scope planning is therefore essential in ensuring that housing projects meet the needs and expectations of target beneficiaries.

Mishra (2019) found that variations in project tasks are significantly influenced by project scope. The study further revealed that changes in project scope have a substantial effect on the quality outcomes of projects. Similarly, Maeri et al. (2022), in their study on project management practices and project execution, identified project scope as a critical element of project success. Their findings emphasize that stakeholders should be actively involved when developing and managing scope changes. The study recommends assigning greater emphasis to scope management to achieve exemplary project performance. These findings underscore the need for inclusive and well-controlled scope management practices.

Kanyaru and Musembi (2023) examined the influence of project scope management on the successful implementation of projects in non-governmental organizations (NGOs) in Nairobi County. Using a descriptive research design, the study targeted 201 NGOs, from which a sample of 100 managers was selected using simple random sampling. The findings revealed that project scope management has a positive and statistically significant effect on successful project implementation. Proper scope definition and control were found to enhance efficiency and effectiveness in project delivery. The study concludes that scope management is a key driver of project success in NGO-managed projects. These results further reinforce the relevance of scope management across different sectors.

Mosha (2018) examined critical success factors in project management for dam construction projects in India and Myanmar. The study focused on project quality management practices and identified key success factors linked to project management knowledge areas. The findings indicated that significant attention should be given to critical areas such as project cost estimation, budget determination, quality checklists, cost control, requirements collection, activity duration estimation, schedule development, and risk identification. Well-defined

stakeholder management plans were also highlighted as essential to project success. The study concludes that comprehensive scope planning and integration of key management practices are vital for achieving successful outcomes in complex construction projects.

2.4.2 Project Time Management

According to Kiarie and Wanyoike (2016) in their study on determinants of effective execution of projects funded by the Government of Kenya, using the Integrated Financial Management Information System (IFMIS) as a case, the results indicate that projects such as IFMIS experience political interference, particularly in the identification, definition, and alteration of project scope. The study found that political influence negatively affects effective project execution. Based on these findings, the researchers recommended that project managers supervising government-funded projects should exercise firm control in their management practices, especially in the management of project time. It was emphasized that project managers should strictly adhere to established and precise project management practices irrespective of the degree of political interference.

According to Sanda (2016), as cited by Matheka and Mugai (2024), a survey was conducted to evaluate the relative importance of factors causing delays in construction projects in the Hong Kong construction industry. The researcher analyzed and presented the main causes of delays, which were classified into two categories: the role of parties within the local construction industry and the role of the type of project. The study findings revealed that the main causes of delays included poor site management, inadequate supervision, unforeseen ground conditions, and poor decision-making by project teams. These factors were found to significantly affect project completion timelines.

According to Desmond (2022), in Unaffordable America, the most important causes of time overruns include incomplete drawings, frequent design changes, slow decision-making by clients, late issuance of instructions, and shortages of skilled manpower. Similarly, Swiss (2013), as cited by Elizabeth (2020), investigated factors affecting time overruns in public construction projects in Jordan and revealed that the

major causes of delays included excessive change orders from project owners, poor planning and scheduling by contractors, ambiguities and errors in specifications and drawings, slow decision-making by owners, and poor qualifications of consultants, engineers, and staff assigned to projects. These findings highlight that time overruns in construction projects are largely driven by managerial, technical, and institutional challenges across different contexts.,

2.4.3 Project Cost Management

Project cost estimation involves the prediction of project expenditure and achievement, which depends on the integration of project information, availability of funds, and effective control of project execution (PMI, 2021). Shilingi (2020) studied the influence of organizational resources on the implementation of strategic plans in Tanzanian executive agencies. The study reiterated that a majority of respondents agreed that organizational resources significantly influence the successful implementation of executive strategic plans in the public sector. Barney (2020) supplements this view by emphasizing that firm resources include all assets, capabilities, processes, information, and knowledge under organizational control. These resources enable firms to conceive and implement strategies that improve performance. Firm resources may be tangible or intangible assets used to formulate and implement strategies.

Fisher (2020) examined a framework for enhancing government policy costs related to construction resources for sustainable housing in South Africa. The study applied a mixed-method approach using surveys among construction professionals. The findings revealed that despite the existence of more robust public housing programs for low-income groups, the housing problem remains a persistent crisis. The study further noted that existing housing policies contribute to the provision of critical resource inputs necessary for implementing housing projects. Resources such as labour, plant and equipment, and materials should be integrated into public housing policies to enhance sustainability. Proper integration of these resources is essential for housing programs to be effective and beneficial to a wider population.

Kieti (2020), in a study examining the status and opportunities of housing challenges in Kenya, discovered that despite the government identifying housing provision as part of the Big Four Agenda, resource limitations continue to impede timely implementation and performance of housing programs. The study noted that the government aimed to construct 50,000 housing units by the end of 2022. However, the program experienced financial challenges due to insufficient budgetary allocation from the Government of Kenya. High interest costs from financial providers further constrained project execution. These financial limitations significantly affected the performance of housing programs.

Wabwile and Ruguru (2023) found that project cost management has a positive and significant effect on low-cost housing projects implemented in Nairobi County, Kenya. The study further noted that project managers should possess adequate experience and skills, coupled with strong financial planning and cost management capabilities. These competencies enable project managers to effectively control, monitor, and manage project costs. Similarly, Gitonga et al., (2022) emphasized that construction firms should strengthen project cost management practices. This can be achieved by improving resource mobilization, cost estimation techniques, and cost budgeting processes. Strengthening these practices enhances overall project performance.

Luvai and Mugai (2024), in their study on infrastructure management practices and implementation of selected high-rise building projects in Nairobi County, found that major causes of time overruns included delayed payments to contractors. Other factors identified were employer cash flow problems, delays in fund disbursement by financiers, lengthy government procedures, and delays in accessing construction sites. Mustapha (2013), as cited by Yakubu et al. (2020), conducted a study on factors causing construction delays in Ghana and identified similar issues. The study found that delays were mainly caused by late honoring of certificates, delayed payments, and lack of credit facilities. These findings highlight the strong relationship between financial constraints and project delays.

Tirivayi and Benevolent (2022), in a study conducted in Zimbabwe, asserted that project cost performance faces significant challenges, particularly in fragile economies. The study findings revealed that major contributors to project cost overruns included currency exchange rate devaluation and inadequate financial cost planning for housing projects. Political instability was also identified as a critical factor affecting project cost performance. The study recommended continuous tracking of project expenses and regular monitoring of project cost baselines. Effective financial oversight was emphasized as essential for improving cost performance.

Hassan and Adeleke (2019) noted that delays in construction projects can be caused by several parties, including clients, contractors, consultants, acts of God, or third parties. Delays may occur at any stage of a project, either early or late in the project lifecycle. The study emphasized that negotiating fair and timely damage settlements benefits all parties involved. These findings support Pluto's (2020) observation that the construction industry has a poor reputation for managing delays. Delay analysis is often ignored or handled subjectively through contingency additions, resulting in missed schedule deadlines. In housing construction projects, effective time management remains critical, as delays directly affect intended beneficiaries.

Mohamed and Nyangau (2020), in their study on housing delivery models for addressing the housing needs of low- and middle-income public sector employees in Kenya, found that the government was overwhelmed by the substantial demand for housing units. The study revealed that the government was unable to deliver the required number of housing units within the allocated budget. Financial constraints and limited implementation capacity were identified as key challenges. These findings further demonstrate the critical role of cost management in achieving sustainable housing delivery.

2.4.4 Disclosure and Reporting

Disclosure and reporting are defined by Sharma et al. (2020) as the process of releasing information, whether in qualitative or quantitative form, through formal methods or voluntary channels. Marrion and Oliver (2020) reiterate that companies

in South Africa seek to meet stakeholder expectations through more robust integrated reporting systems. The researchers examine disclosure and reporting from two perspectives. First, they consider disclosure as a way of reducing pressure from stakeholders, particularly those with greater influence. Second, they view integrated reporting as a mechanism for improving transparency and accountability within organizations. Through these approaches, disclosure and reporting enhance stakeholder engagement and trust.

Sharma et al. (2020) conducted a study to test potential factors influencing disclosure and reporting among listed industries in India, particularly in environmentally and socially sensitive sectors. The study findings revealed that disclosure of information relating to environmental and social governance activities is largely driven by stakeholder pressure. These findings are further supported by Eccles et al. (2020), who conducted a comparative analysis of integrated reporting systems across ten countries. Their study revealed that integrated reporting plays a key role in improving reporting efficiency. Companies were able to compare reports from different countries within a shorter time, thereby reducing time wastage. As a result, integrated reporting was found to contribute to improved efficiency and decision-making.

Pinyarat et al. (2018), in a study that examined the relationship between project governance and information technology governance, found that disclosure and reporting have a positive impact on project performance. The study established that effective disclosure practices enhance transparency and accountability in project implementation. Similarly, Abdullah et al. (2023), in a study conducted in Pakistan on project governance practices in public sector infrastructure programs, identified disclosure and reporting as the most problematic dimension of project governance. This challenge was attributed to bureaucratic hierarchies within public sector institutions. The findings indicate that weak disclosure mechanisms negatively affect performance in public construction projects. Strengthening disclosure and reporting systems was therefore recommended as a key improvement area.

Desmond (2022), in Unaffordable America, confirms that a parliamentary inquiry identified evidence of optimism bias in project planning. The inquiry revealed overestimation of reductions in staff numbers resulting from outsourcing, efficiency gains, and changes in working practices. This indicated inadequate disclosure prior to project commencement and during implementation. Similarly, Othman et al. (2017) investigated factors contributing to effective quality planning for construction projects in Malaysia. Data were collected from 50 construction company representatives through questionnaires and semi-structured interviews. The study found that inspections, quality audits, and experiments ranked as the first, second, and third most important factors influencing effective quality planning. These findings highlight the importance of transparent reporting and quality-focused disclosure in improving project performance.

2.4.5 Community Participation

According to Mwangi (2018), the term participation is often modified with adjectives, resulting in terms such as community participation, citizen participation, people's participation, public participation, and popular participation, although they all refer to the same concept. Community or stakeholder participation is viewed as an approach that contributes to sustainable development because it incorporates the views, opinions, and perspectives of those affected by development initiatives. Participation allows beneficiaries to influence decisions that directly affect their lives. This inclusive approach enhances ownership, accountability, and acceptance of development projects. When communities are involved, project outcomes are more likely to be aligned with local needs and priorities. As a result, participation has become a key principle in contemporary development practice.

A study conducted in Zimbabwe by Chifamba (2013), as cited by Elizabeth (2020), revealed that despite more than two decades of effort to integrate rural populations into mainstream development through participatory approaches, living conditions in rural areas continued to deteriorate. The findings raised serious questions regarding the effectiveness of community participation in rural development initiatives. The study noted that although participation was encouraged, it did not automatically

translate into improved livelihoods. This outcome prompted scholars and practitioners to reassess how participation is implemented in development projects. The findings suggest that participation alone may not guarantee development success without proper structure and support mechanisms. This highlights the need for meaningful and well-managed community involvement.

Yang et al. (2016), as cited by Chileshe et al. (2020), emphasized the importance of public participation in project implementation and execution based on the recognition of participation as a fundamental human right. Their study demonstrated that community participation enhances project monitoring by increasing public confidence and strengthening skills acquired during project implementation. These skills enable participants to respond more effectively to local problems. Participation was also found to improve transparency and accountability in project processes. Through engagement, communities develop a sense of responsibility for project outcomes. These findings reinforce the role of participation in improving both project performance and community capacity.

Sigmon (2011), as cited by Luvai et al. (2024), examined five Engineers Without Borders USA (EWB-USA) water projects in Peru to identify lessons learned from project implementation. The study identified strong local partnerships, involvement of local government, established regulations, effective communication, measurable performance metrics, and community cash contributions as key factors for project success. Community cash contributions were the most frequently cited success factor, while in-kind contributions and community involvement in decision-making were also important. Paddock (2013) similarly found that a Bolivian latrine project that lacked cash contributions was unsuccessful despite community provision of labor and tools. The project failed due to limited community ownership and inadequate understanding of project objectives. Kweyu (2018) further reported that community-based development approaches are among the most effective tools for achieving long-term project sustainability..

2.4.6 Project Performance

Performance of construction projects can be assessed using several performance metrics and indicators related to quality standards, customer satisfaction, health and safety, time, and cost (PMI, 2021). Performance can be defined as the ability of an organization to achieve its stated objectives using limited resources and is often assessed in terms of efficiency and effectiveness. Project completion refers to the degree of achievement of various efforts or undertakings in relation to the defined goals or objectives that form the project parameters. According to Gitau and Sang (2020), performance involves a complex series of actions that integrate skills and knowledge to produce valuable results. Scholars such as Karimi and Munyori (2019) and Abdilahi et al. (2020) agree that the conventional assessment of project performance is largely based on the iron triangle. This approach evaluates whether project outputs are delivered within the defined scope, quality, time, and cost constraints.

Key performance measurement frameworks are identified as those that have a few but relevant measures, are linked to critical project objectives, provide accurate information, and incorporate both financial and non-financial indicators (Martin & Chelule, 2020). There are numerous potential measures for evaluating the success of construction projects, but most focus on three core areas: scope, schedule, and cost. The research identified seven major project performance indicators, namely project construction cost, project construction time, project cost predictability, project time predictability, client satisfaction with the final product, and client satisfaction with service delivery. In addition, three organizational performance indicators were identified: safety, productivity, and profitability. These indicators collectively provide a comprehensive basis for evaluating both project-level and organizational performance. Proper measurement of these indicators enables project managers to monitor progress and take corrective action where necessary.

The relationship between project success, lean practices, and performance metrics in project-based settings was also examined by Kabirifar and Mojtahedi (2019). Their study identified performance indicators, tools, and concepts relevant to key

performance indicators and success criteria. The study further explored how businesses utilize key performance indicators to enhance project outcomes. The scope of the study also covered the contextual background of the selected case studies. Additionally, several documents were reviewed to support further analysis and validation of findings. These insights reinforce the importance of structured performance measurement systems in achieving successful project delivery.

2.5 Critique of Existing Literature

The construction industry continues to suffer from poor project performance due to its complex nature, where work is fragmented among different stakeholders and multiple sub-processes. Hirpa (2022) developed a framework for project integration management by defining several attributes based on their critical importance. The framework was proposed as a useful tool for construction practitioners to utilize resources effectively in achieving more integrated projects. Despite identifying attributes such as coordination, leadership, knowledge sharing, and trust, the study lacked a comprehensive understanding of integration attributes related to managing challenges and uncertainty. The study reported that projects experience higher success rates and improved performance with the adoption of an integrated approach. The impact of effective time management on enhanced project performance has also been highlighted in several studies (Mwangi, 2018; Gitau & Sang, 2020; Kweyu, 2018; Chepngeno & Kwasira, 2020), which identified cost as one of the most important attributes within project management models.

However, most of these studies focused on software integration or contractual integration, despite the fact that integration should be evaluated as a core element encompassing multiple dimensions and influencing several variables within a project network. Studies by Mwangi (2018) and Murithi (2018) examined factors influencing project implementation success in county government–funded infrastructure projects, particularly in terms of cost and time. These studies were largely case-based and applied limited or no cross-sectional survey research methods, while the role of stakeholder participation was only minimally addressed. Similarly, studies by Elizabethi (2020), Kanyaru and Musembi (2023), and Wabwile and

Ruguru (2023) concluded that project management processes are significantly correlated with project success. However, these studies focused on specific sectors such as state corporations, power projects, and HIV/AIDS programs. Consequently, gaps remain in understanding project integration management within housing projects. The current study therefore seeks to examine the effect of project integration management on the performance of National Housing Corporation programs in Kenya.

2.6 Research Gap

A review of existing literature shows that some research has been conducted with specific reference to housing construction projects. However, the reviewed literature points to conflicting understandings regarding the relationship between project integration management and project performance, which remains a key concept in construction project management. These inconsistencies provide evidence that further research is required to deepen understanding in this area. While project integration management is widely acknowledged as critical to project success, its influence on performance outcomes has not been conclusively established. The literature therefore highlights the need for additional empirical investigation to clarify this relationship. This gap is particularly evident within the context of housing construction projects.

A scan of empirical literature reveals numerous studies that have examined various project integration management components in relation to project performance. Some studies focused on the role of stakeholder management in the performance of county government and donor-funded projects (Mwangi, 2018; Chepngeno & Kwasira, 2023), while others examined the impact of resource management practices on construction projects (Muhamed & Nyangau, 2020; Shilingi, 2020; Wabwile & Ruguru, 2023; Luvai & Mugai, 2024). Additional studies concentrated on health-sector projects rather than housing construction projects. The predominant use of descriptive research designs in these studies provides only a snapshot of relationships and fails to establish causal pathways or account for changes across the project life cycle. Furthermore, the use of small sample sizes raises concerns about the

generalizability of findings at the national level. Many construction-related studies were conducted outside Kenya, limiting the applicability of their findings to the Kenyan context (Latif et al., 2020; Anderson & Bigby, 2021; Barney, 2020; Mosha, 2018; Sharma et al., 2020). Consequently, the current study seeks to bridge these gaps by examining the contribution of project integration management specifically project scope management, project time management, project cost management, and disclosure and reporting on the performance of National Housing Corporation projects in Kenya.

2.7 Summary

This chapter reviewed both theoretical and empirical literature from previous studies on project integration management and the performance of National Housing Corporation projects in Kenya. The chapter also presented a conceptual framework illustrating the relationship between the independent variables and the dependent variable of the study. In addition, a critique of existing literature was provided, and key research gaps identified in previous studies on project integration management were highlighted.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter presented a systematic description of the methodology that was used to carry out the research. The chapter is structured into the following subtopics: research philosophy, research design, target population, sampling procedure and sample size, data collection instruments, data collection procedure, pilot study, data analysis, and data presentation.

3.2 Research Philosophy

According to Jenkins et al. (2017), research philosophy is the foundation of knowledge, and the nature of that knowledge contains important assumptions about views of the world. Research philosophies may be categorized as positivism, interpretivism, realism, or pragmatism. These philosophies share a common set of assumptions, and their similarities help to identify their underlying orientations. Given the stated philosophies above, the choice of a research philosophy depends on the research hypothesis to be tested. In this regard, the selection of an appropriate philosophy is guided by the nature of the research problem and the type of evidence required. Research philosophy therefore provides direction on how knowledge is generated, interpreted, and validated within a study.

This study adopted the positivist research philosophy as its epistemological foundation, as it provides a robust framework for investigating the relationship between project integration management and the performance of National Housing Corporation projects in Kenya (Sereen & Sunitha, 2011). This philosophy is particularly well suited to the current study because it enables systematic examination of concrete project integration management variables, including project scope management, project time management, project cost management, and disclosure and reporting. It also allows for the assessment of their quantitative impacts on key performance indicators such as project quality, customer satisfaction,

and the number of successful projects delivered. The justification for selecting positivism is based on three considerations.

First, positivism aligns with the study's aim of examining causal relationships between the independent variable (project integration management) and performance outcomes, thereby enabling predictive insight through empirical testing (Creswell & Creswell, 2018). Second, positivism emphasizes quantitative methods, which support precise measurement and statistical analysis and enhance the generalizability of study findings across housing construction projects in Kenya (Cooper & Schindler, 2011). Lastly, positivism emphasizes methodological objectivity, which ensures unbiased conclusions and facilitates actionable recommendations while complementing quantitative elements of understandi.

3.3 Research Design

Kothari (2012) defines research design as a plan for a study that provides the overall framework for collecting data. Mugenda and Mugenda (2012) define it as a plan for selecting subjects, the research site, and data collection procedures to answer the research questions. This study adopted a cross-sectional research design. The cross-sectional research design was appropriate for this study because it allows the researcher to gather two types of data, namely qualitative and quantitative data, on project integration management and the performance of National Housing Corporation projects in Kenya. The qualitative research approach was used because it advocates for the collection of data related to the knowledge, perceptions, and opinions that people have about the topic under study. In addition, the quantitative research approach was used because it helps obtain research results that can be used to formulate statistics for data analysis (Neuman, 2014).

3.4 Target Population

According to Mugenda and Mugenda (2012), a population is defined as the entire group of individuals or objects having common observable characteristics. Cooper and Schindler (2011) further define population as the total collection of elements about which one wants to make inferences. The target population for the study

comprised 425 National Housing Corporation projects undertaken between 2013 and 2021, which included ongoing projects, completed projects, and stalled projects, and these constituted the unit of observation. The study population, on the other hand, consisted of project managers, project consultants, project engineers, and technical auditors working on National Housing Corporation projects in Kenya, who formed the unit of analysis. The list of projects under study was obtained from the official website of the National Housing Corporation.

3.5 Sampling Procedure and Sample Size

According to Kothari (2004), sampling is the process of selecting a number of objects or individuals from a population in such a way that the selected group contains elements that are representative of the characteristics found in the entire population.

3.5.1 Sampling Techinique

The researcher employed both probability and non-probability sampling techniques to select respondents for the study. Purposive sampling and probability sampling techniques were used to select top executive officers at the National Housing Corporation. These techniques were applied because the selected individuals were considered and perceived to possess adequate knowledge and experience regarding the operations and status of project activities being carried out by the National Housing Corporation. This approach ensured that the right respondents with appropriate skills, knowledge, authority, and experience across different project areas were adequately exhausted (Sreenvidya & Sunitha, 2011).

In addition, simple random sampling, which is a probability sampling technique, was used to select National Housing Corporation engineers, consultants, project managers, contractors, auditors, and architects. This technique was adopted because it minimizes research bias in the selection of respondents and provides an equal chance for each respondent to participate in the study. This method was mainly used to collect quantitative data from the randomly selected respondents..

3.5.2 Sample Size

A sample is a subset of a population selected to participate in a study, as espoused by Saunders and Thornhill (2009). The Yamane sample size determination formula (Yamane, 1967), which assumes a 95% confidence level, was adopted for this study.

$$n = \frac{N}{1 + Ne^2}$$

n= Sample Size

N=Target Population (425)

E = marginal Error of (10%)

In the proposed study, the sample was be calculated at precision level of (10%)

$$n=\frac{425}{1+(400x0.1^2)}$$

n=203

3.6 Data Collection Instruments

According to Jenkins et al. (2017), data collection is defined as the means through which information is obtained from selected subjects of an investigation. In this study, data were collected using questionnaires and secondary data sources.

3.6.1 Questionners

The study employed the use of questionnaires, as most research scholars prefer questionnaires for primary data collection due to their economical nature, ability to permit the use of standardized questions, and provision of adequate time for respondents to think through the questions. In addition, questionnaires are easy to administer to the target population, making them suitable for large-scale data collection (Mugenda & Mugenda, 2012). Considering that the majority of the target population was able to read and write, the researcher used structured questionnaires

for data collection. Structured questionnaires were adopted to help conserve time and because they are easy to complete and analyze (Kothari, 2012). The use of structured questionnaires also encouraged targeted respondents to provide in-depth responses without feeling constrained. The questionnaire for the study was designed to capture all the study variables and address the specific objectives of the research. Document review and interview was also used to collect data.Zikmund (2010) defines document review as a process that involves reviewing relevant documents aligned with the topic under study.

3.7 Data Collection Procedure

Saunders (2009) defines data collection as the procedures and processes followed to access quality data. In this study, an introductory letter was obtained from JKUAT to formally authorize the research process. A NACOSTI permit was also secured upon the successful defense of the research proposal and recommendations from the College of Human Resource Development. Thereafter, the researcher sought permission from the National Housing Corporation project management to conduct the study. Upon approval, the researcher was introduced to National Housing Corporation project personnel who were requested to participate in the study by completing the questionnaires. These procedures ensured ethical compliance, institutional legitimacy, and smooth access to the study respondents.

According to Kothari (2012), primary data are data collected afresh for the first time and are therefore original in character. After identifying the target population, the researcher began by training five research assistants to support the administration of the questionnaires. The training focused on the objectives of the study, as well as proper recording and management of data collected from respondents in the field. The research assistants self-administered the questionnaires at the respondents' workplaces to enhance response accuracy. Respondents who were unable to complete the questionnaires immediately were given up to one week due to their busy schedules supervising construction projects. The research assistants later returned to collect the completed questionnaires, an approach that aligns with Saunders and

Thornhill (2009), who emphasize allowing adequate time for respondents to receive, consider, and respond to data collection requests at their convenience.

3.8 Pilot Study

Mugenda and Mugenda (2009) define a pilot test as the pretesting of research instruments with a few respondents in order to assess their accuracy. For this study, a pilot test was conducted before the commencement of the main data collection to determine the accuracy and suitability of the research instrument, specifically the questionnaire, in obtaining the desired information. A pilot test helps to detect weaknesses in the research design and the data collection instruments. It also provides an opportunity to identify potential problems in the questionnaire, such as ambiguous questions, questions that combine more than one issue, questions that may make respondents uncomfortable, and items that are unclear to respondents. Through this process, necessary corrections and refinements can be made before the actual study is undertaken.

The pilot test for this study was conducted on 10% of the sample population, as advocated by Mugenda and Mugenda (2012). According to Mugenda and Mugenda (2012), 10% of the sample population is adequate for piloting and pretesting research instruments. The pilot test was conducted on projects that were not included in the final study to avoid contamination of the main data. Although participants in the pilot study provided valuable input, their responses were excluded from the final analysis to ensure objectivity and accuracy of the findings. The results of the pilot test were used to improve and refine the research instrument. Consequently, the validity and reliability of the questionnaire were enhanced through insights gained from the pilot testing process.

3.8.1 Reliability of Research Instruments

According to Hall (2015) reliability is the measure of concern to produce similar and consistent results or data after repeated measurement trials. The pre-testing of research instruments aims at determining the reliability of the research tools which include namely warding structure and sequence of research questions. A reliable

instrument is asserted by Neusman (2014) to produce stable and consistence results. The current study adopted Cronbach's alpha which stated that for an instrument to be reliable, it must produce a reliability index of 0.7 (Kothari, 2012).The alpha was tested through subjecting the data collected from few respondents in SPSS, where the researcher did reliability test.Cronbach's alpha is correlation between two sets of data, a reliably coefficient of zero indicate that the score are unrealistic the higher the reliably coefficient the more reliable or accurate the test score. For research purpose test with score of 0.7 and above are accepted as reliable, while for clinical decision making, test score between 0.8 and 0.9 are accepted. The researcher used Cronbach's alpha to test for reliability and coefficient above 0.7 were considered reliable.

3.8.2 Validity of Research Instruments

According to Jenkins et al. (2017), validity is defined as the extent to which research conclusions are accurate, in the sense that other people would agree that they are true. Validity concerns the accuracy and meaningfulness of inferences drawn from research results. There are three main types of validity tests, namely content validity, criterion validity, and construct validity. Content validity refers to the extent to which items in a research instrument are representative of the entire domain that the instrument seeks to measure. In this study, content validity was evaluated by involving the supervisor, as a research expert, to assess questionnaire items based on their relevance and alignment with the content domain. This process ensured that the instrument adequately covered all aspects of the variables under investigation.

Criterion validity measures how well one instrument predicts outcomes based on another measure. In this study, criterion validity was applied to assess whether the research instrument accurately reflected the abilities or outcomes it was intended to measure. Construct validity, on the other hand, refers to the degree to which an instrument accurately measures the intended theoretical construct. The assessment of construct validity required testing the correlations between the study variables and other variables known to be theoretically related. Data obtained from the pilot study were analyzed to ascertain the validity of the research instrument. Validity was further established through close consultation and expert judgment from supervisors,

who examined face, content, and construct validity to confirm that the instrument adequately represented the study variables in line with the research objectives..

3.9 Data Analysis and Presentation

Hall (2015) defines data analysis as the computation of certain measures together with searching for patterns and relationships that exist among data groups. Data processing and analysis are essential to ensure that all relevant data are gathered for making meaningful comparisons and interpretations (Mugenda & Mugenda, 2012). The raw data collected from respondents in the field were cleaned, edited, and coded to enhance accuracy and consistency. The edited data were then transformed into information that could be easily understood and interpreted. This study utilized both qualitative and quantitative data, as advocated by Kothari (2012). The integration of the two approaches enabled comprehensive analysis and strengthened the interpretation of study findings.

Qualitative data captured from open-ended questionnaire items were analyzed using content analysis. Descriptive and inferential statistical techniques were also employed in the study. Descriptive statistics were used to summarize and organize data in an effective and meaningful manner by reducing large volumes of information into frequencies and percentages, making the data easier to understand (Neuman, 2014). Inferential statistics were applied to determine whether observed associations in the sample were likely to exist in the larger population from which the sample was drawn. This approach enabled the researcher to make informed conclusions and generalizations. The findings from the data analysis were presented using tables and figures for clarity and ease of interpretation..

3.9.1 Multiple Regression Analysis

Zikimud (2010) a multiple regression analysis is a statistical process for estimating the relationship among variables. It includes many techniques for modeling and analyzing several variables, when the focus is on the relationship between a dependent variable and one or more independent variables or (predictor’s). It’s done to predict the value of the dependent variable for individuals for whom some

information concerning the explanatory variables is available or in order to estimate the effect of some explanation variable on the dependent variable.

The multiple regression attempts to determine whether a group of variables together predict a given dependant variable since they are four independent variables in this study.The multiple regression models was as follows without the moderator to test direct effects.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \acute{\varepsilon} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots ...(i)$$

Where:

Y = Performance of National Housing Corporation Projects in Kenya

X_1 = Project scope management

X_2 = Project time management

X_3 = Project cost management

X_4 =Project disclosure and reporting

$\beta_{0=}$ is constant

β_0 β_1, β_2, β_3, β_4 represent regression coefficients

$\acute{\varepsilon}$ = Error term.-

3.9.2 Regression Model 2 Equation

The study adopted the following multiple regression model with the moderator (interaction term) as proposed by (Hayes 2018):The moderator is suported if there is substancial correlation between the predetor and outcome of the dependent variable.In order to evaluate the moderating effect of community participation (Z) on the relationship between an independent variable and dependent variable, the study used the moderated multiple regression analysis.

$$Y = \beta_0 + \beta_{1\,Z} X_1 Z + \beta_{2Z} X_2 Z + \beta_{3Z} X_3 Z + \beta_{4Z} X_4 Z + \acute{\varepsilon} \ldots\ldots\ldots\ldots\ldots\ldots \text{(ii)}$$

Where:

Y= is the dependent variable project performance

$\beta_{0=}$ is constant

X_1, X_2, X_3 and X_4 represent project scope management, project time management, project cost management and project disclosure and reporting respectively is constant

β_1, β_2, β_3, and β_4 represent regression coefficients for project scope management, project time management, project cost management, project disclosure and reporting respectively

Z=Community participation (Moderating variable)

$\acute{\varepsilon}$ = Error term.

X_1Z to X_4Z were created by multiplying each independent variable and project outcomres.The is associated with these iteraction terms β_1 to β_4 quantify both the direction and strength of moderating effect positive coefficients indicaes that community participation enhance project performance, while negative coefficients indicates community participation weakens this relationship. The models intercept is represented by β_0 and $\acute{\varepsilon}$ accounts for unexplained variance.

3.10 Assumption of Linear Regession

To ensure the robustness and reliability of regression analysis the study conducted several diagatistic tests and verify statistical assumptions and asses model fit.The study was subject to the following diagnostic s tests.

3.10.1 Normality Assumption

The test for normality assumption holds that the error terms are normally distributed and this was tested using normal P-P plots and histograms (Hayes, 2018).

3.10.2 Linearity

Linearity assumption holds that there is a linear relationship between dependent and independent variable and it was tested using ANOVA test of linearity and residual plots (Creswell, 2014)

3.10.3 Homoscedasticity

Hayes (2018) defines homoscedasticity as the “difering variance” that the existence of heteroscedacity can invalidate statistical tests that assume the modeling error are uncorrelated and normally distributed .The assumption holds that the variance of residuals is constant across all levels of the independent variable and it was tested using residual plots and Park test (Jenkins et al., 2017).

3.10.4 Auto Correlation

Creswell (2013) defines auto correlation as collection between members of a series of observation ordered in time space. The assumption of residual independence holds that error terms are not auto correlated Hall (2015), observes that Dorbin--Watson statistic ranges between a value of 0 and 4. A value that is near 2 indicates non-auto correlation and a value to 0 shows there is a positive correlation when the value close to 4 indicates a negative correlation (Jenkins et al., 2017).

3.10.5 Multicollinearity

To test for Multicollinearity the study used the Variance Influation factor (VIF) techinique.This techinique indicates increase of coefficient variance in the presence of multicolenearity Creswel (2013).According to Hall (2015), identification of multi-colinearity in a model is important and is tested by examining the tolerance and variance inflation factor (VIF) diagnosis. The variance inflation factor measures the

impact of multicollinearity among the variables in a regression mode.Hai-jew (2015) concludes that even though there is no formal criterion for determining the bottom line of the tolerance value of VIF, tolerance values are less than 0. 1 and VIF greater than 10 roughly indicate significant multicollinearity.

3.10.6 Factor Analysis

Gujarati, (2003) define factor analysis as a gauge of the substantive importance of a given variable to the factor and it is used to identify and remove hidden constructs or variable items that do not meet the objective of the study and which may not be apparent from direct analysis The study conducted exploratory and confirmatory factor analysis before undertaking final regression analysis.

3.10.7 Operationalization of Variables

The dependant variable is performance, which was assed through the four independent variables, project scope management, project time management, projectcost management, project duisclosure and reporting and moderating variable community participation

Table 3.1: Operationalizatio of Variables

Variable	Construts	Data type
Project scope management	i. Scopeplanning ii. Scope control iii. Scopevalidation iv. Workbreakdown structure	Quantitative and qualitative
Project time management	i. Activitydefinition ii. Schedule definition iii. Activityresourceestimates iv. Estimate activity resource	Quntitative and qualitative
Project cost management	i. Cost estimation ii. Financialresouremobilization iii. Cost budgeting iv. Cost controlling	Quantitative and qualitative
Disclosure and reporting	i. Statu reports ii. Risk reports iii. Board reports iv. Variance reports	Qualitative and quantitative
Project performance	i. Quality of projects ii. Stakeholders satisfaction iii. Number successfull Project outcome	Quantitative and qualitative

CHAPTER FOUR

RESEARCH FINDINGS AND DISSCUSSION

4.1 Introduction

This chapter give results based on research objectives, the chapter entails the response rate, pilot results, demographic characteristics, descriptive statistics, diagnostic tests, Inferential results,regression analysis and multiple regression analysis

4.2 Response Rate

The study selected a sample of 203 project strategic partners registered and working at National Housing Corporation projects in Kenya. Response rate is the number of respondents who completed the questioner divided by the number of people chosen as a sample Kothari, (2012). The researcher distributed a total of 203 questionnaires. Only 188 questionnaires were duly filled and returned. The returned questioner formed a response rate of 92.7%, as indicated in table 4. 1 which was considered to be excellent for analysis and reporting according to (Creswell, 2014) and was considered good for analysis and further reporting. The analysis on response rate is depicted in Table 4.1.

Table 4.1: Response Rate

Response	Frequency	Percent
Questionnaires duly filled and returned	188	92.7
Questionnaires not returned	15	7.3
Total	203	100

4.3 Pilot Test Results

A pilot test was conducted to determine the reliability and validity of research instruments. Asample of 10% of the total sample size was conduted, with the respondents who were not part of the main study as advocated by (Mugenda, 2018).The pilot study results were used to make necessary adjustments of research instruments.

4.3.1 Reliability Tests

Accordingt to Gujarati, (2003) states that cronbach alpha is computed to verify the approprietness as well as the dependapility of research instruments.Table 4.2 displays reliability analysis results.

Table 4.2: Reliability Analysis Results

Variable	Number of items	Cronbach's Alpha
Project scope management	6	.817
Project time management	5	.819
Project cost management	7	.778
Project disclosure and reporting	4	.737
Community participation	5	.750
Project performance	5	.737

N/21

The study involved 43 respondents (N=21) in assessing reliability of the research questionnaire who were not part of the study. The findings indicate that project scope management had an alpha of 0.817 with 6 test items. Project time management had an alpha of 0.819 with 5 test items. Project cost management had alpha of 0.778 with 7 test items. Project disclosure and reporting had an alpha of 0.730 with 4 test items. It was noted that community participation had alpha of 0.750 with 5 test items. Project performance had an alpha of 0.737 with 5 test items. This implies that the research questionnaire was reliable as the alpha for all the study

variables was above the 0.7 minimum thresholds according to (Sreevidya and Sunitha, 2011).

4.3.2 Validity Test Results

Validity refers to extended to which research instrument measures the theoretical constructs it is designed to access (Kothari, 2012).Valididity ensures that the findings are meaningful and interpretable to the research in contex. In this study content validity and construct validity were established.Conten validity was done to ensure the instriument adequately covers the domain of intrest and construct validity was done to ensure that instrument measures the intended purpose of research**.**

4.3.3 Factor Analysis of Variables

4.3.3.1 Factor Analysis for Project Scope Management

The factor analysis results for project scope management are as presented in Table 4.3. Usually, factors with factor loadings of above 0.4 are excellent and should be retained for further data analysis. As a result, project scope management items namely, the scope planning of the project was done before the project was initiated, project scope control is key issue in the implementation of the project, the work break down structure was used to plan the project activities, all the projects delivered were within the stipulated scope, the collection of the project requirements was mandatory before execution of any project in my organization and validation of project scope deliverables were compared against the scope baseline to ascertain if the project teams have produced what was in the planned document were retained for further data analysis. Furthermore, the first factor accounted for 48.141% of the total variance. In addition, Kaiser- Meyer- Olkin Measure (KMO measure) was used by the study to test for sampling adequacy. The findings in table 4.3 revealed that the KMO was greater than 0.5 and Bartlett’s test was significant.

Table 4.3: Factor Analysis for Project Scope Management

Statement	Component
The scope planning was done before the project was initiated	.797
Project scope control was key issue in the implementation of the project	.755
The work break down structure was used to plan the project activities	.720
The projects delivered were within the stipulated scope	.651
collection of the project requirements was mandatory before execution	.618
Validation of project scope deliverables were compared against the scope baseline	.600
Total Variance Explained	
% of Variance	48.141%
Total	48.141%
KMO and Bartlett's Test	
Kaiser-Meyer-Olkin Measure of Sampling Adequacy	.834
Bartlett's Test of Sphericity, Approx. Chi-Square	238.597
Df	15
Sig	.000

Extraction Method: Principal Component Analysis.

Rotation Method: Equamax with Kaiser Normalization.

4.3.3.2 Factor Analysis for Project Time Management

The factor analysis results for project time management are as presented in Table 4.4. Usually, factors with factor loadings of above 0.4 are excellent and should be retained for further data analysis. As a result, project time management items namely, all the project activities are sequentially done to ensure a smooth flow of the project activities, definition of project activities is done in every project before it takes off, the resource estimates of all activities are done for inclusion during the schedule management of project activities, the time to be taken by each activity is estimated

during the planning process to ascertain the required timeframe for every task and projects completed are normally delivered within the projected timeframes were retained for further data analysis. Furthermore, the first factor accounted for 37.370% of the total variance and the second factor accounted 26.662% of the total variance. In addition, Kaiser- Meyer- Olkin Measure (KMO measure) was used by the study to test for sampling adequacy. The findings in Table 4.4 revealed that the KMO was greater than 0.5 and Bartlett's test was significant.

Table 4.4: Factor Analysis for Project Time Management

Statement	**Component**	
project activities are sequentially done to ensure a smooth flow of the project activities	1	2
Definition of project activities is done in every project before it takes off	.807	-.015
The resource estimates of all activities are done for inclusion during the schedule management of project activities	.775	.107
The time to be taken by each activity is estimated during the planning process to ascertain the required timeframe for every task	.753	.265
Projects completed are normally delivered within the projected timeframes	.004	.813
	.223	.768
Total Variance Explained: Rotation Sums of Squared Loadings		
% of Variance	37.370	
% of Variance		26.662
Cumulative %		64.032
KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy	.664	
Bartlett's Test of Sphericity, Approx. Chi-Square	128.149	
Df	10	
Sig	.000	

Extraction Method: Principal Component Analysis.

Rotation Method: Equamax with Kaiser Normalization.

4.3.3.3 Factor Analysis for Project Cost Management

The factor analysis results for project cost management are presented in Table 4.5. Generally, factors with loadings above 0.4 are considered adequate and are retained for further data analysis. Based on this criterion, the retained project cost management items included: cost plans being defined before every project begins, budget determination being mandatory prior to project initiation, project cost estimation being conducted to establish the total project cost before commencement, establishment of funding sources at the project planning stage, project budgets clearly providing for various project activities, project financing being secured before project start, and recognition that mishandling project cost management can lead to project failure. These items adequately captured the construct of project cost management and were therefore retained for subsequent analysis.

Furthermore, the first factor accounted for 40.881% of the total variance, while the second factor accounted for 23.985% of the total variance, indicating a substantial explanation of variability by the extracted factors. In addition, the Kaiser–Meyer–Olkin (KMO) Measure of Sampling Adequacy was used to assess the suitability of the data for factor analysis. The results in Table 4.5 show that the KMO value was greater than 0.5 and that Bartlett's Test of Sphericity was significant, confirming that the data were appropriate for factor analysis..

Table 4.5: Factor Analysis for Project Cost Management

Statement	Component	
Cost plan is defined before every project begins	.803	.073
Budget determination is considered before any project is commences	.775	-.306
Cost estimation of the project is done to establish the cost of the entire project	.755	.055
Funding sources were established before the project commences	.724	.365
Project budget provide a clear provision of various project activities	.682	-.137
Financing of was secured before the start of project	.679	-.493
The project was implemented within the specified cost	.378	.796
Total Variance Explained: Rotation Sums of Squared Loadings		
% of Variance	40.881	
% of Variance		23.985
Cumulative %		64.865
KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy	.776	
Bartlett's Test of Sphericity, Approx. Chi-Square	420.286	
Df	21	
Sig	.000	

Extraction Method: Principal Component Analysis.

Rotation Method: Equamax with Kaiser Normalization.

4.3.3.4 Factor Analysis for Project Disclosure and Reporting

The factor analysis results for project disclosure and reporting are as presented in Table 4.6. Usually, factors with factor loadings of above 0.4 are excellent and should be retained for further data analysis. As a result, project disclosure and reporting items namely, the organization gives regular reports on project status, project risk

report for every project is normally established before commencement of any project, the organization gives regular variance report on progress of the project and board meetings reports or executive reports are mandatory conducted before any project phase commences or starts were retained for further data analysis. Furthermore, the first factor accounted for 57.570% of the total variance. In addition, Kaiser- Meyer-Olkin Measure (KMO measure) was used by the study to test for sampling adequacy. The findings in Table 4.6 revealed that the KMO was greater than 0.5 and Bartlett's test was significant.

Table 4.6: Factor Analysis for Project Disclosure and Reporting

Statement	Component
The community took part in execution of the project	.809
Community members were involved feasibility study	.776
The community was involved in handing over the project	.769
Project kick of meeting involved the community	.674
Project viability involved the community	.781
Total Variance Explained	
% of Variance	57.570
Cumulative %	57.570
KMO and Bartlett's Test	
Kaiser-Meyer-Olkin Measure of Sampling Adequacy	.750
Bartlett's Test of Sphericity, Approx. Chi-Square	155.877
Df	6
Sig	.000

Extraction Method: Principal Component Analysis.

4.3.3.5 Factor Analysis for Community Participation

The factor analysis results for community participation are as presented in Table 4.7. Usually, factors with factor loadings of above 0.4 are excellent and should be retained for further data analysis. As a result, community participation items namely, poor communication plan leads to project delays, the community is involved in the

planning and design of the project, training of community on project issues leads to minimal project disputes, the project manager takes lead in community participation for meaningful decision making of the project activities and the procedures for community participation and contribution are available were retained for further data analysis. Furthermore, the first factor accounted for 55.142% of the total variance. In addition, Kaiser- Meyer- Olkin Measure (KMO measure) was used by the study to test for sampling adequacy. The findings in Table 4.7 revealed that the KMO was greater than 0.5 and Bartlett's test was significant.

Table 4.7: Factor Analysis for Community Participation

Statement	Component
The project manager takes lead in community participation for meaningful decision making of the project activities	.750
The community is involved in the planning and design of the project	.748
Training of community on project issues leads to minimal project disputes	.747
The procedures for community participation and contribution are available through uncertain	.743
Poor communication plan leads to project delays	.725
Total Variance Explained	
% of Variance	55.142
Cumulative %	55.142
KMO and Bartlett's Test	
Kaiser-Meyer-Olkin Measure of Sampling Adequacy	.816
Bartlett's Test of Sphericity, Approx. Chi-Square	225.239
Df	10
Sig	.000

Extraction Method: Principal Component Analysis.

4.3.3.6 Factor Analysis for Performance

The factor analysis results for performance are as presented in Table 4.8. Usually, factors with factor loadings of above 0.4 are excellent and should be retained for further data analysis. As a result, performance items namely, all the projects completed by my organization are always aligned with the stated business requirements, stakeholders satisfaction is a key indicator of project performance and realization of its objectives, aspects of micro economy affect the number of projects completed, with the community being the direct beneficiary of the projects, the success of the project outcomes is always determined by their levels of satisfaction and the current trends and changes in technologies affect the project deliverables to be attained were retained for further data analysis. Furthermore, the first factor accounted for 66.350% of the total variance. In addition, Kaiser- Meyer- Olkin Measure (KMO measure) was used by the study to test for sampling adequacy. The findings in Table 4.8 revealed that the KMO was greater than 0.5 and Bartlett's test was significant.

Table 4.8: Factor Analysis for Performance

	Component
Aspects of micro economy affect the number of projects completed	.878
All the projects completed by my organization are always aligned with the stated business requirements	.841
Stakeholders satisfaction is a key indicator of project performance and realization of its objectives	.825
With the community being the direct beneficiary of the projects, the success of the project outcomes is always determined by their levels of satisfaction	.792
The current trends and changes in technologies affect the project deliverables to be attained	.729
Total Variance Explained	
% of Variance	66.350
Cumulative %	66.350
KMO and Bartlett's Test	
Kaiser-Meyer-Olkin Measure of Sampling Adequacy	.853
Bartlett's Test of Sphericity, Approx. Chi-Square	408.565
Df	10
Sig	.000

Extraction Method: Principal Component Analysis.

4.4 Demographic Characteristics

This section analysed demographic characteristics of respondents such as level of experience, project type, education level, position in the organization, the length of time serving in the organization.

4.4.1 Project Type

This study also examined how the respondents were distributed according to the project type. The results of the analysis are presented in Table 4.9.

Table 4.9: Distribution of Respondents by Project Type

Project type	Frequency	Percent
Mortgage housing scheme	100	53.19
Tenant purchase scheme	30	15.95
Site and service scheme	15	7.98
Rental housing scheme	12	6.38
Police house programs	10	5.31
Build wile saving	10	5.31
Urban renewal	11	5.88
Total	188	100.0

From Table 4.9 it was established that 110 (53.19%) respondents worked in mortgage housing schemes. 30 (16.95%) respondents worked in tenant purchase schemes. 15 (7.98%) respondents worked in site and service schemes. 12 (6.38%) respondents worked in rental housing schemes. 10 (5.31%) respondents worked in police house programs. 10 (5.31%) respondents worked in own build units. 11 (5.88%) respondents worked in urban renewal projects. This implies that the respondents had experience in project management hence making the data more credible,this findings are in line with (Lukale, 2019, Fisher, 2020, Lattif et al., 2020) who noted that construction project managers should have knowedge and skill to be able to work in different projects and programs to anable them gain experience and cope up with ever rising challenges in different project scenarials.

4.4.2 Level of Education

The study also examined the distribution of respondents based on highest level of education.The results of analysis are shown in Table 4.10.

Table 4.10: Level of Education

Level of Education	Frequency	Percent
Undergraduate	140	74.46
Post graduate	48	25.54
Total	188	100.0

It was found out Table 4.10 that 140 (74.46%) respondents had attained undergraduate education. 48 (25.54%) respondents had attained post graduate education. The results imply that, respondence understood the questionnaire and gave the valid response since they had a good understanding as guided by their level of education.This results are in line with Chileshe et al., (2020) found out that the level of education influences the level of management skills. It was therefore necessary to establish education status of the various respondents. The findings also collaborate with studies of Mugo & Moronge, (2018) which indicates that in today's constantly changing environment, education was a major factor that impacts positively on employee's performance as well as the project performance

4.4.3 Work Experience

The study sought to find out the the period they have worked in housing projects. The findings are presented in Table 4.11.

Table 4.11: Work Experience

Time	Frequency	Percent
3 to 6 years	109	57.97
11 to 14 years	40	21.27
7 to 10 years	39	20.76
Total	188	100.0

Based on the results in Table 4.11 the results shows that 109 (57.97%) respondents had worked in housing projects for 3 to 6 years. 40 (21.27%) respondents had worked in housing projects for 11 to 14 years. 39 (20.76%) respondents had worked in housing projects for 7 to 10 years. These results collaborates with finding from (Chege et al., 2020, Kabirifa & Mojitahedi, 2019) who pointed out that experience depends on the number of years of service in the sector involved. It is assumed that the longer on worked in a given position the more they understand the roles and hence the higher the ability to articulate issues pertaining to the role. From the findings the respondents had a better understanding on the undertaking of project management in the housing sector projects the findings indicates that majority had worked for more than three years

4.5 Descriptive Analysis

This section presents results on statements on both dependent and independent variables. Descriptive analysis consists of frequency tables, diagrams, measure of central tendency and measure of dispersal. Kothari (2012) Descriptive analysis was used to examine the relationship between variables by describing the direction and association between them. The study sought the opinions of respondents on project scope management, project time management, project cost management, disclosure and reporting, community participation and performance of National Housing Corporation Projects in Kenya. The respondents were required to indicate their level of agreement/disagreement with various statements on a five-point Likert scale.

4.5.1 Project Scope Management

The first objective was to explore the influence of project scope management on performance of National Housing Projects in Kenya the views are as follows

4.5.2 Descriptive Statistics for Project Scope Management

In the study project scope was measured by use of sentiments which the respondents asserted their level of agreement on the basis of Likert scale 1-5 four spaces 1-2-3-4-5 middile 4/5=0.8 The scale was such that 1+0.8=1.8 Disagree 1.8 +0.8=2.6 Disagree

2.6+0.8= 3.4 Neutral 3.4+0.8=4.2 Agree 4.2+0.8= 5.0Agree .The results are tabulated below in table 4.12.

Table 4.12: Project Scope Management

Statement	Mean	SD
The scope planning was done before the project was initiated	3.35	1.158
Project scope control was key issue in the implementation of the project	2.68	1.228
The work break down structure was used to plan the project activities	3.13	1.209
The projects delivered were within the stipulated scope	3.15	1.286
collection of the project requirements was mandatory before execution	3.31	1.311
Validation of project scope deliverables were compared against the scope baseline	3.26	1.045

Based on the findings in Table 4.12, most respondents were undecided on whether project scope planning was conducted before the project was initiated (mean = 3.35; SD = 1.158). There was also indecisiveness on whether project scope control is a key issue in project implementation (mean = 2.68; SD = 1.228). The findings further established indecision on whether the work breakdown structure was used to plan project activities (mean = 3.13; SD = 1.209). It was noted that 60 respondents (35.3%) disagreed that all projects delivered were within the stipulated scope, while 82 respondents (48.2%) agreed with this statement. Overall, there was indecisiveness on whether all projects delivered were within the stipulated scope (mean = 3.15; SD = 1.286).

The study also established indecisiveness on whether the collection of project requirements was mandatory before executing any project within the organization (mean = 3.31; SD = 1.311). Further findings revealed that respondents were undecided on whether validation of project scope deliverables was conducted against

the scope baseline to ascertain whether project teams produced what was outlined in the planned documents (mean = 3.26; SD = 1.045). These findings concur with studies by Maeri et al. (2023) and Mosha (2018), which reported that workers in government organizations often do not disclose information to outsiders. In many cases, they fail to collaborate fully due to fear of job loss and concerns about personal job security. From the findings, it is evident that respondents were non-committal and not ready to disclose more detailed information..

4.5.3 Document Analysis Project Scope Management

Table 4.13: Use of Project Scope Management

Document	Available	Frequency	Percent
Project scope management plan used	Regularly used	20	80
	Not regularly used	5	20

The findings presented in table 4.13 show that 20 (80%) noted that project scope management plan is regularly used in achievement of project deliverables. 5 (20%) noted that project scope management plan is used in achievement of project deliverables. These results are in consistence with (Chepgeno & Kwasira, 2020 , Gerull, 2023) who asserts that if projects scope management plan is well defined regularly and managed the intended project objectives are meet which translates into performance of projects.

4.5.4 Project Time Management

The second objective was to examine how project time management influences the performance of National Housing Cooperation Projects in Kenya.

4.5.5 Descriptive Statistics for Project Time Management

The study sought to examine the opinion of respondents on project time management. The results of analysis are shown in Table 4.14 In the study project time management was measured by use of sentiments which the respondents asserted

their level of agreement on the basis of Likert scale 1-5 four spaces 1-2-3-4-5 middle 4/5=0.8The scale was such that 1+0.8=1.8 Disagree 1.8 +0.8=2.6 Disagree 2.6+0.8= 3.4 Neutral 3.4+0.8=4.2 Agree 4.2+0.8= 5.0Agree .The results are tabulated below in table 4.14.

Table 4.14: Descriptive Statistics for Project Time Management

Statement	Mean	SD
project activities are sequentially done to ensure a smooth flow of the project activities	2.91	1.201
Definition of project activities is done in every project before it takes off	2.81	1.167
The resource estimates of all activities are done for inclusion during the schedule management of project activities	3.26	1.018
The time to be taken by each activity is estimated during the planning process to ascertain the required timeframe for every task	3.29	1.112
Projects completed are normally delivered within the projected timeframes	2.82	1.102

The findings in Table 4.14 showed that respondents were undecided on whether all project activities are carried out sequentially to ensure a smooth flow of project activities (mean = 2.91; SD = 1.201). There was also indecisiveness on whether the definition of project activities is done in every project before implementation begins (mean = 2.81; SD = 1.167). The study further revealed that respondents were undecided on whether resource estimates for all activities are prepared for inclusion during the schedule management of project activities (mean = 3.26; SD = 1.018). It was also noted that respondents were undecided on whether the time required for each activity is estimated during the planning process to determine the appropriate timeframe for every task (mean = 3.29; SD = 1.112). These results generally indicate uncertainty among respondents regarding the application of time management practices in project planning.

It was further noted that respondents agreed that projects are normally completed and delivered within the projected timeframes (mean = 2.82; SD = 1.102). However, these results suggest that respondents were not fully willing to disclose more detailed information on how time management influences the performance of housing projects. The current study findings are in agreement with Kiarie and Wanyoike (2016), who reported that government projects are often characterized by confidentiality and non-disclosure of information. This is mainly because project stakeholders fear that leaking information may trigger public scrutiny. In many cases, government project contracts are not fully disclosed to the public, which limits transparency and open discussion on project performance..

4.5.6 Document Analysis for Time

Table 4.15: Importance of Time

Statement	Available	Frequency	Percent
Project Time Management plan	Available	25	100
	Not available	0	0
Total		**25**	**100**

The findings in table 4.15 indicate that 25 (100.0%) agreed that time is an important element in project planning and management and that it affects project quality, scope and cost and prevents time overrun and project delays. This current results is backed by (Matheka & Mugai, 2024, Elizabeth, 2020, Gitau and Sang, 2020) who pointed out that time is an important element in any construction work and if time is not well planned and managed lead to time overrun.

4.5.7 Project Cost Management

The third objective was to establish the influence of project cost management on performance of National Housing Projects in Kenya. The researcher sought information from respondents on specific dimensions of project cost management as shown in Table 4.16.

4.5.8 Descriptive Statistics for Project Cost Management

The study also examined the opinion of respondents on project cost management. The results of analysis are presented in Table 4.16. Descriptive Statistics for Project Time ManagementIn the study project cost management was measured by use of sentiments which the respondents asserted their level of agreement on the basis of Likert scale 1-5 four spaces 1-2-3-4-5 middle 4/5=0.8The scale was such that 1+0.8=1.8 Disagree 1.8 +0.8=2.6 Disagree 2.6+0.8= 3.4 Neutral 3.4+0.8=4.2 Agree 4.2+0.8= 5.0Agree .The results are tabulated below in table 4.16.

Table 4.16: Descriptive Statistics for Project Cost Management

Statement	Mean	SD
Cost plan is defined before every project begins	2.73	1.176
Budget determination is considered before any project is commences	2.76	1.224
Cost estimation of the project is done to establish the cost of the entire project	3.04	1.181
Funding sources were established before the project commences	2.86	1.334
Project budget provide a clear provision of various project activities	2.80	1.243
Financing of was secured before the start of project	2.74	1.112
The project was implemented within the specified cost	2.95	1.249

The study indicate in Table 4.16 that the respondents were undecided on whether cost plan is defined before every project begins or not (mean = 2.73; SD = 1.176). The findings indicate that there was indecisiveness on whether budget determination is considered mandatory before any project is initiated or not (mean = 2.76; SD = 1.224). The study established that the respondents were undecided on whether cost estimation of the project is done to establish the cost of the entire project before the commencement of the project or not (mean = 3.04; SD = 1.181). It was established that the respondents were undecided on whether funding sources were established at the project planning stage of this project before being implemented (mean = 2.86; SD = 1.334).

It was established that the respondents were undecided on whether project budget provide a clear provision of various project activities (mean = 2.80; SD = 1.243). It was established the respondents were undecided on whether financing of projects is normally secured before the start of any project (mean = 2.74; SD = 1.112). There was indecisiveness on whether mishandling of project cost management can lead to project failure or not (mean = 2.95; SD = 1.249).

This results reveals that the respondents are non commutal they do not want to disclose more information about the projects this might be because they do not want the public to know exactly what is results are in agreement with (Wabwile & Rugurui, 2023, Githonga, 2022, Luvai & Mugai, 2024, Shilingi, 2020). Points out that these projects which are normally financed by world Bank, IMF and tax payers money face several setbacks such as abandonment, cost overun, schedule deviation and stakeholder dissatisfaction because the government cannot disclose the exact cost of the contract on the project being undertaken.

5.5.9 Document Analysis on Monetary Size of a Typical Project

Table 4.17: Average Monetary Size of a Typical Project.

Document		Frequency	Percent
Average monetary size of a typical project	Kshs 300 million	25	100.0
Annual construction budget for housing projects	Kshs 5 billion		
Project monetary size range	Kshs 250 million to Kshs 300 million		
Project cost estimates involve an analysis of uncertainties			
Programs ensures projects are affordable			
How programs ensure projects are affordable	Projects like Boma Yanguu allows clients to buy houses by depositing 20% and paying monthly installments		
Presence of new or different approaches the projects could use to address the issue of affordability		25	100.0

The findings in Table 4.17 indicate that all 25 respondents (100.0%) agreed that the average monetary size of a typical project is Kshs 300 million, the annual construction budget for housing projects is Kshs 5 billion, and the project monetary size range lies between Kshs 250 million and Kshs 300 million. All 25 respondents (100%) agreed that project cost estimates involve an analysis of uncertainties. However, the findings also show that all 25 respondents (100%) disagreed that project cost estimates involve an analysis of uncertainties. In addition, 152 respondents (89.4%) agreed that programs ensure projects are affordable, while 25 respondents (100%) disagreed that such programs ensure project affordability. These mixed responses indicate inconsistencies in respondents' views regarding cost estimation practices and project affordability.

Further, all 25 respondents (100%) agreed that projects such as Boma Yangu allow clients to purchase houses by depositing 20% and paying the balance through monthly installments. All 25 respondents (100.0%) also admitted that there are new or different approaches that projects could adopt to address affordability challenges. The findings further suggest that project managers should monitor and control project activities, resources, and expenditures required to deliver each output in order to ensure that customer requirements are met. This concurs with Fisher (2020), who noted that realistic estimates concerning resource planning should be developed using appropriate cost estimation techniques. Such practices facilitate accountability and transparency in projects, particularly in public sector projects.

4.5.10 Document Anaylsis on Affordability of Projects

Table 4.18: Affordability of Projects

Document		Frequency	Percent
Presence of new or different approaches the projects could use to address the issue of affordability		7	28
Approaches the projects could use to address the issue of affordability	Green technology to speed delivery and lower delivery cost	4	16
	Mortgage refinancing	3	12
	Tax exemption for first time home buyers	4	16
	Introduction of National Housing Development Fund	3	12
	Partnering with foreign investors like UK Climate Investment and FSD Kenya	4	16
	Total	25	100.0

Findings from Table 4.18 showed that 7 (28%) respondents agreed that there exist new or different approaches the projects could use to address the issue of affordability. 4 (16%) respondents agreed that green technology to speed delivery and lower delivery cost could be used to address the issue of affordability. 3 (12%) respondents agreed that mortgage refinancing could be used to address the issue of affordability. 4 (16%) respondents agreed that tax exemption for first time home buyers could be used to address the issue of affordability. 3 (12%) respondents agreed that introduction of National Housing Development Fund could be used to address the issue of affordability. 4 (16%) respondents agreed that partnering with foreign investors like UK Climate Investment and FSD Kenya could be used to address the issue of affordability. This finding shows that the high cost of getting finance or loans which has higher interest rates leads to materials for construction to escalate and if affordable funding measures are put in place housing will be affordable, this results conforms to findings of Fashina el at, (2020) who noted that

funding of projects is a major problem associated with projects, most financial providers give loans at ahigher intrest rate which lock out most of contractors who are involved in construction industry in the country.

4.5.11 Disclosure and Reporting

The fouth objective was to establish the influence of project disclosure and reportingt on performance of National Housing Projects in Kenya. The researcher sought information from respondents on specific dimensions of project disclosure and reportingt management as shown in Table 4.19.

4.5.12 Descriptive Statistics for Disclosure and Reporting

The study also examined the opinion of respondents on Disclosure and Reporting The results of analysis are presented in Table 4.19. In the study Disclosure and reporting was measured by use of sentiments which the respondents asserted their level of agreement on the basis of Likert scale 1-5 four spaces 1-2-3-4-5 middle 4/5=0.8The scale was such that 1+0.8=1.8 Disagree 1.8 +0.8=2.6 Disagree 2.6+0.8= 3.4 Neutral 3.4+0.8=4.2 Agree 4.2+0.8= 5.0Agree .The results are tabulated below in Table 4.19.

Table 4.19: Descriptive Statistics for Disclosure and Reporting

Statement	Mean	SD
The organization gives regular reports on project status	2.95	1.235
Project risk report is normally established before commencement of any project	2.76	1.233
Variance report on progress of the project is done	2.90	1.118
Board meetings reports or executive reports was conducted before the project starts	2.71	1.286

The findings in Table 4.19 indicate that the respondents were undecided on whether the organization gives regular reports on project status or not (mean = 2.95; SD = 1.235). There was indecisiveness on whether project risk report for every project is normally established before commencement of any project or not (mean = 2.76; SD = 1.233). The study found out that the respondents were undecided on whether the organization gives regular variance report on progress of the project or not (mean = 2.90; SD = 1.118).

It was also established that the respondents were undecided on whether board meetings reports or executive reports are mandatory conducted before any project phase commences or starts or not (mean = 2.71; SD = 1.286).This current study concurs with the study findings of (Sharma et al., 2019 Pinyarat et al., 2019) who noted that most of government employees working in projects do not disclose information on status of the project to the public. In addition the results show that government officers working on project are non committal they do not want to disclose more information to the public for fear of being victimized and also because of confidentiality of some contract agreements.

4.5.13 Document Analysis on Disclosure and Reporting

Table 4.20: Project Status Reports

Document	Available	Frequency	Percent
Project status reports available	Avilable	23	92
	Not available	2	8
Total		25	100

The findings in Table 4.20 show that 23 (92%) agreed that project status reports are available 2 (8%) disagreed that status reports are unvaillable. This results concure with earlier researchers like Eccles et al., (2020) who noted that project manager should have continuous progress reports on status of the project being undertaken, so that to be in position to know the milestones so far project has achieved.This findings concurs with Abdullah et al., (2019) who notes that monitoring and evaluation reports are important to track the project progress in any construction industry.

4.5.14 Community Participation

The fifth objective was to determine the moderating influence of community participation on the relationship between project management integration and performance of National Housing Cooperation projects in Kenya. The researcher examined the views of respondents on community participation. The results are shown in Table 4.21.In the study Community Participation was measured by use of sentiments which the respondents asserted their level of agreement on the basis of Likert scale 1-5 four spaces 1-2-3-4-5 middle 4/5=0.8 The scale was such that 1+0.8=1.8 Disagree 1.8 +0.8=2.6 Disagree 2.6+0.8= 3.4 Neutral 3.4+0.8=4.2 Agree 4.2+0.8= 5.0Agree .The results are tabulated below in table 4.21.

Table 4.21: Descriptive Statistics for Community Participation

Statement	Mean	SD
The community took part in execution of the project	2.81	1.168
Community members were involved feasibility study	2.84	1.108
The community was involved in handing over the project	2.78	1.200
Project kick of meeting involved the community	2.85	1.310
Project viability involved the community	2.76	1.188

The study in Table 4.21 found out that the respondents were undecided on whether the community took part in execution of the project or not (mean = 2.81; SD = 1.169). The study determined that the respondents were undecided on whether the community is involved in feasibility study of the project or not (mean = 2.84; SD = 1.108).The study determined that There was indecisiveness on whether the community was involved in handing over the project or not (mean = 2.78; SD = 1.200). It was noted that the respondents were undecided on whether the community members were involved in project kick off meetings or not (mean = 2.85; SD = 1.310).It was noted that the respondents were undecided on whether the project viability involved the community or not (mean = 2.76; SD = 1.188). The respondents were not ready to disclose more information about the involvement of community participation on performance of the housing projects this current study

results are in line with I (Mwangi, 2018, Lattif et al., 2020) who reported that most government projects are not involving the community participation because if they involve the community might disagree on the project to be initiated in addition the community might see that the project is not a priority at the moment so because of changes in regimes and government it makes it impossible for government to involve the community participation process because they want a score card on the project.

4.5.15 Document Analysis on Community Participation

Table 4.22: Community Participation

Document	Available	Frequency	Percent
Communication plan with community	Available	15	100
	Not available	0	0
Total		25	100

The findings in Table 4.22 indicate that 25 (100%) agreed that community participation in housing projects influences the performance of the projects.Furhermore they agreed that one of the challenges experienced regarding community participation in housing construction projects was that sometimes community views do not reflect the true picture of projects being initiated.Most of the project do not considered community views like projects in Kibera where the National Housing Corporation constructed several units but the residence decline to live in because they were not consulted and their views were not put in place and because of lack of participation of the community the product specification did not meet the customer satisfaction this result concurs with (Chileshe et al., 2022).

4.5.16 Performance of National Housing Corporation Projects in Kenya

The study also analyzed the views of respondents on performance of National Housing Corporation Projects in Kenya.

4.5.17 Descriptive Statistics for Performance of National Housing Corporation Projects in Kenya

The study also examined the opinion of respondents on performance of National Housing Corporation Projects The results of analysis are presented in Table 4.23. In the study Disclosure and reporting was measured by use of sentiments which the respondents asserted their level of agreement on the basis of Likert scale 1-5 four spaces 1-2-3-4-5 middle 4/5=0.8 The scale was such that 1+0.8=1.8 Disagree 1.8 +0.8=2.6 Disagree 2.6+0.8= 3.4 Neutral 3.4+0.8=4.2 Agree 4.2+0.8= 5.0Agree .The results are tabulated below in table 4.23.

Table 4.23: Descriptive Statistics for Performance of National Housing Corporation Projects in Kenya

Statement	Mean	SD
Project completed was aligned with stated requirements	3.17	1.207
Beneficiaries of the project were satisfied	3.05	1.349
Aspects of micro economy affected the number of projects completed	3.10	1.281
Was the value for money realized in the project	3.11	1.241
The current trends and changes in technologies affect the project deliverables to be attained	3.15	1.231

The study in Table 4.23 found out that the respondents were undecided on whether all the projects completed were aligned with the stated requirements or not (mean = 3.17; SD = 1.207).. The respondents were undecided on whether the beneficiaries of the project or not (mean = 3.05; SD = 1.349).The study results reveals that the respondents were undecided on whether aspects of micro economy affect the number of projects completed (mean = 3.10; SD = 1.281). The study determined that the respondents were undecided on whether the value for money was realized or not (mean = 3.11; SD = 1.241).The study determined that the respondents were undecided on whether the time to be taken by each activity is estimated during the

planning process to ascertain the required timeframe for every task or not (mean = 3.159; SD = 1.241).

It was noted that most of the sentiments by the respondents were neutral and they seems that they were not ready to disclose more information concerning the status of the performance of the housing projects being a government entity the disclosure of information to the public is very difficult because of different procurement and contract agreements which have been put in place this results are in agreement with study findings of Martine and Chelule, (2018) reported that different projects undertaken by government are substandard and only the contractor reap heavily from the shady work they do and most people are not pleased with the quality of work done, despite of training of consultants in the construction industry they do not meet the specified criteria of performance. The results are supplemented by Gitau & Sang, (2022) they noted that performance measure is important in assessment of improvement of organizations as well as determining whether or not it is achieving its stated project goals.

4.5.18 Document Analysis forPerfomance

Table 4.24: Quality Management Plan

Document	Available	Frequency	Percent
Quality management plan	Available	23	92
	Not availables	3	8
Total		25	100.0

It was found out in Table 4.24 that 25 (92%) agreed that quality management plan is used to ascertain the quality metrix required in each project type being inicieted and 3(8%) noted that quality management plan is not available this concurs with (Abdilahi et al, 2020, Gitau & Sang 2020) who noted that dispite most projects managers having quality management plans in their organizations they are not strictly follow and adhered to, this end up to a lot of projects delivered with lack of quality stardards and ruine the customer satisfaction.

4.5.19 Document Analysis for Project Quality

Table 4.25: Project Quality

Document	Frequency	Percent
Good quality	20	80
Poor quality	5	20
Total	25	100.0

The findings show that 20 (80%) agreed that the project were delivered within quality stardards laid down. However 5 (20%) laments that the project were of poor and high lights potential concerns as poor workmanship,inadequate construction materials, alteration of project scope, poor construction policies and political interfeance.To enhance this disparites there is need to enhance quality through enhanced quality control, stakeholder engagement and strict adherence to buiiding and construction code of conduct that can improve performance outcomes of projects(Desmon, 2022).

4.5.20 Document Analysis on Stakeholder Satisfaction

Table 4.26: Sakeholders Satisfaction

Document	Frequency	Percent
Satisfied	23	92
Unsatisfied	2	8
Total	**188**	**100.0**

It was found out in Table 4.26 that 23 (92%) were satisfied and pleased with housing construction projects undertaken by National Housing Corporation Projects in Kenya and 2 (8%) were not satisfied and pleased by the completed housing projects and futher they asserted that they were not satitisfied because the houses were poorly designed, delayed completion and poor quality of workmanship. This conforms with Ahemed et al., (2019) findings which indicate that despite most projects being completed and meeting the quality stardards they exist some projects

delivered which does not meet the customer satisfaction because they are not well managed from inception to completion. mile stone

4.5.21 Cronbach Alpha Summary

From the study to test the reliability of the scale, Cronbach Alpha was calculated with the aid of SPSS software. The coefficient range between 0 and 1, with a high value indicate a high level of consistence among the item though the value of alpha is influenced by the number of items in a scale. It increases as the number of items increases. Further with the use of SPSS to calculate Cronbach alpha it is possible to see whether removing any of the items individually will its value. Thus indicating which of the items are unrealistic if any. Once the set of items which each variable meet the Cronbach alpha threshold, they we aggregated using average to give composte variable. This is summarized in the table 4.27 below.

Table 4.27: Cronbach Alpha Aggregate Statistics

S/N	Variable	No of Items	Cronbach Alpha	Mean	Std Dev
1.	Project Scope Management (x_1)	6	.817	3.14	1.206
2.	Project Time Management (X_2)	5	.819	3.018	1.12
3.	Project Cost management (X_3)	7	.778	2.84	1.217
4.	Project Disclosure and Reporting (X_4)	4	.737	2.83	1.218
5.	Community Participation (X_5)	5	.750	2.808	1.1948

4.6 Diagnostic Test

Regression analysis was used to investigate the influence of project integration management on performance of National Housing Cooperation Projects in Kenya. For regression analysis to be performed data must meet the assumption of normality,

Multicollinearity, Autocorrelation, Heteroscdacity and Linearity. The satisfaction of regression analysis leads to unbiased estimates and hence the results are combatively and fairy closes to the truth. Diagnostic tests were used to measure assumptions (Jenkins et al., 2017).

4.6.1 Normality

From the descriptive analysis, normality for independent variables was conducted .For inferential analysis to be done such as correlation ,regression or related, the independent variable should have a normal distribution .In case the independent variable is not normally distributed, then normality had to be sought before proceeding with any analysis (Hall, 2015).Kothari (2013) suggested that both graphical plots and any statistical tests (Shapiro-Wilk or Kolgomogrov-Smirnov test) can be used to assess the actual degree of departure from normality .To indentify the shape of the distribution graphical plots were used as presented in figure 4.1. .

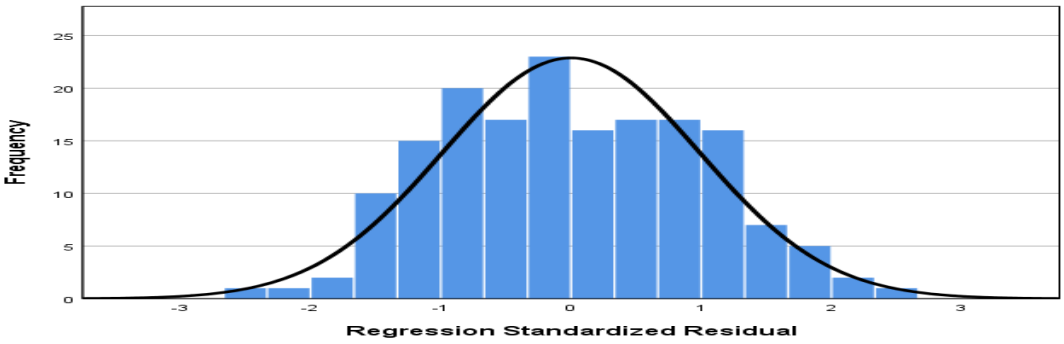

Figure 4.1: Histogram of Regression Standardized Residual

The findings presented in figure 4.1 show that the histogram of regression standardized residual depicts an approximately normal curve. This implies that the assumption of normality was met (Hayes, 2018).

The normal P-P plot was also used to test for normality. The results are shown in Figure 4.2.

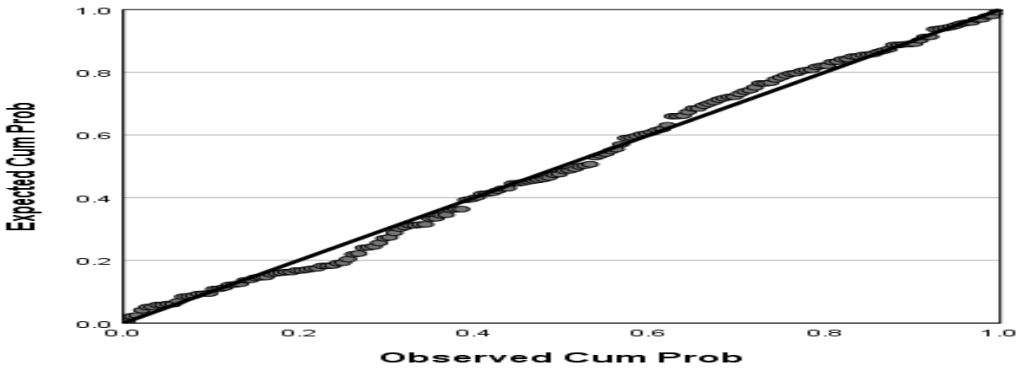

Figure 4.2: Normal P-P Plot of Regression Standardized Residual

The findings from figure 4.2 shows that the plot of regression standardized residuals is approximately along the straight line in the normal P-P plot in Figure 4.2. This implies that the assumption of normality was met (Creswell, 2014).

4.6.2 Linearity Test

The researcher also assessed whether the assumption of linearity and homoscedasticity was met using residual plots as shown in Figure 4.3.

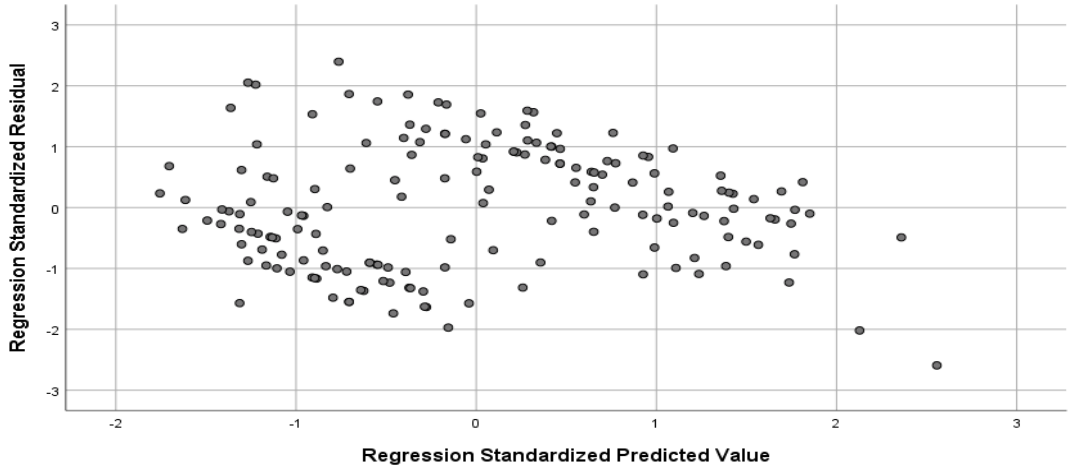

Figure 4.3: Residual Plots of Regression Standardized Predicted Value against the Regression Standardized Residual

The findings from figure 4.3 indicate that the residuals are clustered around zero from the left to the right across various values of the predicted value. This implies that the linearity assumption was met.

4.6.3 Hetroscedacity Test

Hetroscedacity test is important when interpreting and gathering information for empirical evidence over a certain phenomeneon.Heteroscedacity occurs when the variance of the error of dependant variable are not the same across data.Heterocedacity was conducted using residual plots as shown in figure 4.3 above. The residual plots are approximately cloudy with no pattern implying that the assumption of homoscedasticity was met (Hall, 2015)

4.6.4 Mulicollenearity

Multicollenearity test was crucial in identifying whethere the study predictor variable correlates with each other.Multicollinearity is a problem with correlation matrix that occurs when variables are too highly correlated Hai-jew, (2015).It implies that one variable can be predicted linearly using the other variables with high levels of accuracy. Strong correlation between the predictor variables is not desired because it increases error in the coefficient. Kothari,(2013) defines VIF as an index of amount that the variance of each regression coefficient is increased to a situation in which in all of the predictor variables are uncorrelated and suggested that VIFs of 10 or more to be the rule of the thumb for conducting VIF.Mugenda and Mugenda, (2009) noted that if two or more variables have Inflation Factor of 5 or greater than 5 ,one of them must be removed from the regression as this indicates presence of multicollinearity.Variable Inflation Factor (VIF) was applied in assessing multicollinearity in the model. The results are shown in Table 4.28.

Table. 4.28: Multicollinearity Test

Variables	Tolerance	VIF
Project scope management	.778	1.290
Project time management	.782	1.279
Project cost management	.343	2.915
Disclosure and reporting	.355	2.816

The findings presented in Table 4.28 indicate that project scope management had a VIF of 1.290 and tolerance of 0.778. Project time management had a VIF of 1.279 and tolerance of 0.782. Project cost management had a VIF of 2.915 and tolerance of 0.343. Disclosure and reporting had a VIF of 2.818 and tolerance of 0.355. The findings imply that there was no serious multicollinearity problems as all independent variables had tolerance greater than 0.2 and VIF less than 5, hence all independent variables were included in the multiple regression model (Creswell, 2014).

4.6.5 Autocolleration

Autocolleration was checked using Durbin-Watson test. The null hypothesis for the Durbin-Watson d tests is the residual aren't linearly auto collated .The d value ranges from 0 and 4,if the values is found to be within 2 then it implies absence of autocolleration. Values below 1 and 3 are caused for concern and may render our analysis invalid. If the d values are; 1.5< d< 2.5 it implies absence of autocolleration the study also ascertained whether there was autocorrelation among residuals. The results are depicted in Table 4.29.

Table 4.29: Durbin-Watson Statistic

R	R Square	R Square Change	F Change	df1	df2	Sig. F Change	Durbin-Watson
.614	.377	.377	24.936	4	165	.000	1.582

As illustrated in Table 4.29 shows that the Durbin- Wartson statistic was 1.582. This implies that the assumption of independence was met as the value is within the acceptable range of 1.5 to 2.5 (Garson, 2012).

4.7 Inferential Results

The relationship between variables was determined in this study by computing inferential statistics.Inferential statistics help determine the relationship between

variables of the study and it helps determine the type of association and the level of siginificance of the association

4.7.1 Correlation Analysis of the Study Variables

Kothari (2012) asserts that the correlation coefficient enables the researcher to quantify the strength of the linear relationship between two or more variables. Correlation is a measure of the degree of relationship among variables (Zikmund, 2010). Several measures of correlation are available, and the selection of each depends mostly on the level of data being analyzed. For ordinal level or ranked data, Spearman's rank correlation can be used to analyze the degree of association between two continuous variables. Pearson's product–moment correlation coefficient (r) requires at least an interval level of measurement for data. The correlation coefficient provides a numerical summary of the direction and strength of the linear relationship between two variables. Pearson's correlation coefficient (r) ranges from −1 to +1, where the sign indicates whether there is a positive or negative correlation. The absolute value provides information on the strength of the relationship, where a value of +1 represents a perfect positive correlation and a value of −1 represents a perfect negative correlation (Sekaran, 2010).

The researcher sought to determine the coefficient of correlation by establishing the strength of the relationship between the independent variables and the dependent variable. The larger the correlation value, the stronger the association between the two variables. In this study, the components of project integration management were the independent variables, namely project scope management, project time management, project cost management, and disclosure and reporting, with one moderating variable. The study presented the results in Table 4.30..

Table. 4.30: Correlation Analysis Results of Study Variables

		PP	PP	PTM	PCM	PDR
Project performance (PP)	Pearson Correlation	1				
	Sig. (2-tailed)					
	N	170				
Project scope management (PP)	Pearson Correlation	.395**	1			
	Sig. (2-tailed)	.000				
	N	170	170			
Project time management (PTM)	Pearson Correlation	.443**	.246**	1		
	Sig. (2-tailed)	.000	.001			
	N	170	170	170		
Project cost management(PCM)	Pearson Correlation	.362**	.116	.074	1	
	Sig. (2-tailed)	.000	.131	.336		
	N	170	170	170	170	
Project disclosure and reporting (PDR)	Pearson Correlation	.204**	.049	.080	.389**	1
	Sig. (2-tailed)	.008	.528	.300	.000	
	N	170	170	170	170	

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

According to the results presented in Table 30, it was observed that the relationships between the variables were all significant ($p < 0.05$). The study results also showed that there was no significant relationship among the independent variables, indicating the absence of multicollinearity among the study variables. Moreover, the study found a weak positive and significant relationship between project scope management and the performance of National Housing Corporation projects in Kenya ($r = 0.395$; $p < 0.05$). This implies that improved project scope management is associated with enhanced performance of National Housing Corporation projects in Kenya, and vice versa. This further suggests that effective project scope management has a significant influence on project performance.

These findings are consistent with Hassan and Adeleke (2019), who established that project scope management enhances project performance and ensures that projects are delivered within the stipulated timeframe and allocated budget. Proper planning of scope management prevents design alterations and reduces the likelihood of scope creep. Similarly, Elizabeth (2020) established that when project scope management is properly planned and effectively implemented, it leads to improved project performance and successful project outcomes.

For project time management, the study found a weak positive but insignificant relationship between project time management and the performance of National Housing Corporation projects in Kenya ($r = 0.443$; $p > 0.05$). This implies that increased project time management is associated with improved performance of National Housing Corporation projects in Kenya, although the relationship is not statistically significant. These findings agree with Kweyu (2018), who established that effective time management is associated with improved project performance, noting that time is a critical resource and proper time estimation techniques enable projects to be completed within planned timelines. Similarly, Mwangi (2018) found that delays in construction projects are often caused by local construction industry factors and project characteristics, and such delays lead to late project delivery, increased costs, and sometimes legal disputes. The author further explained that proper planning tools and accurate time estimates enhance timely project completion and improve overall project performance.

It was found that there is a weak positive and insignificant relationship between project cost management and the performance of National Housing Corporation projects in Kenya ($r = 0.362$; $p > 0.05$). This implies that increased project cost management is associated with enhanced performance of National Housing Corporation projects in Kenya, and vice versa. These current results support the findings of Elizabeth (2020), who established that project cost management enhances project performance. The author further revealed that proper cost estimation methods, openness in financial budgeting, and the involvement of all project stakeholders enhance project performance.

Similarly, Kiarie and Wanyoike (2016) pointed out that cost planning enhances project performance and recommended that late payments should be avoided. The authors further noted that the project manager should be aware of project phases, stages, and payment schedules to contractors in order to avoid unnecessary delays and failure in project performance. The authors concluded that cost plays an important role in project performance because, without proper cost planning, projects cannot be completed according to planned specifications. Similar findings were reported by Mwangi (2018), who associated enhanced cost management abilities with better cost planning and financial control, which are necessary for projects to be completed within the planned budget.

Project financial management skills are important in estimating capital requirements, determining capital composition, selecting sources of funds, and managing financial resources within housing projects. Similar findings were reported by Gitau and Sang (2022), who also established a significant positive relationship between project cost management and project performance. The authors noted that poor financial practices, such as buying on credit and lack of expenditure control, may lead to unplanned financial commitments and reduce potential investment in long-term projects such as housing.

It was also found that there is a weak positive and significant relationship between disclosure and reporting and the performance of National Housing Corporation projects in Kenya ($r = 0.204$; $p < 0.05$). This implies that increased disclosure and reporting are associated with enhanced performance of National Housing Corporation projects in Kenya, and vice versa. These current findings agree with Othman et al. (2017), who established that disclosure and reporting enhance project performance. The authors further stated that board meetings should be used to share relevant project information rather than withholding it, as this ensures access to current information and enhances project performance. Similarly, Williams et al. (2019) suggested that there is a need to disclose all project-related information to stakeholders. The authors further pointed out that information bias may delay project completion and recommended that project managers in the construction industry should ensure full disclosure of information to enhance project performance..

4.7.2 Linear Regression Analysis

Regression analysis is a set of statistical technique that allows asses the relationship between one independent variables and dependant variable. Regression is often used when the intent of analysis is predictor. The goal of regression coefficient (B values), for the independent variables that bring the y values predicted from the equation as close as possible to: “y’ values obtained by measurement. The regression coefficient that is computed minimizes the sum of squared deviation between predicted and obtained y values for the data Kothari, (2012).

Hall, (2015) notes that, though multiple regression technique is used to assess the impact of a set of predictors on it dependant variables, unfortunately, multiple regression is not suitable when you have categorical dependant variables. In such cases logistical regression allows test of model to predict categorical outcomes with two or more categories. The independent variable can be either categorical or conteneous or mix of both in the model.Multiple regressions were fitted to the data in order to investigate the influence of project integration management on performance of National Housing Corporation Projects in Kenya. The study conducted regression analysis with and without the moderator in order to examine the moderating effect of community participation on the relationship between project integration management and performance of National Housing Corporation Projects in Kenya.A simple regression analysis was performed in order to analyse the influence of project intergration management on performance of National Housing Corporation projects in Kenya.

To investigate the correlation between the factors, a multiple linear regression analysis was performed.The data for multiple regression entered,the findings were coded and the results were calculated with the help of Statistical Package for Social Sciences (SPSS) application, on the results of National Housing Corporation projects which serves as dependent variable. The analyzed combined effect of project scope management, project time management, project cost management and disclosure and reporting on performance of National Housing Corporation Projects in Kenya wase presented in Table 4.31.

Table 4.31: Regression Model-Summary Statistics

R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
				R Square Change	F Change	df1	df2	Sig. F Change
.614	.377	.358	.82273	.377	19.835	5	164	.000

a. Predictors: (Constant), Disclosure and reporting, Project scope management, Project time management, Project cost management, community participation

b Dependant Variable;Performance of National Housing Corporation Projects

Table 4.32: Regression Model-ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
l	Regression	7.256	4	1.814	9.725	.000b
	Residual	17.161	92	.187		
	Total	24.418	96			

	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	1.646	.464		3.549	.001
Project scope management	.347	.100	.333	3.470	.001
Project time management	.129	.098	167	1.481	.779
Project cost management	.123	.086	.155	1.430	.156
Disclosure and reporting	.182	.079	.234	2.295	.024

a. Dependent Variable: Performance of National Housing Corporation Projects in Kenya

b. Predictors: (Constant), Disclosure and reporting, Project scope management, Project time management, Project cost management Regression coefficient of the overall model are as shown in table

An overall regression model was carried out to determine the combined effect of the relationship between project integration management and the performance of National Housing Corporation projects in Kenya. The model summary shown in Table 4.32 was used to explain the extent to which changes in the dependent variable can be explained by changes in the independent variables. The regression analysis model highlighted major aspects of the relationship. Multiple regression analysis from the model summary showed an R-square of 0.377, revealing that 37.7% of the variation in the performance of National Housing Corporation projects can be explained by project scope management, project time management, project cost management, and project disclosure and reporting. The remaining 62.3% of project performance variation was explained by other factors not included in the model.

The standard error of estimate of 0.82273 achieved reflects the average distance between the observed values and the regression line. This shows that the model was accurate in its prediction since the value was less than 1, which implies less variation within the Likert scale used in the study. The R-square obtained of 37.7% still indicates a real relationship between the significant predictors and the response variable. In addition, a low R-square value can still represent a good model because some fields have a greater amount of unexplained variation (Kothari, 2013).

The current study findings support the findings of Yakubu (2023) and Kieti (2020), who studied various performance indicators, including project cost, project time, and project scope, and established that these indicators are important contributors to project performance. The authors further established a significant relationship between these indicators and project performance. Similarly, Mugo and Moronge (2018) found that project cost management, project scope management, project time management, and project disclosure and reporting are collectively critical elements contributing to project performance.

To determine whether the model was significant and a good fit for the data, the study used analysis of variance (ANOVA), as illustrated in Table 4.37. The overall ANOVA results indicated that the model was significant ($F = 9.725$; $p < 0.05$), showing that the overall model was significant and that project scope management, project time

management, project cost management, and disclosure and reporting jointly affected the performance of National Housing Corporation projects in Kenya. Moreover, the study found that the regression model was significant, as shown by p = 0.000, which is less than 0.05. This further indicates that the regression model provides a good fit for the data and that the calculated F value was appropriate for estimating population parameters. The findings also indicate that there is a statistically significant relationship between project integration management and the performance of National Housing Corporation projects in Kenya ($F = 9.725$; $p < 0.05$), implying that project integration management significantly determines project performance.

4.7.2 Hypothesis Testing Results

Research hypothesis were based on the findings from the table of coefficients obtained from the multiple regression analysis as presented in Table 4.32 above. The values of t-statistics at 0.5 significant level was used with $p < 0.05$). Indicating statistical significance. The study also conducted the t-test to ascertain the statistical significance of the regression coefficient of each independent variable without moderation.

Project Scope Management and Performance of National Housing Corporation Projects

The study sought a simple linear relationship between project scope management and performance of National Housing Corporation Projects in Kenya,by assessing the relationship between project scope managenment and performance factors.The researcher tested the following hypothesis

H_{01} *There is no significant relationship between project scope management and performance of National Housing Corporation Projects in Kenya*

Based on the results presented in Table 4.32, the value of ($t = 3.470$; $p < 0.05$) indicates a positive and significant effect of project scope management on the performance of National Housing Corporation projects in Kenya. The study further obtained a beta coefficient of 0.347 for project scope management. This implies that

a one-unit increase in project scope management enhances the performance of National Housing Corporation projects in Kenya by 0.347 units. These results indicate that project scope management significantly influences the performance of National Housing Corporation projects in Kenya.

These results agree with the findings of Mohammed and Nyangau (2020), who established that proper planning of scope management in projects enhances project performance. The findings also supplement those of Hassan and Adeleke (2019), whose study revealed that proper scope planning involves determining and documenting specific project goals, tasks, costs, and deadlines. The authors further noted that when project scope is altered without proper control, project performance is negatively affected. Therefore, effective project scope management planning should be emphasized to ensure projects are completed within the planned timelines and assigned budget.

This study further agrees with the findings of Kibugi and Muchelule (2021), who examined the determinants of Financial Integrated Management Systems and found that many government projects are characterized by political interference in the identification and definition of project scope. The researchers recommended that project managers should exercise firm supervision, particularly in managing project scope, because failure to properly control scope may lead to poor project performance and failure to achieve intended objectives. Based on these findings, the null hypothesis that there is no significant relationship between project scope management and the performance of National Housing Corporation projects in Kenya was rejected. It was therefore concluded that there is a significant relationship between project scope management and project performance.

Project Time Management and Performance of National Housing Corporation Projects

The study sought a simple linear relationship between project time management and performance of National Housing Corporation Projects in Kenya, by assessing the relationship between project time managenment and performance factors.The researcher tested the following hypothesis

H_{02} *There is no significant relationship between project time management and performance of National Housing Corporation Projects in Kenya*.

The value ($t = 1.481$; $p > 0.05$) indicates that project time management does not significantly predict the performance of National Housing Corporation projects in Kenya. The study further obtained a beta coefficient of 0.129, implying that a one-unit increase in project time management leads to a 0.129-unit increase in project performance, with other variables held constant. However, since the relationship was not statistically significant, project time management did not have a significant effect on the performance of National Housing Corporation projects in Kenya. Therefore, the null hypothesis that there is no significant relationship between project time management and performance was not rejected. It was concluded that project time management has no significant influence on project performance.

These findings conform with the study by Kanyaru and Musembi (2021), who found that project time had an effect on project management in projects implemented by non-governmental organizations in Nairobi County. The findings also supplement those of Chenge et al. (2020), who noted that the construction industry has a poor reputation for coping with delays, which frustrates intended project beneficiaries. The author explained that delay analysis is often ignored or subjectively handled by simply adding contingency time, resulting in many projects failing to meet scheduled deadlines. In the construction industry, effective time management is critical because delays can result from factors such as machine breakdowns, technological changes, political interference, inflation, government policy changes, and conflicts, all of which contribute to project delays.

However, these findings disagree with Kavitu et al. (2018), who studied the causes of construction project overruns and found that time overruns are mainly caused by incomplete drawings, design changes, slow client decision-making, late instructions, and shortages of skilled manpower. The current study findings could be attributed to characteristics of the study population or external factors that may have influenced the relationship between project time management and project performance. This

suggests the need for further research to provide more insight into the relationship between project time management and project performance.

Project Cost Management and Performance of National Housing Corporation Projects

The study sought a simple linear relationship between project cost management and performance of National Housing Corporation Projects in Kenya, by assessing the relationship between project cost managenment and performance factors.The researcher tested the following hypothesis

H_{03} *There is no significant relationship between project cost management and performance of National Housing Corporation Projects in Kenya* .The study obtained ($t = 1.430$; $p > 0.05$).

This implies a statistical significant effect of project cost management on performance of National Housing Corporation Projects in Kenya. Further a beta 0.123 was obtained. This implies 1 unit increase project cost management results to 0.123 increases in performance with other variables held constant therefore the null hypothesis that there is no significant relationship between project cost management and performance of National Housing Corporation Programs in Kenya was t rejected. It was concluded that there is significant relationship between project cost management and performance of National Housing Corporation Projects in Kenya

.This results agrees with the findings of Matheka and Mugai (2024) that financial cost management affects the performance of project positively. The study supplements the findings of Mugo & Moronge, (2018) that planning of financial cost management and involving the stakeholders promotes performance of a project. It was explained that cost management ensures proper utilization of funds to ensure cost of the project does not vary. It also ensure that the funds were disbursed without delays hence avoiding the cost overruns and delays of implementation of the project.Hirpa, (2022) points out that sufficient funding of the project is one of the basic conditions for smooth project activity operations without stoppage and unnecessary disruption.

Project Disclosure and Reporting and Performance of National Housing Corporation Projects

The study sought a simple linear relationship between project disclosure and reporting and performance of National Housing Corporation Projects in Kenya, by assessing the relationship between project disclosure and reporting and performance factors.The researcher tested the following hypothesis.

H_{04} *There is no significant relationship between disclosure and reporting and performance of National Housing Corporation Projects in Kenya* .

The study obtained a value of ($t = 2.295$; $p < 0.05$), indicating that disclosure and reporting significantly predict the performance of National Housing Corporation projects in Kenya. A beta coefficient of 0.182 was obtained, implying that a one-unit increase in disclosure and reporting results in a 0.182-unit increase in the performance of National Housing Corporation projects in Kenya, with other variables held constant. Therefore, the null hypothesis that there is no significant relationship between disclosure and reporting and project performance was rejected. It was concluded that disclosure and reporting have a significant influence on the performance of National Housing Corporation projects in Kenya.

These results are consistent with the findings of Pinyarat et al. (2018), who established that project disclosure and reporting positively affect project performance. Their study revealed that proper disclosure of information and timely reporting through appropriate communication channels help avoid delays in project activities. Similarly, Williams et al. (2019) found evidence that inadequate disclosure and reporting contributed to poor project performance, particularly in projects implemented through Private Finance Initiatives in the UK. The study noted that failure to adequately disclose information before and during project implementation contributed to inefficiencies and reduced project success.

Further, Gitau and Sang (2020) established that early communication of information to the project team ensures that all members are aligned with project objectives and activities. The study also revealed that proper planning of communication and

reporting channels ensures that projects remain on track and can be easily monitored. This enhances transparency and ensures that project team members are aware of ongoing and upcoming activities, which contributes significantly to improved project performance. The results of the t-test of individual regression coefficients further showed that project scope management, project time management, project cost management, disclosure and reporting, and the constant term were included in the regression equation as significant predictors ($p < 0.05$).

The model equation further revealed that holding project scope management, project time management, project cost management, and disclosure and reporting constant at zero, the performance of National Housing Corporation projects would be at a constant value of 1.646. The regression function shown in Equation (i) was used to explain the results of the multiple regression analysis and to demonstrate the relationship between the independent variables and project performance..

$$\mathbf{Y = 1.646 + 0.347X_1 + 0.129X_2 + 0.123\ 0x_3 + 0.182X_4} \quad \textbf{(i)}$$

Y=Performance of National Housing Corporation Projects

$\mathbf{X_1}$=Project Scope

$\mathbf{X_2}$=Project Time

$\mathbf{X_3}$=Project Cost

$\mathbf{X_4}$=Disclosure and Reporting

4.8 Moderated Multiple Regression Analysis

A moderator variable donates M, as a third variable that affects the strength of relationship between the dependent variable (Y) and the independent variable (X).According to Hayes (2018), the strength and form of relationshisp between two variables may depend on the value of moderating variable. A moderator is a variable that modifies the form or strength of the relationship between an independent and dependent variables. In correlation studies, the moderating variable is defined as a

third variable donated by M, which affects the correlation between two variables X and Y. Kothari, (2012) noted that a statistically significant moderating variable can amplify or weaken the correlation between X and Y.The moderating variable is technically another predictor variable and therefore multiple regression analysis is run to determine the effect of the variable.

Table 4.33: Significance of the Overall Moderating Effect of Community participation

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.545a	.297	.267	.43190	.397	9.725	4	92	.000
2	.704b	.465	.307	.2986	.681	2.338	3	88	.061

a. Predictors: (Constant), Disclosure and reporting, Project scope management, Project time management, Project cost management, community participation

b. Predictors: (Constant), Disclosure and reporting, Project scope management, Project time management, Project cost management, community participation, X^2* community participation, X^1* community participation, X^4* community participation, X^3* community participation

c. Dependent Variable: Performance of National Housing Corporation Projects in Kenya

In model 1 the findings in Tablet 4.33 show that the value of R square was 0.397 before the introduction of moderating variable community participation.Findings in Model 2, indicate that after moderation R square increase to 0.681 suggesting that the 68.1% variation in performance of National Housing Corporation projects can be explained by in change in moderated project scope management, project time management, project cost management and disclosure and reporting and performance of National Housing Corporation projects in Kenya.The remaining percentage donates other factors that were not part of the the model.From the finding the

moderated variable was strongly and positively related to performance of National Housing Corporation projects in Kenya as indicated by R square =0.681 which is correlated coefficient (R) demonstrates the relationship strength between variables.From the findings adjusted (R) square increased when moderating variable community participation was included it increased from 0.397 to 0.681.The introduction of moderating variable increase amount of variation in performance of National Housing Corporation projects that can be explained by variables.

Similarly Abdilahi et al., (2020) noted that community participation in projects plays an important role in implimentation of housing construction project and if their views and intrest are not considered projects will fail to meet the expectations of key stakeholders such as customer satisfaction.

Table 4.34: Moderated Beta Coefficients

	Unstandardized Coefficients		**Standardized Coefficients**	**T**	**Sig.**
	B	**Std. Error**	**Beta**		
(Constant)	-1.268	1.363		-.930	.354
Project scope management	.978	.260	.796	3.755	.000
Project time management	.669	.295	.473	2.264	.025
Project cost management	.675	.281	.553	2.402	.017
Project disclosure and reporting	-.958	.264	-.862	-3.634	.000
Community participation	.278	.463	.241	.601	.549
X_1* community participation	-.222	.083	-.841	-2.678	.008
X_2* community participation	-.097	.102	-.348	-.956	.340
X_3* community participation	-.116	.091	-.502	-1.286	.200
X_4* community participation	.355	.083	1.830	4.282	.000

The moderated hypothesis results was community participation doesnot influence the performance of national housing coporation project in Kenya. As shown project scope management community participation has a siginificant influence on performance of National Housing Coporation projects in Kenya β=0.978 p=0.000. The influence was significant since the p-value was less than selected level of siginificant (0.005).Therefore the study rejected the null hypothesis H05community participation have no siginificant moderating effect on the relationship between project scope management and performance of National Housing Corporation projects in Kenya.The findings shows that project time management siginificantlly influence performance of National housing Coporation projects in kenya β=0.958 p=0.25. the study rejected the null hypothesis **H_{05}** Community participation have a siginificant moderating effect on the relationship between project time management and performance of National Housing Coporation projects in kenya.

Project cost management Community participation was seen to have a positive influence on performance of National Housing Corporation Projects in Kenya. β=0.675 p=0.17 was less than the selected level of siginificance(0.05) .The study thus rejected the null hypothesis **H_{05}** community participation have a siginificant moderating effect on the relationship between project cost management and performance of National Housing Corporation projects in Kenya.The findings are in agreement with Mahamed and Nyangau, (2020) who asserts that community participation from inception to completion of a project enable them to air their varing griverences concerning the project under construction which at times reduces resistancnce to the project and enable scope changes control.

Lastly, the findings from the study indicates that disclosure and reporting Community participation positively and siginificantlly influence performance of National Housing Corporation projects in Kenya β=0.958 p=0.000.The p-value obtained 000 was less than the selected level of siginificance.The study therefore rejectected the null hypothesis **H_{05}** disclosure and reporting have no siginificance moderating effect on the relationship between project disclosure and reporting and performance of National Housing Corporation Projects in Kenya.Astudy by

(Chileshe at el., 2020) found a siginificant and positive relationship between the moderating effect of community participation and performace of projects.

From the table 4.50 shows the estimated moderating multiple regression model is given as

$$Y=1.268+0.978\ X_1+0.698X_2+0.675X_3 3+0.958X_4 \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\text{(ii)}$$

Multiple regression analysis was done to determine the joint regression after moderation.The results by equation (ii) of regression of coefficients results after moderation shows that the interaction between the independent variables and the moderating variables (community participation) siginificantlly influences the performance of National Housing Corporation projects in Kenya.The regression coefficients reveals that the relative impact of different aspects of project intergration management X_1 has a positive but modest effect on performance, showing that a well defined and planed scope enable the project from running into scope creep (Chepngeno & Kwasira, 2020).

X_2 Project time management indicate that a well project excuted well by utilizing all project time estimates and scheduling tools outomaticall will achieve the predefined objective and eventually performance stardards will be realized. X_3 project cost management contributes postivelly to performace of National Housing Corporation projects in Kenya. By utilizing the use of proper finaciancial planning tools and cost monitoring in projects prevents project from running into cost overrun Matheka & Mugai, (2024).

X_4 Project disclosure and reporting carries the highest beta coefficients,it indicates and emphasisess the critical role playd bye disclosre and reporting of information among project managers and project teams because if the project teams have information at all project cycle phases. The moderation effect of community participation pose important highlight on the importance of performance projects in National Housing Corporation projects.The results reveals that community participation siginificantly influences the relationship between project intergtagration management on performance of National Housing Corporation projects in Kenya.

4.8.1 Summary of Hypothesis Tested

Table 4.35: Hypothesis Testing Summary

Hypothesis	Results	Findings
H_{01}Project scope management has no significant influence on performance of National Housing Corporation projects in Kenya	P=0.347< 0.05 H_{01}Accepted	Project scope management significantly influence performance of National Housing Corporation Projects
H_{02}Project time management has no significant influence on Performance of National Housing Corporation projects	P=0.129>0.05 H_{02} Accept	Project time management insignificant influence Performance of National Housing Corporation Project in Kenya
H_{03}Project cost management has no significant influence on performance of National Housing Corporation project in Kenya.	P=0.123< 0.05 H_{03} Accepted	Project cost management significantly influence performance of national Corporation Programs in Kenya
H_{04}Disclosure and reporting has no significant influence on performance of National Housing Corporation project in Kenya	P=0.182 <0.05 Accepted	Disclosure and Reporting significantly influence performance of National Housing Corporation Programs in Kenya

4.8.2 Optimal model

The summary of the optimal model constrasts the findings before and after moderation by the community participation in Table 4.36:

Table 4.36: Moderated Beta Coefficients

Model	Before Moderation Beta	P-values	After Moderation Beta	T	Sig (P-value)
(Constant)			0.8		.000
Project Scope Management	.347		.978		
Project Time Management	.234		.669		.025
Project Cost Management	.123		.675		.017
Project Disclosure & Reporting	.182		.958		.000
R-Square	**0.397**		**0.681**		

Beta coefficients before moderation indicates the direct impact of project intergration management on performance of National Housing Corporation Projects in Kenya,with project scope management β=0.347, project time management β=0.234, project cost management β=0.123 and disclosure and reporting β=0.182.All the variables shows statistically siginificant contribution (p=0.05) R-square 0.397 suggests that these predictors collectively explain 39.7% of the variation in project performance.

After introduction of community participation as a moderator the results shows adjusted beta coefficients reflecting the interaction effect of the moderator community participation, project scope management, project time management, project cost management, project disclosure management remain siginificant. The R-square value improves to 0.681 indicating that the moderated model explains 68.1%

of the variation in project performance in National Housing Corporation.This indicates the role of community participation in enhancing the explanatory power of the model and effectiveness of project intergration management.

A model optimization was carred out as presentented in figure 4.4.The purpose of the model was to serve as a guide in the process of deriving the final model.All the siginificant variables were included as illustrated in figure 4.4

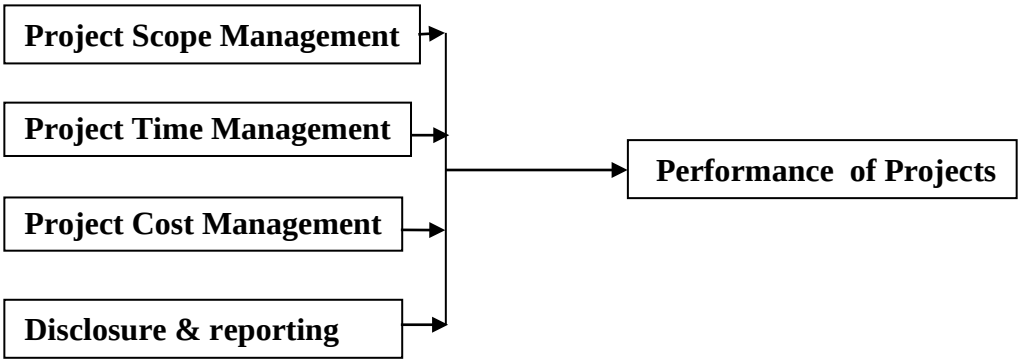

Figure 4.4: Linkages of Variable for Projects Scope,Project Time, Project Cost, Project Disclosure and Reporting and Performance of National Housing Corporation Project

4.9 Discussions of Results

The relationship between project intergration management on performance of National Housing Corporation projects indicates that project project intergration management practices are siginificantlly correlated with project performance if they met quality stardards,satisfied the customer and if they have a good number ou successful projects deliverd.The correlation analysis results presented in the study indicatrs that community participation is linked to performance of National Housing Corporation Projects in Kenya.The results of moderation analys illustrates that community participation moderates the relationship between project intergration management and performance of National Housing Corporation projects in Kenya

4.9.1 Project Scope Management and Performance of National Housing Corporation Projects

The first objective was to assess the relationship between project scope management and the performance of National Housing Corporation projects in Kenya. The findings of the study indicated that respondents were undecided on whether scope planning was conducted before project initiation. There was also indecisiveness on whether project scope control was a key issue in project implementation. Furthermore, respondents were undecided on whether the work breakdown structure was used to plan project activities. It was noted that some respondents disagreed that all projects delivered were within the stipulated scope, while others remained undecided. The study also found indecisiveness regarding whether the collection of project requirements was mandatory before project execution. Additionally, respondents were unsure whether the validation of project scope deliverables was compared against the scope baseline to confirm that the project teams had delivered according to the planned documents.

These findings concur with studies by Lattif et al. (2020) and Mosha (2018), who reported that most employees in government organizations do not disclose information to outsiders or the public. On many occasions, they fail to collaborate fully due to fear of reporting the exact situation, often as a way to protect their jobs. The study revealed that respondents were non-committal and not ready to provide full information. This reluctance to disclose details may influence project implementation and outcomes, as critical information for monitoring scope is sometimes withheld.

The findings were further supplemented by qualitative information from key informants, who noted that improving performance of National Housing Corporation projects requires close follow-up on architectural designs during the planning stages. This ensures that projects only cover the areas that were originally designed. The key informants also revealed that project scope is often altered before project commencement, which negatively affects customer satisfaction. These observations support earlier studies by Chepngeno and Kwasira (2023) and Mbutu et al. (2022),

which highlighted that scope alterations before implementation are common in public construction projects. Such alterations can impact project success and the timely delivery of outputs.

Correlation analysis indicated that the relationship between project scope management and performance was positive and significant, demonstrating a clear linkage to project performance in Kenya. Regression analysis further confirmed that project scope management is a significant predictor of performance. Multiple linear regression results supported this finding, showing that scope management contributes significantly to project success. These results align with Kweyu (2018), who found a significant positive relationship between project scope management and performance in last-mile construction projects. Similarly, Abdulayi et al. (2020) argued that clearly defined scope allows project teams to operate within planned boundaries, which minimizes scope alterations and enhances overall project performance..

4.9.2 Project Time Management and Performance of National Housing Corporation Projects

The second objective of the study was to assess the relationship between project time management and the performance of National Housing Corporation projects in Kenya. The findings revealed that respondents were undecided on whether all project activities are carried out sequentially to ensure a smooth flow of work. There was also indecisiveness on whether the definition of project activities is done in every project before it takes off. Furthermore, respondents were undecided on whether resource estimates for all activities are prepared for inclusion in schedule management. It was noted that respondents were also unsure whether the time required for each activity is estimated during the planning process to determine appropriate timeframes for every task. However, there was consensus that projects completed are generally delivered within projected timeframes. These findings suggest that respondents were not fully willing to disclose details about how time management influences project performance.

These results are consistent with studies by Sanda (2016) and Kiarie and Wanyoike (2016), who reported that in government projects there is often confidentiality and non-disclosure of information, as employees fear that leaks may trigger public criticism. The findings also align with Kavitu et al. (2018), who noted that proper time management and accurate estimation of time improve project delivery in most construction projects. The study indicates that the lack of disclosure by respondents may be linked to the sensitive nature of government project contracts, which are not always made public. Consequently, time management practices may not always be transparent, even though they are critical for project success.

The study findings were further supplemented by qualitative information from key informants, who emphasized the need for proper communication among all personnel involved in National Housing Corporation construction projects. When communication is not streamlined, delays occur, which directly impact project timelines. Stalled plans lead to increased project duration and time overruns. These findings are supported by Luvai and Mugai (2024) and Chileshe et al. (2020), who affirmed that appropriate time estimates for every project activity and assignment of work are essential to minimize time wastage during construction. Key methods that project managers should use for time estimation include expert estimation, bottom-up estimation, and analogous estimation.

Correlation analysis indicated that the relationship between project time management and project performance was positive and significant, demonstrating a strong linkage to performance in National Housing Corporation projects. Regression analysis further revealed that project time management is a significant predictor of project performance. This observation was supported by multiple linear regression results, which confirmed that time management contributes significantly to project success. These findings are consistent with Elizabeth (2020), who noted that time is a critical element when planning project activities, and failure to plan time effectively often results in projects spilling over beyond their scheduled deadlines..

4.9.3 Project Cost Management and Performance of National Housing Corporation Projects

The third objective was to establish the influence of project cost management on the performance of National Housing Corporation projects in Kenya. The study found that respondents were undecided on whether a cost plan is defined before every project begins. There was also indecisiveness on whether budget determination is considered mandatory before project initiation. Respondents were undecided on whether cost estimation is done to establish the total cost of the project before commencement. Similarly, they were unsure whether funding sources are established during the project planning stage and whether the project budget provides a clear provision for various project activities. Additionally, respondents were indecisive on whether financing of projects is normally secured before the start of any project. There was also uncertainty regarding whether mishandling of project cost management could lead to project failure. These results reveal that respondents were non-committal and reluctant to disclose more information, possibly to prevent public knowledge of project details.

These findings are consistent with studies by Murithi (2018), Elizabeth (2020), Omondi (2020), Mosha (2018), and Hassan and Adeleke (2018), who reported that projects financed by the World Bank, IMF, and taxpayers' money often face setbacks such as abandonment, cost overruns, schedule deviations, and stakeholder dissatisfaction. The inability of governments to disclose exact project costs contributes to these challenges. The study's results suggest that lack of transparency and non-disclosure may influence how cost management affects project performance.

The findings were further supplemented by qualitative information from key informants, who revealed several factors affecting project cost management and performance. These included prolonged land disputes, unpredictable weather, high costs of building materials, inflation, delays in the importation of materials, and cost escalation of supplies. Such factors adversely affect the performance of projects. These findings align with Kibugi and Muchelule (2021), Mohammed and Nyangau (2020), and Kieti (2020), who argued that project cost estimates should be prepared

before project commencement. They also emphasized that risks associated with projects should be identified and insured, so that if they occur, they are already accounted for in the project plan.

Correlation analysis indicated that the relationship between project cost management and performance of National Housing Corporation projects was positive and significant, showing a clear linkage to project performance. Regression analysis further revealed that project cost management is a significant predictor of project performance. This observation was supported by multiple linear regression, which confirmed that cost management significantly contributes to project success. These findings affirm previous research by Pluto (2020), who noted that when project costs are poorly managed or insignificant to performance, projects face failures that frustrate intended beneficiaries and damage the project's reputation..

4.9.4 Project Dislosure and Reporting and Performance of National Housing Corporation Projects

The fourth objective was to establish the influence of project disclosure and reporting on the performance of National Housing Corporation projects in Kenya. The study found that respondents were undecided on whether the community took part in project execution. There was also indecisiveness on whether the community was involved in the feasibility study of the project. Respondents were undecided on whether the community participated in project handover or in kick-off meetings. Additionally, there was uncertainty about whether project viability assessments involved community input. Overall, respondents were not willing to provide detailed information about community participation in project performance.

These results align with studies by Karimi and Munyori (2019), Kavita and Musembi (2018), Kabirifa and Mojitahhedi (2019), and Lattif et al. (2020), who reported that most government projects do not involve community participation. Community involvement is often avoided because communities may disagree with the project being initiated or may perceive it as a low-priority initiative. Lack of community engagement can reduce transparency and limit feedback from stakeholders, which

may affect the overall project outcome. This highlights the importance of structured strategies to include communities in the project lifecycle.

The findings were further supported by qualitative information from key informants, who revealed that communication channels within the corporation are weak and need improvement. Poor communication often causes project teams to stall and delays progression to subsequent project activities. These observations align with Marrone (2020), who emphasized that effective communication is essential in any construction project, and failure to disclose information prevents project teams from proceeding to the next task. Strong communication and reporting mechanisms are therefore critical for ensuring smooth project implementation.

Correlation analysis indicated that the relationship between project disclosure and reporting and project performance was positive and significant, showing a clear linkage to performance in National Housing Corporation projects. Regression analysis further revealed that disclosure and reporting is a significant predictor of project performance. Multiple linear regression supported this finding, indicating that disclosure and reporting contribute significantly to project success. These results concur with Sharma et al. (2020), who noted that timely and accurate disclosure of project information is essential for project managers and has a direct impact on project performance. Poor reporting and inadequate disclosure can hinder project monitoring and negatively affect outcomes.

4.9.5 Moderating Effect of Community Participation

The fifth objective was to determine the moderating influence of community participation on the relationship between project integration management and the performance of National Housing Corporation projects in Kenya. The study established that community participation significantly moderates the relationship between project scope management and project performance. Similarly, it was found that community participation significantly moderates the relationship between project time management and performance. The study further revealed that community participation significantly moderates the relationship between project cost management and project performance.

In addition, the findings indicated that community participation significantly moderates the relationship between disclosure and reporting and project performance. These results align with the findings of Elizabeth (2020) and Othman et al. (2017), who affirmed that community participation plays a crucial role in construction projects. Engaging the community before project implementation helps to prevent conflicts and reduces delays caused by disagreements or legislative hurdles. Overall, involving the community ensures smoother project execution and enhances overall project performance.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

In this chapter, the summary of key research findings, the conclusions drawn from the findings, recommendations, contribution of the study to the theory, policy contribution of research and areas for further research are presented.The summary, conclusions and recommendations are in line with the study objectives.

5.2 Summary

This section outlines a summary of the major findings of the study. The main purpose of this study was to examine project integration management and its effect on the performance of National Housing Corporation projects in Kenya. The independent variables of the study were project scope management, project time management, project cost management, and project disclosure and reporting. The study also investigated the moderating effect of community participation on the relationship between project integration management and performance of National Housing Corporation projects in Kenya. The findings indicated that the independent variables had a significant partial influence in predicting project performance. The constant was also significant, implying that apart from the four variables investigated project scope management, project time management, project cost management, and disclosure and reporting there are other factors not included in the model that may affect performance. This reveals the need for further research in this particular area.

On the use of theories, the study made significant advancements in the theoretical argument for the application of the Theory of Constraints, General System Theory, Competence Theory, Goal-Setting Theory, and Community Participation Theory. The study emphasized the Theory of Constraints by highlighting the importance of managing project constraints, noting that all projects, regardless of size or complexity, are subject to constraints such as risks, scope, quality, and costs, among others. It is important for project managers to understand each constraint and possess

the knowledge and skills to manage it effectively. The study also aligns with the theoretical arguments of Contingency Theory, which posits that each project is unique and should be managed according to its specific environment and characteristics.

Moreover, each project is executed in an open environment with varying ecological conditions, topography, and different contracting parties, which may at times delay the project from achieving its predetermined performance. The study contributes to General System Theory by emphasizing that every department has a unique role in the success and performance of a project, as each department comprises employees with different skills and knowledge relevant to the project. The study also advances Community Participation Theory, which advocates for the inclusion of the community from project identification and implementation through to final closure. Such inclusion greatly contributes to project success and overall performance.

The study contributes to Goal-Setting Theory by examining the relationship between setting goals and improving performance within a project. It underscores the importance of clearly defined objectives in enhancing the outcomes of projects. Overall, the study provides theoretical and practical insights into how project integration management, when combined with proper goal setting, community involvement, and management of constraints, can positively influence the performance of National Housing Corporation projects in Kenya..

5.2.1 Project Scope Management Activities

The first objective of the study was to establish the extent to which project scope management influence performance of National Housing Corporation Projects in Kenya.From the reviwed literature on project scope management it is observed that scope management has been recognized as a crucial aspect of project performance.Project scope plays avital role in defining components of work, project deliverables and stakeholders requirements.Previous studies instill the need for a well and articulated project scope for resource allocation, reduced project diviation from the original plan, and enhanced the overall performance of the project.The study

established that project scope management siginificantlly had a positively relationship with performance of National Housing Corporation projects in Kenya.

Scope control aligns with established literature by advocating for proper scope control changes and communicating and reporting any changes incase it occurs to avoid the project from deviating from its original plan.Scope validation aligns with the priveous studies by recognising the role of validating project scope with the client or customer to avoid any unnessary conflits which may occur.The study recognise the role of work break down structure plays in the decoposition of project work into smaller and manageable components for easy assignment of project teams and allocation resources and time.

The study reveals that project scope management had a strong correlation with performance of National Housing Corporation Projects in Kenya.The regression analysis conducted indicates that project scope management had positive and significant relationship on performance of National Housing Corporation Projects in Kenya. The findings indicate that project scope management significantly predicts performance of National Housing Corporation Projects in Kenya, the results showed that a unit increase in project scope leads to an increase in performance in National Housing Corporation projects in Kenya.

5.2.2 Project Time Management Activities

The second objective of the study was to examine how project time management influences the performance of National Housing Corporation projects in Kenya. The respondents were undecided on whether all project activities are sequentially carried out to ensure a smooth flow of operations. There was also indecisiveness on whether the definition of project activities is done in every project before it begins. Similarly, respondents were undecided on whether resource estimates for all activities are prepared for inclusion in the schedule management of project activities. Uncertainty was also noted on whether the time required for each activity is estimated during the planning process to determine the overall timeframe for every task. Despite this indecision, it was established that there is a strong correlation between project time

management and the performance of National Housing Corporation projects, with most completed projects being delivered within projected timeframes.

The study further found a weak positive but insignificant relationship between project time management and performance of National Housing Corporation projects. However, project time management was determined to significantly predict project performance, confirming that the main constructs of project time management contribute to changes in performance outcomes. Overall, the findings suggest that while there may be uncertainty among respondents regarding time planning practices, effective time management remains an important predictor of project success in National Housing Corporation projects in Kenya..

5.2.3 Project Cost Management Activities

The third objective of the study was to find out the influence of project cost management on the performance of National Housing Corporation Projects in Kenya.previors research studies advocates for effective cost management planning to reduce financial risks and enhanced cost projections cosiquentlly with this prospect this study found out that project cost management siginificantlly influence the performance of National Housing Corporation projects in Kenya.Cost planning aspect discussed in the literature ecomposes the development of cost management planes,the study findings suggests that a well tailored and structured cost management plan for a particular project should be done to iprove on project budget restricts.

The regression analysis model confirms that their was a positive and significant relationship between project cost management and performance of National Housing Corporation.This rainforces the established principales of project management.The moderated model reveals that community participation siginificantlly influence the relationship between project cost management and performance of National Housing Corporation projects in Kenya with scholarly discussion on the role of community particaption in managing and oversight of project finances and project performance..

5.3 Conclusions

The purpose of the study was to examine project integration management and the performance of National Housing Corporation projects in Kenya. The conclusions were drawn by comparing the study objectives with the research findings. It was concluded that the independent variables of the study were related to the dependent variable. This relationship was confirmed through correlation and regression analyses, which revealed a positive and significant linear relationship between the independent variables and the dependent variable. All the project integration management practices had a significant partial influence in predicting the performance of National Housing Corporation projects in Kenya. Specifically, the study concluded that there was a positive and statistically significant relationship between project scope management and performance. Project time management was also found to positively and significantly predict project performance, while project cost management and disclosure and reporting similarly had positive and significant predictive effects on performance.

The study further concluded that the key inputs for preparing the scope statement should include the project charter, requirements, and organizational process assets, such as policies and procedures related to the scope. These inputs are essential in ensuring that project scope management effectively contributes to performance. The findings indicate that effective management of scope, time, cost, and disclosure and reporting collectively supports the achievement of project objectives and enhances overall performance.

Additionally, the study established that community participation significantly moderates the relationship between project integration management practices and project performance. Community involvement was found to significantly moderate the relationships between project scope management, project time management, project cost management, and disclosure and reporting with performance. This highlights the crucial role of engaging the community in all stages of a project, from planning to implementation, to ensure improved outcomes. Overall, the study

concluded that community participation enhances the effect of project integration management on the performance of National Housing Corporation projects in Kenya.

5.4 Recommendations

This section gives recommedations to policy and practice and areas for further research based on the study findings and conclusions.The following recommendations were proposed in relation to the study findings of the study

5.4.1 Managerial Recommendations

Supervision of housing construction projects should be made a continuous routine; in fact, the authority should ensure daily oversight. Absentee supervision should not be tolerated in any type of construction project. The experience of the contractor should be carefully scrutinized, with their track record properly understood and documented. Relevant procedures, laws, and regulations should be clearly identified and aligned with the contractor's experience before assigning any contract. Stakeholders should also be enlightened on the best way to involve themselves in a project and the extent of their involvement without interfering with ongoing construction.

The study recommends that contractors possess adequate skills, experience, and competence for the assigned work. They should deploy competent project teams and employ appropriate methods and tools for each assignment. Management in housing construction projects should clearly define the roles and responsibilities of project teams, enabling them to work toward the aligned objectives of the project. Additionally, training and development opportunities should be provided for all personnel, including technical training, workshops on project construction, and project management practices.

For project scope, proper planning should be emphasized to ensure that project teams work within the defined scope, allowing them to operate within the scale of work assigned. Regarding project time, stakeholders should employ available time estimation methods to account for unforeseen events that may delay construction. Delays may increase costs and cause property damage or injury to project teams and

participants; such risks should be transferred to third parties, such as through insurance, to mitigate potential effects.

In terms of project cost management, the study recommends adopting proper financial management tools for planning costs and implementing cost control measures to achieve project objectives. Project disclosure and reporting should be encouraged, ensuring information flows efficiently across different departments. This allows project teams to access the necessary information on time, enhancing overall performance. Finally, all stakeholders should collaborate to mitigate disputes during project execution, preventing delays caused by legal or litigation processes.

5.4.2 Policy Recommendation

The study gives an insight for government to identify the key areas where policy review is needed regarding housing construction projects, by triying to reiew the outdated policie which hinder investors fom joining the construction industry. The study recommends for the government to adopt the centralized procumment system and simplify the supply chain and make the tender open and the contractual agreements open to the citizen to foster accountability and trancparency of contracts. The study also recommends for inclusion of project integration management practices for coordination and direction in projects this will ensure that project are completed with the defined performance.

5.5 Contribution of Reseach

The research arguments in the existing literature can be grouped according to theoretical and methodological contribution.The study fills the knowledgap by using community participation as a moderator on the relationship between project intergration management and performance of National Housing Corporation projects in Kenya.The research provide empirical evidence of the relationship between project intergration managhement and performance of National Corporation projects.The study is unique in the sence that the methodology adopted items of assessment of the interaction of various project intergration practices and how they have been linked to project performance of National Housing Corporation

projects.The study used a combination of data collection, procedures and analysis which are a huge methological contribution in the field of project intergration management practices on performance on performance of National Corporation projects in Kenya.The inclusion of hierarchical regression analysis to investigate the moderating role of community participation on perfoformance of National Housing Corporation projects in Kenya.This provided a key contribution and generated key new knowledge for good management practice in performance of construction projects in Kenya.

5.6 Areas for Future Research

This study focused exclusively on housing construction projects implemented by the National Housing Corporation in Kenya. As a result, the findings may not be fully generalizable to other types of projects or sectors. Future studies should examine project integration management practices in other sectors such as road construction, water and sanitation projects, agricultural development projects, and energy infrastructure. These sectors differ in terms of project complexity, stakeholder involvement, regulatory requirements, and resource allocation, which may influence how integration management practices affect project performance. Expanding research across different sectors will provide comparative insights and enhance the generalizability and applicability of findings across the broader construction and project management environment.

In addition, this study examined only four dimensions of project integration management, namely project scope management, project time management, project cost management, and disclosure and reporting. Future research should incorporate additional project management dimensions such as project quality management, project risk management, stakeholder management, communication management, and project leadership. These variables play a critical role in coordinating project activities, enhancing decision-making, and improving overall project outcomes. Including these additional factors will provide a more comprehensive understanding of project integration management and its influence on project performance.

Further, future researchers may consider examining the moderating or mediating effects of factors such as organizational culture, technological adoption, project manager competencies, and stakeholder engagement on the relationship between project integration management practices and project performance. These factors may strengthen or weaken the effectiveness of integration practices and help explain variations in project success. Such studies will contribute to theory development and provide more practical recommendations for improving project performance in diverse organizational and sectoral contexts.

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APPENDICES

Appendix I: Letter of Introduction

Andrew Kipsang Chepkwony

Jomo Kenyatta University of Agriculture and Technology

Department of Entrepreneurship, Technology, Leadership and Management

P. O BOX 62001

NAIROBI

Dear Despondent,

RE: RESEARCH DATA ON "PROJECT INTEGRATION MANAGEMENT ON PERFORMANCE OF NATIONAL HOUSING CORPORATION PRJECT IN KENYAS"

I am a student pursuing a Doctor of Philosophy degree in Project Management at Jomo Kenyatta University. I am required to collect data for my research thesis for partial fulfillment for the award of the degree. My research topic is, Project Integration Management on performance of National Housing Corporation projects in Kenya. I am requesting for your assistance in making my research a success.

This letter is therefore to kindly request you to fill in questionnaire for this research. Any information you will give be assured that it will be given confidentiality and the information will be used only for research purpose only as stated above. Thank you in Advance. Feel free to contact me in case of anything on this phone number, 07242240006

Yours sincerely

Andrew Kipsang Chepkwony

Appendix II: Questionnaire

The information as provided in this questionnaire is subject to confidentiality and will only be used in for the case of academic research purpose only. We make request therefore than you read, understand and provide accurate and appropriate answers by filling and ticking the blank spaces provided.

PART A: BACKGROUND INFORMATION

1. Project type……..
2. Kindly what is your highest level of education

    a) O level ( )
    b) College/ Technical ( )
    c) Undergraduate ( )
    d) Post graduate ( )
    e) Others specify ( ) ……

3. How many years of experience do you have working in National Housing Projects?

    a) Less than 3 years ( )
    b) 3 to 6 years ( )
    c) 6 to 9 years ( )
    d) 9 to 12 years ( )
    e) 12 to 15 years ( )
    f) More than 15 years ( )

PART B: INDEPENDENT VARIABLES

A: PROJECT SCOPE MANAGEMENT

4. What extend do you agree with the following statements concerning the project scope. Where: **SA = Strongly Agree A=Agree N=Neutral D=Disagree SD=Strongly Disagree.**

Statement	SA	A	N	D	SD
The scope planning of the project was done before the project was initiated					
Project scope control was a key issue in the implementation of the project					
The work break down structure was used to plan the project activities					
The project was delivered within the stipulated scope					
collection of the project requirements was mandatory before execution of the project					
Validation of project scope deliverables was compared against the scope baseline					

B. PROJECT TIME MANAGEMEMENT

5. What extend do you agree with the following statements concerning the project time management. Where: **SA=Strongly Agree A=Agree N=Neutral D=Disagree SD=Strongly Disagree**

	Statement	SA	A	N	D	SD
A	Project schedule was done before implementation begins					
B	Effort is made to ensure adherence to project schedule					
C	The resource estimates of activities are done during the schedule management					
D	Projects are usually completed within the allocated time					
E	Enough time is allocated for project implementation					

C: PROJECT COST MANAGEMENT

6. Where: **SA = Strongly Agree A=Agree N=Neutral D=Disagree SD=Strongly Disagree.**

	Statement	**SA**	**A**	**N**	**D**	**SD**
A	Cost plan is defined before the project begins					
B	Budget determination was considered before the project commenced					
C	Cost estimates was establish before the commencement of the project					
D	Funding sources were established before the project was implemented					
E	Project budget provide a clear provision of various project activities					
F	Financing of project is normally secured before the start of the project					
G	The project was implemented within the specified cost					

D: PROJECT DISCLOSURE AND REPORTING

7. To what extend do you agree with the statements concerning project disclosure and reporting? Where: **SA = Strongly Agree A=Agree N=Neutral D=Disagree SD=Strongly Disagree**

S/N	Statement	SA	A	N	D	SD
A	Regular project status reports are done at each stage					
B	Project risk report was done before the project commenced.					
C	Regular variance report on progress of the project was conducted					
D	Board meetings reports or executive reports are mandatory conducted before any project phase commences or starts					

E: COMMUNITY PARTICIPATION

8. Please give your opinion with regards to the following statements concerning the community participation. Where: **SA = Strongly Agree A=Agree N=Neutral D=Disagree SD=Strongly Disagree**

	Statement	SA	A	N	D	SD
A	Was the community involve in decision making in execution of the project					
B	Community members normally give feedback concerning the status of the project					
C	Project kick of meeting involved the community members					
D	The community was involved in resource control of the project					
E	Viability of the project was done in collaboration with the community members					

F: PROJECT PERFORMANCE

9. To what extend do you agree with the following statements concerning performance of housing projects participation. Where: **SA = Strongly Agree A=Agree N=Neutral D=Disagree SD=Strongly Disagree**

	Statement	**SA**	**A**	**N**	**D**	**SD**
A	Project completed was aligned with stated requirements					
B	Beneficiaries of the project were satisfied					
C	Aspects of micro economy affected the number of projects completed					
D	The value for money was realized in the project					
E	The current trends and changes in technologies affect the project deliverables to be attained					

10. **Quality of projects**. Did the projects which were completed by National Housing corporation pleased the end userYes? ( ) No( ).
11. **Stakeholder satisfaction**.Stakeholders of the project were satisfied with the end product of the project?Yes ( ) No ( )
12. If yes to question No 11 above, why were they unsatisfied with the final product of the project?
13. **Project objective**
14. Stipulated time frame Yes( ) No ( )
15. The allocated budget Yes( ) No ( )
16. The project scope Yes( ) No()
17. Lack of commumunity participation Nes ( ) No( )

Appendix III: Key Informant Guide.

Introduction:Thank you for accepting to be intervied for our research about project intergration management and performance of National Housing Corporation projects in Kenya.My name is …….and would like to talk about your experience concerning National Housing Corporation Projects in Kenya.Iam interested in knowing your contribution and participation in National Housing Corporation construction projects and challenges you may be experiencing.Iwill write down key information during our interaction sesion.Your response will be kept with outmost confidetiallity and the report will not identify your response.Are You willing to participate in this interview?

1) What is your key role in this project?
2) What qualifications do you posses for the role ?
3) Do you believe that the project managers manageing this projects are competent?
4) Do you consider project scope management a key management practice of achieving project deliverable?
5) What measures do you use to asses the performance of your projects?
6) Does schedule time affect performance?
7) What is the average monitory size of a typical project ?
8) What role does community play in your projects?
9) What are the milestone so far acheived?

Thank you for your time

Appendix IV: List of National Housing Cooperation Projects from 2013-2021 in Kenya

Sn.	Name of scheme	Number of Units
1.	Langata IV Flats	101
2.	Langata V Flats	199
3.	Kisii Flats	40
4.	Kakamega	80
5.	Langata Phase II	310
6.	Langata Phase III	110
7.	Langata Phase I	230
8.	Kisumu Mamboleo	69
9.	Pumwani Phase II	160
10.	Bububu (Likoni)	89
11.	Jonathan Ngeno	173
12.	Kibera Highrise (J3, J4, J5)	120
13.	Kiboko (Thika) Ph. 4	41
14.	Sabaki (Malindi)	22
15.	Kibera Highrise Ph. 2 Ext	53
16.	Kibera Highrise Ph 2	952
17	Vihiga USAID	59
18.	Isiolo USAID	63
19.	Embu	99
20.	Kibera Highrise Ph 1	982
21.	Kerugoya USAID	40
22.	Bungoma USAID	90
23.	Busia USAID	73
24.	Machakos	55
25.	Malindi (USAID)	40
26.	Kakamega USAID	212
27.	Pumwani Highrise	284
28.	Kiambu (USAID)	56
29.	Meru USAID	223
30.	Muranga (USAID)	55
31.	Kitui USAID	30
32.	Meru USAID	2
33.	Samuel Ayany	50
34.	Kisumu USAID	180
35.	Meru USAID	42
36.	Kahawa West	600
37.	Kisauni (USAID)	84
38.	Likoni (USAID)	122
39.	Thika (USAID)	100
40.	Nyeri (USAID)	59
41.	Kisumu	4
42.	Kibera	12
43.	Kisumu	10
44.	Harambee	247
45.	Kerugoya	4
46.	Changamwe	47
47.	Kariobangi	26
48.	Mathare	565
49.	Kibera Aided	210
50.	Kariobangi	60
51.	Kariobangi	250
52.	Uhuru 4	158
53.	Otiende	16
54.	Mathare	16
55.	Uhuru Phase 4	297
56.	Uhuru Phase 3	280
57.	Kariobangi Phase 4	42
58.	Thika 2	30
59.	Thika 1	12
60.	Mariakani	13
61.	Machakos 1	12
62.	Machakos 2	38
63.	Otiende Phase 3	9
64.	Kibera Phase 4	92
65.	Nyeri	20
66.	Kisumu Mosque Estate	3
67.	Kitui	17
68.	Otiende self-help	44
69.	Mombasa	58
70.	Otiende	53
71.	Kibera	34
72.	Langata staff housing	34

73.	Homa Bay	12
74.	Kakamega	34
75.	Karanja Road flats	20
76.	Sadi Road Infill	24
77.	Woodley Infill	16
78.	Changamwe	72
79.	Wundanyi Ph2 Ext.	23
80.	Wundanyi ph. 2	28
81.	Kajiado	30
82.	Karatina (USAID)	38
83.	Kabarnet Ph 3	41
84.	Wundanyi	50
85.	Kabarnet Ph 2	51
86.	Hola	13
87.	Meru	26
88.	Kaiobangi 5	320
89.	Kitale	48
90.	Kitale	48
91.	Mutomo	5
92.	Mutito	6
93.	Buru Buru S. A.	218
94.	Gatundu	5
95.	Arina /Shauri Moyo	300
96.	Huruma Phase 2	586
97.	Ruringu (Nyeri)	8
98.	Githunguri (Kiambu)	6
99.	Olkalau	15
100.	Kikuyu	6
101.	Malindi	66
102.	Rongo	9
103.	Manga (Nyamira)	8
104.	Kimilili	6
105.	Buxton	216
106.	Changamwe N0. 3	300
107.	Tongaren	6
108.	Hamisi	7
109.	Khwisero	12
110.	Ruiru	26
111.	Naro Moru	10
112.	Kangema (Muranga)	8
113.	Limuru	6
114.	Baricho (Kirinyaga)	3
115.	Kimathi (Nyeri)	60

116.	Mweiga	11
117.	Ruringu (Staff Houses)	8
118.	Kimathi No. 6 (Nyeri)	60
119.	Karatina	38
120.	Githunguri (Kiambu)	5
121.	Thika Phase 1	96
122.	Lumbwa (Kipkelion)	15
123.	Londiani (Kericho)	15
124.	Iten	11
125.	Eldoret 10C	102
126.	Eldoret 9C	136
127.	Eldoret 9B	40
128.	Kaloleni 'C'	312
129.	Kilifi No. 2	20
130.	Wundanyi	8
131.	Maseno Phase 1	8
132.	Kisii	16
133.	Ogembo (Kisii)	8
134.	Ogembo (Kisii)	10
135.	Homa Bay	13
136.	Oyugis	8
137.	Naivasha	16
138.	Kericho	
139.	Ndhiwa	10
140.	Mbita	7
141.	Sirisia (Bungoma)	6
142.	Vihiga	7
143.	Endebess	14
144.	Chuka	16
145.	Nkubu	12
146.	Maua	9
147.	Kibera Flats	12
148.	Kigumo (Muranga)	9
149.	Kandara (Muranga)	10
150.	Thika 9 Phase 1	152
151.	Sotik	12
152.	Kericho Ph. 7	15
153.	Bomet	6
154.	Eldoret	39
155.	Turbo	8
156.	Nanyuki	39

157.	Kabarnet	16
158.	Narok	12
159.	Likoni	300
160.	Kisii Ph 3	11
161.	Malava	10
162.	Masaku	6
163.	Runyejes	11
164.	Madaraka	248
165.	Kiambu	22
166.	Kerugoya	8
167.	Masaba (Kitale)	96
168.	Flamingo (Nakuru)	232
169.	Masaba (Kitale)	96
170.	Changamwe	700
171.	Arina (Kisumu)	50
172.	Bondo (Siaya)	8
173.	Ukwala (Siaya)	4
174.	Bungoma	24
175.	Webuye 2A	300
176.	Webuye	48
177.	Webuye D	150
178.	Webuye 1C	64
179.	Lumakanda	10
180.	Kitui	10
181.	Athi River No. 2	21
182.	Askari Housing	180
183.	Makadara No. 1	352
184.	Wamagana (Nyeri)	6
185.	Eldoret No. 8C	15
186.	Eldoret No. 8A	250
187.	Rumuruti (Laikipia)	8
188.	Kapsabet	10
189.	Malindi	27
190.	Msambweni	10
191.	Kinango	10
192.	Kwale	22
193.	Hola	12
194.	Tamu	12
195.	Kbera 111	43
196.	Kehancha	13
197.	Busia	34
198.	Uhuru Estate	297
199.	Kariobangi	320

200.	Kitale 3	50
201.	Nakuru 13	40
202.	Stoni Athi Housing Phase I	101
203.	Stoni Athi Housing Phase II Economy	199
204.	Langata Commercial Center	310
205.	NHC Olympic View Kibera	110
206.	Changamwe infill Phase II	230
207.	Kericho Housing	69
208.	Nyeri Mixed Development	160
209.	Bububu Housing Phase II	89
210.	Nyeri Wamagana	173
211.	Pumwani Housing Phase III	120
212.	Changamwe III	41
213.	Kakamega Amalemba	22
214.	Maralal rental Housing	53
215.	Siaya Housing	952
216.	Stoni Athi rental Housing	59
217.	Madaraka infill sector BD	63
218.	Langata Housing Phase VI	99
219.	Kisii Housing Phase II	982
220.	Kisumu Kanyakwar Housing Phase I	40
221.	Langata VI Flats	101
222.	Langata VII Flats	199
223.	Langata Phase IV	310
224.	Langata Phase V	110
225.	Langata Phase II	230
226.	Kisumu Mamboleo I	69
227.	Pumwani Phase III	160

228.	Bububu (Likoni) I	89
229.	Jonathan Ngeno I	173
230.	Kibera zone K	120
231.	Kiboko (Thika) Ph. 4 I	41
232.	Sabaki (Malindi) I	22
233.	Kibera Highrise Ph. 2 Ext I	53
234.	Kibera Highrise Ph 2 I	952
235.	Vihiga USAID I	59
236.	Isiolo USAID I	63
237.	Embu I	99
238.	Kibera Highrise Ph 1 V	982
239.	Kerugoya USAID II	40
240.	Bungoma USAID V	90
241.	Busia USAID II	73
242.	Machakos V	55
243.	Malindi (USAID) I	40
244.	Kakamega USAID I	212
245.	Pumwani Highrise I	284
246.	Kiambu (USAID) I	56
247.	Meru USAID I	223
248.	Muranga (USAID) I	55
249.	Kitui USAID I	30
250.	Meru USAID I	2
251.	Samuel Ayany I	50
252.	Kisumu USAID I	180
253.	Meru USAID I	42
254.	Kahawa West I	600
255.	Kisauni (USAID) I	84
256.	Likoni (USAID) I	122
257.	Thika (USAID) IV	100
258.	Nyeri (USAID) V	59
259.	KisumuVII	4
260.	Kibera V	12
261.	Kisumu VI	10
262.	HarambeeI	247
263.	Kerugoya V	4
264.	Changamwe VI	47
265.	Kariobangi II	26
266.	Mathare IX	565
267.	Kibera Aided II	210
268.	Kariobangi III	60
269.	Kariobangi I	250
270.	Uhuru 4 I	158
271.	Otiende II	16
272.	Mathare II	16
273.	Uhuru Phase 4 IV	297
274.	Uhuru Phase 3 V	280
275.	Kariobangi Phase 4	42
276.	Thika 3	30
277.	Thika 4	12
278.	Mariakani	13
279.	Machakos 2	12
280.	Machakos 3	38
281.	Otiende Phase 4	9
282.	Kibera Phase 6	92
283.	Nyeri 1	20
284.	Kisumu Mosque Estate I	3
285.	Kitui II	17
286.	Otiende self-help III	44
287.	Mombasa 7	58
288.	Kanyakwa 11	53
289.	Kibera II	34
290.	Langata staff housing III	34
291.	Homa Bay II	12
292.	Kakamega V	34
293.	Langata IV FlatsPhase 1	
294.	Langata V Flats Phase 2	
295.	Kisii Flats Phase 2	40
296.	KakamegaPhase 1	80
297.	LangataPhase Phase 2	3
298.	LangataPhase Phase 3	10
299.	LangataPhase 8	230
300.	Kisumu MamboleoPhase 1	69
301.	PumwaniPhase Phase 3	Phase 160

302.	Bububu (Likoni)	89
303.	Jonathan Ngeno	Phase 173
304.	Kibera Highrise (J3, J4, J5)	Phase 120
305.	Kiboko (Thika) Ph. VI	4 Phase 1
306.	Sabaki (Malindi) I	22
307.	Kibera Highrise Ph. 2 Ext II	53
308.	Kibera Highrise Ph Phase 2 I	952
309.	Vihiga USAID VII	59
310.	Isiolo USAID II	63
311.	Embu Phase 2	99
312.	Kibera Highrise Ph Phase 6	982
313.	Kerugoya USAID 8	40
314.	Bungoma USAID Phase 9	90
315.	Busia USAIDPhase Phase 10	73
316.	Machakos Phase 9	55
317.	Malindi (USAID) II	40
318.	Kakamega USAIDPHASE III	2 12
319.	Pumwani Highrise IV	284
320.	Kiambu (USAID) V	56
321.	Meru USAID IV	223
322.	Muranga (USAID) VII	55
323.	Kitui USAID 8	30
324.	Meru USAIDPhase 1	2
325.	Samuel Ayany Phase 2	50
326.	Kisumu USAID Phase 6	80
327.	Meru USAID Phase 2	42
328.	Kahawa WestPhase 1	600
329.	Kisauni (USAID) Phase 2	84
330.	Likoni (USAID)	122
	Phase 2	
331.	Thika (USAID) Phase 6	e 100
332.	Nyeri (USAID) Phase 9	59
333.	Kisumu II	4
334.	Kibera 8	12
335.	Kisumu Phase 7	10
336.	Harambee Phase 6	247
337.	Kerugoya Phase 2	4
338.	Changamwe Phase 2	47
339.	KariobangiPhase 1	26
340.	Mathare Phase 3	565
341.	Kibera Aided Phase 7	2 10
342.	Kariobangi Phase 6	60
343.	Kariobangi Phase 2	250
344.	Uhuru Phase 4	Phase 158
345.	Otiende Phase 4	Phase 16
346.	Mathare 8	Phase 16
347.	UhuruPhase Phase 4	297
348.	UhuruPhase Phase 3	280
349.	KariobangiPhase Phase 4	42
350.	Thika Phase 2	30
351.	ThikaPhase 1	12
352.	Mariakani Phase 3	13
353.	MachakosPhase 1	12
354.	Machakos Phase 2	38
355.	OtiendePhase Phase 3	9
356.	KiberaPhase Phase 4	92
357.	Nyeri Phase 7	20
358.	Kisumu Mosque Estate 8	3
359.	Kitui Phase 3	17
360.	Otiende self-help 8	44
361.	Mombasa Phase 9	58
362.	Otiende Phase 2	53
363.	KiberaPhase 1	34
364.	Langata staff housing Phase 2	34
365.	Homa Bay Phase 3	12

366.	Kakamega Phase 7	34
367.	Karanja Road flats Phase 6	20
368.	Sadi Road Infill Phase 6	24
369.	Woodley Infill Phase 7	16
370.	Changamwe Phase 2	72
371.	Wundanyi Ph2 Ext. Phase 6	23
372.	Otiende self-help	41
373.	Mombasa	52
374.	Otiende	57
375.	Kibera	40
376.	Langata staff housing	20
377.	Homa Bay	10
378.	Kakamega	31
379.	Karanja Road flats	24
380.	Sadi Road Infill	28
381.	Woodley Infill	12
382.	Changamwe	72
383.	Wundanyi Ph2 Ext.	27
384.	Wundanyi ph. 2	28
385.	Kajiado	31
386.	Karatina (USAID)	38
387.	Kabarnet Ph 3	41
388.	Wundanyi	57
389.	Kabarnet Ph 2	52
390.	Hola	13
391.	Meru	22
392.	Kaiobangi 5	321
393.	Kitale	481
394.	Kitale	48
395.	Mutomo	8
396.	Mutito	9
397.	Buru Buru S. A.	219
398.	Gatundu	4
399.	Arina /Shauri Moyo	301
400.	Huruma Phase 2	589
401.	Ruringu (Nyeri)	10
402.	Githunguri (Kiambu)	6
403.	Olkalau	15
404.	Kikuyu	6
405.	Malindi	66
406.	Rongo	19
407.	Manga (Nyamira)	18
408.	Kimilili	16
409.	Buxton	516
410.	Changamwe N0. 3	100
411.	Eldoret	49
412.	Turbo	18
413.	Nanyuki	69
414.	Kabarnet	26
415.	Narok	22
416.	Likoni	200
417.	Kisii Ph 3	21
418.	Malava	20
419.	Masaku	61
420.	Runyejes	111
421.	Madaraka	244
422.	Kibera II	38
423.	Langata staff housing III	36
424.	Homa Bay II	12
425.	Kakamega V	31

Appendex V Nacosti Reseach Prermit

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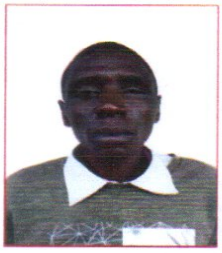

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