PROJECT INTEGRATION MANAGEMENT PRACTICES AND IMPLEMENTATION OF SELECTED HIGH-RISE BUILDINGS PROJECTS IN NAIROBI CITY COUNTY, KENYA

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ABSTRACT

Project integration management is recommended in construction projects since it presents considerations for planning, implementing, monitoring and controlling of construction projects. The general objective of the study was to assess the influence of project integration management practices on implementation of selected high-rise building projects in Nairobi city county, Kenya. The specific objectives were to determine the influence of knowledge management, and stakeholder engagement on the implementation of selected high-rise building projects in Nairobi city county, Kenya. This study was anchored on diffusion theory and stakeholders' theory and the descriptive research design. The study targeted a purposive sample consisting 144 property consultants that oversee the management of the 32 completed high-rise buildings. The study used piloted questionnaires to collect primary data. Content and construct validity was established and reliability determined using the Cronbach's Alpha Coefficient method. Data was analyzed using SPSS Version 28 to generate descriptive and inferential statistics. The study underscores the essential role of knowledge management practices in enhancing project performance. The positive perceptions among respondents regarding various knowledge-sharing mechanisms highlight the conducive environment for knowledge acquisition and integration within project teams. The study emphasizes the importance of active stakeholder engagement throughout the project lifecycle in ensuring project success. The positive perceptions among respondents regarding stakeholder engagement strategies indicate an inclusive approach to decision-making and knowledge sharing. In light of the findings concerning project knowledge, it is recommended that organizations invest in knowledge management initiatives to foster a culture of knowledge sharing and collaboration within project teams. Based on the findings related to stakeholder engagement, it is recommended that project managers prioritize stakeholder involvement and communication to build trust, alignment, and support for high-rise building projects.

Key Word: Project Integration Management Practices, Project Knowledge, Stakeholder Engagement and Implementation of Selected High-Rise Buildings Projects

Background of the Study

Project integration management, describes the process of identifying, defining, combining and coordinating various elements involved in the project in an organized manner to ensure successful management of the stakeholder expectations, and meeting of project requirement (Desalegn, 2018; Heldman, 2018). Ther six sub-processes that are entailed in project integration include development of project charter, development of project management plan, directing and managing project execution, monitoring and controlling project work, performing integrated change control and closing project or phase (PMI, 2016). The move towards project integration has been underpinned by the need for new models of project management practice and performance improvement.

Desalegn (2018) defined project integration management as a component of project management that focuses on the individual procedures during the execution of a process. Desalegn asserted that project integration managers coordinate plans and help ensure that all processes within a project run efficiently and that team members stay on track toward their final goals. Therefore, integration management is the practice of making certain every part of the project is coordinated. Heldman (2018) defined project integration management as an interrelated and integrated process which begin with describing a project in the project charter and ends with closing it. It was further defined as the process of coordinating all aspects of project planning and consolidating and following-up processes in parallel to meet the expectations of clients and stakeholders.

Azozama (2016) mentioned several activities of project integration management which include: developing project charter and plan, managing project execution, controlling project work, and closing project. According to Azozama (2016), the project integration management role is performed by project manager who is fully responsible for project integration management thus making it impossible to transfer or delegate accountability. It is the responsibility of the project manager to collate the results from all the other knowledge areas to have an overall understanding of the project. In the end it is the project manager who is responsible for delivering on the project (Cioffi, 2019).

Project Management Institute (2017) contend that a project charter empowers a project manager to deploy corporate resources to project operations. Establishing a project charter involves elements like commitments, company environmental variables, assets related to organizational processes, and business papers such business case, needs assessment, and rewards management plan. Oguz (2022) further supports that a project charter is required to begin both internal projects where the client is an entity within the organization and external projects where the user is situated outside of the organization.

According to Ranf and Harman (2018), organizations that operate on projects or are organized around projects provide conditions favorable to knowledge management due to the employees engaged with project oversight, their engagement in various tasks and project stages, and thus results in explicit and tacit knowledge. Webb (2017) describe the primary function of knowledge management as to deploy resources and knowledge asset that include networks and technology to enhance organizations' project outcomes. Bahadorestani et al. (2020) agree that project planning is the most important stage in the process of project management and the organization's long-term project performance. Marier-Bienvenue et al. (2017) adds that structured project planning and control solutions involve planning, evaluating, and tracking features that allow the creation of project plans and the comparing of planned and actual performance measurement. According to Mieszkowski and Kardas (2015), the primary strategy for enhancing project success, even in the private sector, is to boost stakeholder participation.

Also, Paloniemi et al. (2015) states that stakeholder involvement improves the likelihood of identifying potential project setbacks during project execution.

Berteaux and Javernick-Will (2015) indicated that project-based organizations in the Architecture, Engineering, and Construction (AEC) industry must integrate knowledge and processes adapting to local environments. They concluded that projects having high integration result in richer information exchange than projects having low integration. Yang et al. (2020) revealed that knowledge integration enhances performance of Chinese construction industry.

According to Phiri (2019) project integration management in Malawi helps teams work together more seamlessly. Integration management brings together various processes, systems, and methodologies to form a cohesive strategy. To accomplish this, trade-offs must be made. Project goals need to be the guiding star when determining when and where these trade-offs will take place. They also require buy-in from the full project team and all stakeholders. Everyone won't get what they want, but the result will be a project completed on time and within budget. Kavishe and Chileshe, (2018) found that despite advocating for a number of benefits associated with project integration management, project implementation is fraught with numerous encounters which comprised project performance.

According to Chang, (2017) there are a lot of performance indicators that can be used to measure and evaluate performance of projects which could be related to indicators such as time, cost, quality, client satisfaction, client changes, business performance, health and safety. The three most predominant performance evaluation indicators include cost, quality and time. Cost, quality, and time are critical aspects in the successful implementation of high-rise building projects. Cost measurement involves comparing actual expenditures with the budgeted costs, thus identifying any cost overruns or savings (Pinto & Covin, 2016). Variance analysis is employed to compare planned costs with actual costs for various project activities, aiding in pinpointing areas where costs deviate from the budget (Schwalbe, 2015). Furthermore, the Cost Performance Index (CPI) serves as a vital metric to gauge cost performance efficiency, providing insights into whether the project is under or over budget (Kerzner, 2017).

Statement of the Problem

The building construction sector is vital for Kenya's economic growth. Over the years, the real estate market has experienced significant expansion, with its contribution to GDP rising from 10.5% in 2000 to 20% in 2021. Despite this growth, the construction sector faces implementation challenges, particularly regarding cost and time overruns in housing development projects, as highlighted by Sovacool, Gilbert, and Nugent (2017).

In Nairobi City County, concerns have been raised about the quality and safety of buildings, including issues with accessibility, durability, and structural integrity. The National Building Institute (NBI) reported that a considerable number of buildings were deemed unsafe or at risk of collapse, with over 60% of them located in Nairobi (AAK, 2018). These challenges are attributed to deficiencies in project management practices and quality control within the construction sector, leading to incidents of structural failure and defective structures. Reports from the National Construction Authority (NCA) indicate that over 30 buildings collapsed in Nairobi City County between 2010 and 2020, resulting in fatalities and injuries. Additionally, some commercial housing projects have either stalled or progressed slowly, contributing to delays in urban development (Ombagi, 2019). The lack of focus on project integration management and implementation of high-rise building projects in Nairobi City County, as highlighted by previous studies, underscores the need to assess the influence of project integration management on the implementation of such projects.

Various studies have been conducted on project integration management and project implementation. For instance, Luvunga and Ngari (2019) researched on the determinants of successful completion of housing projects at national Housing Corporation in Kenya. Kimutai (2020) conducted a study on project management practices and performance of residential construction projects in Nairobi city county, Kenya, Nyabioge, Diang'a and Gwaya (2021) conducted a study on construction Site Management and its Influence on Project Implementation in Nairobi County. Nairowua (2018) conducted a study on factors influencing completion of building construction projects in Kajiado county Kenya. Nevertheless, none of these studies focused on project integration management and implementation of selected high-rise buildings projects in Nairobi city county, Kenya, to fill the highlighted gaps, the current study sought to assess the influence of project integration management on implementation of selected high-rise buildings projects in Nairobi city county, Kenya.

General Objective

To assess the influence of project integration management practices on implementation of selected high-rise buildings projects in Nairobi city county, Kenya.

Specific Objectives

i.   To determine the influence of project knowledge on implementation of selected high-rise buildings projects in Nairobi city county, Kenya.
ii. To examine the influence of stakeholder engagement on implementation of selected high-rise buildings projects in Nairobi city county, Kenya.

Theoretical Framework

Diffusion of Innovation (DOI) Theory

Diffusion of Innovation (DOI) Theory, developed by E.M. Rogers in 1962, is one of the oldest social science theories. It originated in communication to explain how, over time, an idea or product gains momentum and diffuses (or spreads) through a specific population or social system. The end result of this diffusion is that people, as part of a social system, adopt a new idea, behavior, or product. Adoption means that a person does something differently than what they had previously (i.e., purchase or use a new product, acquire and perform a new behavior, etc.). The key to adoption is that the person must perceive the idea, behavior, or product as new or innovative. It is through this that diffusion is possible. Mannan (2013) stated that not all innovations are adopted even if they are good, it may take a long time for an innovation to be adopted. He further stated that resistance to change may be a hindrance to diffusion of innovation although it might not stop the innovation, it will slow it down. Rogers (1995) identified five critical attributes that greatly influence the rate of adoption. These include: relative advantage, compatibility, trialability and observability. According to Rogers, the rate of adoption of new innovations will depend on how the organization perceives its relative advantage, compatibility, trialability, observability and complexity. Thus, an individual's attitude determines his/her intention which further shapes the actual behaviour (Fathema, Shannon, & Ross, 2015).

Adoption of a new idea, behavior, or product (i.e., "innovation") does not happen simultaneously in a social system; rather it is a process whereby some people are more apt to adopt the innovation than others. Researchers have found that people who adopt an innovation early have different characteristics than people who adopt an innovation later. When promoting an innovation to a target population, it is important to understand the characteristics of the target population that will help or hinder adoption of the innovation. This theory was used to assess the role of project knowledge on the implementation of selected high-rise buildings projects in Nairobi city county, Kenya.

Stakeholder Theory

Stakeholder theory was developed by Freeman (1984) and provided the framework for an organization to engage stakeholders in many of its undertakings including projects. The theory fits in the operating environment of an airport where multiple stakeholders have competing interests in the projects being undertaken. Various scholars have added their voices to the role, value, and application of the theory in various aspects including the implementation of projects. The Stakeholder theory identifies the groups which are stakeholders of a project, and both recommends and describes methods by which the interests of those groups can be given due regard to by management (Freeman & Dmytriyev, 2017). Project stakeholders influence the quality of project and performance. Stakeholders can influence the project process all through to the final outcome; whose environment in which they live in is good or badly affected by the project, and who get combined advantages or costs directly or indirectly (Li, Ng & Skitmore, 2013).

Donaldson and Preston (2019) elaborated that the stakeholder model entails that all persons or groups with legitimate interests participating in an enterprise do so to obtain benefits and that there is no pre-set priority of one set of interests and benefits over another. Project stakeholders can either be internal or external the organization. Whether an individual or a group of individuals is external or internal to a project is determined by the point of view of the observer. The stakeholders of a project perceive that they have a stake in the project or the task and as a result of the perceived stake in the project they have certain expectations and hence they adopt a certain type of behavior which is sometimes constructive or destructive. It is important to identify stakeholder early to understand they needs and expectation and needs. This theory will be used to assess the role of stakeholder engagement on implementation of selected high-rise buildings projects in Nairobi city county, Kenya.

Conceptual Framework

A conceptual framework is a representation of the relationship expected to be seen between variables, or the characteristics or properties that needs to be studied. Conceptual frameworks can be written or visual and are generally developed based on a literature review of existing studies about your topic. In this study, the independent variables are project knowledge and stakeholder engagement while the dependent variable is the implementation of high-rise building projects.
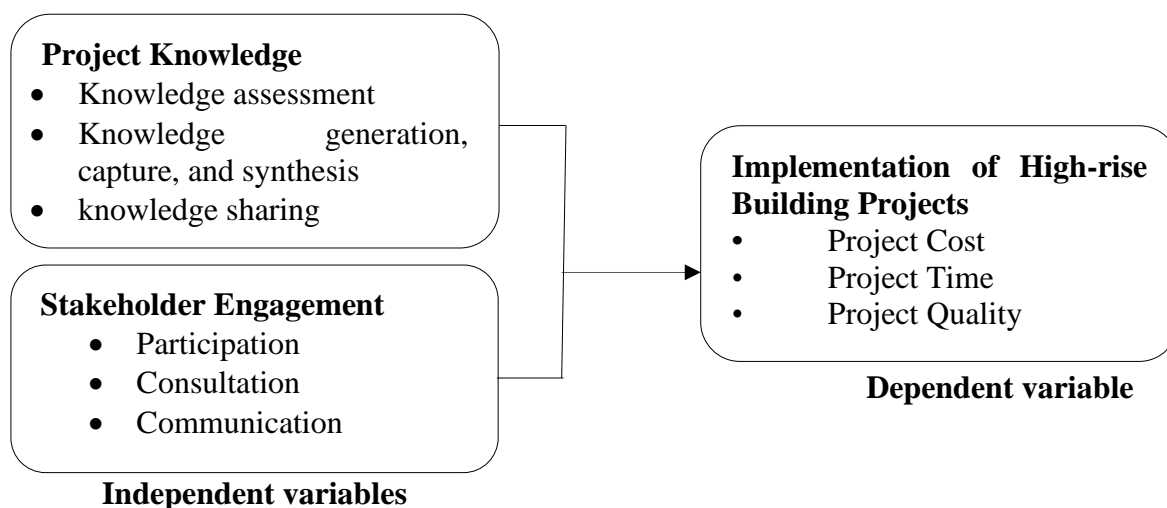

Figure 1: Conceptual Framework

Project Knowledge

Knowledge stems from performance, and the two operate together to enable the business to accomplish its objectives. Binder (2016) defines knowledge and performance as close loops that characterize a strong relationship among project's stakeholders. The greater the personnel' knowledge, the more efficiently they execute their tasks. As a result, Kerzner (2018) affirms that learning from performance increases one's degree of understanding and vise – versa. Valtakoski (2017) believe that knowledge resources generate better returns in the construction and engineering sectors since knowledge is limited and challenging to replicate or replace. Also, managing information enables businesses to build skills and abilities, maintain competitiveness, and boost value (Yayavaram et al., 2018). According to Mburia and Bett (2020), knowledge management tasks include knowledge acquisition, knowledge storage, knowledge production, knowledge exchange, and knowledge integration. Such a practice aids an organization in performing successfully and expanding its capacity. Hislop et al. (2018) adds that such knowledge management activities support organizations in solving issues connected with project execution, conducting strategic planning on the project, and making significant decisions.

North and Kumta (2018) contend that knowledge management is dependent on social and societal components that must be aligned with firm growth, invention, and competitive nature. This among the reasons why corporate culture is essential in knowledge management. Additionally, culture, infrastructure, workforce, and information technology are among the drivers of knowledge management. Webb (2017) argued that knowledge management practices enhance how organizations conduct out their tasks. Such practices enable the organization to improve its project quality and lower lead time since innovative methods that improve organizational performance are learned through knowledge production and sharing of organizational processes. Knowledge management also assists organizations in improving their culture. This can be accomplished through a knowledge sharing culture in which workers are encouraged to create and exchange knowledge about how to boost the performance of their organizations and specific projects.

Wamitu (2016) supports that an organization personnel are motivated to contribute to a project's success because they believe their efforts are recognized. In the project process, project evaluation is a critical component that can determine whether a project succeeds or fails. According to Denicol et al. (2020), human resources comprising knowledge, skills, and abilities are frequently emphasized as the most vital components and factors of project success or failure. This is related to leadership and training, in which a project coordinator with established leadership and managerial skills informs project stakeholders to a successful outcome by motivating and supplying them with the required knowledge and skills, while forming future project management teams via continuous learning (Spence et al., 2019).

Stakeholder Engagement

According to Novoa et al. (2017), stakeholders is the general populace including research scientists, government agencies such as policymakers, non-governmental entities, business owners and manufacturers, among other groups involved in a project. Sharkleton et al. (2018) states that engagement is essential to comprehending views and behaviors, promoting knowledge and social learning, developing collaborative research activities, reaching consensus and contractual arrangements, resolving conflicts, assisting with prioritizing and planning, and developing co-management programs.

Also, Sharkleton et al. (2018) describe stakeholder involvement as the process of engaging multiple players in project decision making, managerial actions, and knowledge generation. According to Reed et al. (2017), engagement can be started and supported from the top-down by external organizations, from the bottom-up by involved parties, or a mixture of both. These

variations are determined by the environmental governance context in which engagement occurs and the objectives it attempts to achieve. It may also differ in terms of interaction method, such as unidirectional dialogue, consultation, discussion, and co-production.

Rodolfo (2018) claim that stakeholder involvement entails sharing a significant knowledge with those who are part of achieving certain project decisions. As a result, their engagement guarantees effective human resource management, project feasibility, and comprehension. Omeka and Chege (2021) adds that the participation of relevant stakeholders has several benefits that include: ensuring that the project needs are met and represent its authentic goals and needs, encouraging transparency in project activities and responsibility for the project to its stakeholders.

Stakeholder participation provides decision-making groups with a wide range of policy possibilities. According to Boaz et al. (2018), strong stakeholder participation allows the group to learn from a wide range of stakeholders. Also, efficient involvement assists in integrating stakeholder requirements into corporate goals and serves as the foundation for effective method advancement (Kornec, 2020). Finding a point of consensus or common purpose allows a group of stakeholders to make a decision while also ensuring an investment generates a significant output. According to Martn, Reinhardt, and Gurtner (2021), stakeholder involvement leads to the development of long-term beneficial and productive relationships.

Stakeholder involvement results in a mutually beneficial connection and enables people to identify patterns as well as evolving challenges that are currently or will be affecting the projects in the future. Ulibarri, Scott, and Perez-Figueroa (2019) link stakeholder participation with the community in deciding the objectives that the relevant agencies might wish to accomplish for them. Project implementation without significant community input can result in projects that are ineffective or fail to meet most users' expectations.

Empirical Review
Project Knowledge and Project Implementation
Li et al. (2020) investigated the connections between information exchange, knowledge organization, and knowledge integration via knowledge creation for improved efficiency of large infrastructure projects in China. 243 valid questionnaires were gathered from groups engaged in complex infrastructure projects, and their responses were analyzed using partial least-squares structural equation modeling. The results indicate that information sharing has a substantial impact on project performance enhancement and appears as numerous mediation roles via knowledge organization, integration, and formation.

Ali, Musawir, and Ali (2018) investigated the effect of knowledge governance, knowledge sharing, and absorptive ability on project performance in project-based organizations (PBOs) in Pakistan's information and technology sector. 133 PBOs provided cross-sectional data on their projects. The partial least squares method was used to evaluate the data. According to the results, knowledge governance and knowledge sharing are primary determinants for increasing the project's absorptive capacity, which in turn enhances project performance considerably. Kasimu and Leje (2019) examined knowledge sharing techniques in Nigerian building companies. Engineers, quantity surveyors, architects, and builders in Abuja-based building companies were assigned 150 questionnaires. The data from the poll was analyzed using the descriptive technique of analysis. The findings indicated that face-to-face interactions at site and staff meetings, mentorship and teaching, project briefing and recruiting sessions, and internal training classes are among the common techniques of knowledge sharing practices.

Ogbonna (2020) sought to identify the barriers that staff members face when it comes to expressing their thoughts, abilities, and knowledge in order to avoid waste and complete

effective projects in the public sector in Nigeria and Ghana. A sample of 13 public-sector project supervisors was collected. Semi-structured conversations were used to gather data. The results revealed three obstacles to knowledge sharing: bureaucracy, misconduct, and allegiance to the parent organization. Mburia and Bett (2020) investigated the impact of knowledge management techniques on project success in Tharaka Nithi County, Kenya. The study used cross-sectional, explanatory, and descriptive research designs to identify 120 managers and staff in the study region. A census survey was conducted on all of the selected personnel. A questionnaire was used to gather primary data. The questionnaires were tested on 12 employees from nearby Embu County to ascertain their response rate. The research discovered that information sharing has an impact on project performance in Tharaka Nithi County.

Omondi and Muthimi (2019) investigated the impact of knowledge identification, gathering, sharing, and preserving methods on program execution at CARE International Kenya. The unit of study was CARE International Kenya, and the unit observations were CARE International Kenya workers. The study's target group consisted of 324 workers from CARE International Kenya's Nairobi headquarters. The researchers obtained a sample size of 179 respondents. Structured and semi-structured questionnaires were used to collect primary data from the sample group. The research discovered a relationship between knowledge repository, identification, accumulation, and exchange and project implementation.

Stakeholder Engagement and Project Implementation
Gonzalez-Porras, Heikkinen, and Kujala (2021) sought to understand stakeholder involvement in megaprojects in a contentious pulp mill project in Uruguay. The study data consisted of 96 newspaper reports between 2005 and 2009. The study's empirical analysis employed qualitative content analysis. The results describe the major events of the megaproject as well as how inter-stakeholder and stakeholder-firm factors arose and progressed throughout the project. According to the findings, stakeholder impacts are interdependent and non-exclusive, and stakeholder influence changes over time.

Demirkesen and Reinhardt (2021) investigated the impact of stakeholder participation on the success of Polish government initiatives. A descriptive research method was used in this research where data was gathered based on the subjects' opinions and points of view. Thirteen government initiatives were included in the target group. The project supervisors and other project support employees served as the observation group. The study tools were questionnaires. According to the study's findings, stakeholder participation is favorably and substantially associated to project success.

Oyeyipo et al. (2019) aimed to evaluate the determinants of stakeholders' management of building projects in Nigeria with an aim to addressing the different needs of stakeholders on such projects. The study included a sample of 59 building projects. The researchers employed a cross-sectional research methodology, with a questionnaire used to obtain data from the project leaders of the chosen construction projects. The intended respondents were chosen using the purposive sampling method. The findings indicated that stakeholders' potential for cooperation, the control level of stakeholder involvement, strong stakeholder involvement in the project, and efficient communication between stakeholders are the most important factors promoting stakeholders' management in building project delivery.

Tengan and Aigbavboa (2017) examined the level of stakeholder involvement in project execution as well as participation in project monitoring and assessment in Ghana. To gather data, an organized discussion guide and a questionnaire schedule were employed. Data from six major stakeholders was examined descriptively. According to the research, there was a high degree of stakeholder involvement in project execution, whereas stakeholder participation in tracking and

assessment of public projects at the local government level was very low. This was linked to stakeholders' insufficient knowledge, comprehension, participation, and time dedicated to project monitoring and assessment.

Omeka and Chege (2021) investigated the impact of stakeholder participation in monitoring and assessment on the success of Constituency Development Fund projects in Kiambu County, Kenya. The study employed descriptive and analytical research methods. The target population involved Constituency Development Fund projects in the area. The sample size involved 60 respondents. The findings revealed that stakeholders' participation in monitoring and assessment has a favorable and substantial impact on the success of the specified projects in the area. Furthermore, increased stakeholder participation in tracking and assessment would contribute to the achievement of such projects.

Kimanzi (2020) investigated the impact of stakeholder engagement on the timely delivery of public houses projects in Kenya. The research was based on a descriptive survey design, with a target group of 150 project managers, planners, coordinators, and site workers. The sample size was 108 participants. The quantitative data used was gathered using a structured questionnaire. According to the findings, there exists a substantial relationship between stakeholders' involvement in project planning and the accomplishment of housing projects.

RESEARCH METHODOLOGY

Research Design
This study used descriptive research design which involved gathering of data that describes events then organizing, tabulating depicting and describing the data. The choice of this research design was influenced by the fact that it enables the researcher to assess the situation in the study area at the time of study. Quantitative descriptive research design facilitates the assessment of events or conditions as they are in nature (Siedlecki, 2020). The data from the sample are examined without the manipulation of the study variables or conditions, therefore, making the research less complex, and less resource intensive (Bloomfield & Fisher, 2019; Siedlecki, 2020).

Target Population

Population refers to the entire group of individuals or items under consideration in any inquiry field that has common attributes (Mugenda & Mugenda 2003). The target population comprised consultants in-charge of high-rise buildings projects in Nairobi City County. According to the chairman of Council of Tall Buildings and Urban Habitat, there are 32 complete high-rise buildings in Nairobi County as shown in Appendix III (Mwenda, 2022). The choice of tall building houses as the focus of the study is justified by their increasing prominence in urban landscapes, particularly in rapidly growing cities like Nairobi, where vertical expansion is necessary to address housing and commercial needs efficiently. Tall building projects represent a complex and specialized category within the construction industry, requiring unique design, engineering, and management approaches. Understanding the factors influencing the successful implementation of these projects is crucial for fostering sustainable urban development and addressing contemporary urban challenges such as land scarcity and environmental sustainability. Additionally, tall buildings serve as symbols of economic development and modernization within cities, making them significant subjects for research aimed at optimizing urban planning, design, and management practices. Therefore, studying tall building houses contributes to the knowledge base needed to support sustainable and resilient urban growth in Nairobi City County and beyond. Although some of the high-rise buildings were completed many years ago, there still exist a management team to ensure sustainability of the projects through constant renovations and reinforcements. The management teams are made up between

2 to 4 property consultants. Therefore, the targeted population was made up of a maximum of 144 property consultants.

Sampling Technique and Sample Size

The study used purposive sampling. In this sampling technique, researchers rely on their judgement to choose the sample size. Respondents in purposive sampling are selected deliberately in order to provide important information that cannot be obtained from other choices (Saunders, Lewis, & Thornhill, 2012; Rai & Thapa, 2015). This technique is suitable for smaller sample size and a more homogenous population (Saunders et al., 2012). According to Tongco (2007), the use of purposive sampling ensures quality of the collected data if the targeted informants are reliable and competent. The choice of the purposive sampling was informed by the believe that the targeted participants had the required competence and conversant with management of the high-rise buildings and since they operate well established real estate companies. The researcher believed that the respondents selected purposively would help to achieve the study objectives. The researcher was guided in the following eligibility criteria in the implementation of the purposive sampling: consultants were chosen who had worked in their firm for not less than one year, and actively involved in decision making within the firm,. Using this approach, the researcher sampled 64 respondents.

Data Collection Instruments

This research used a questionnaire to collect primary data (Appendix II). According to Patton *et. al* (2016), a questionnaire is appropriate in gathering data and measuring it against a particular point of view. It provides a standardized tool for data collection. Structured and open questions were used to collect primary data from the field.

The researcher developed the questionnaire guided by the relevant literature and expert opinion from the supervisor. The questionnaires had six sections based on the study objectives. The questionnaire items were based on a 5-point Likert scale where the respondents were asked to tick as an indicator of whether they agreed or disagreed with the provided statements.

Pilot Study

A pilot study was conducted prior to actual data collection. A pilot study enables a researcher to test the suitability of research instruments and to assess if the instrument would help to achieve study objectives. According to Orodho (2010), a pre-test comprises between one to ten 10 % of the sample. Therefore, a pilot study was carried out with 6 property managers.

Data Analysis and Presentation

Data was analysed using SPSS Version 28. The choice of the software was influenced by its ability to appropriately produce several statistics. SPSS is also able to handle large amount of data and it is purposefully designed for social sciences. Descriptive statistics will be used to analyse the data in frequency distributions and percentages which will be presented in tables. The inferential statistics will include correlation and regression. Correlation help to establish the strength of the relationship between study variables where a significance.
A correlation coefficient between +0.35 and –0.35 is interpreted to mean weak or no relationship between the variables. A correlation coefficient between +0.35 and + 0.65 or between –0.35 and –0.65 is interpreted to imply a moderate relationship between the variables; a correlation coefficient of between +0.65 and 1.00 or between –1.00 and –0.65 is a measure of strong relationship between the variables. Significance was at less than 0.05 therefore any value with a p value of more than 0.05 was considered insignificant
The study also adopted multiple regression analysis to test the relationships between the variables. In the study, a statistical model was developed from the conceptual framework as follows: the dependent variable (DV) which in this study was performance of projects take the

variable [Y], and the coefficients of the independent variables (IV) denoted by X_1, X_2, were used to show how a change in the independent variables would predict changes in the dependent variable Statistically, analysis was carried out using the models.

RESEARCH FINDINGS AND DISCUSSION

Descriptive Analysis for Study Variables

In this section the study presents findings on Likert scale questions where respondents were asked to indicate their level of agreement with various statements that relate with the influence of project integration management practices on implementation of selected high-rise buildings projects in Nairobi city county, Kenya. They used a 5-point Likert scale where 1-strongly disagree, 2-disagree, 3-moderate, 4-agree, 5-strongly agree.

Project Knowledge

The first objective of the study was to determine the influence of project knowledge on the implementation of selected high-rise buildings projects in Nairobi city county, Kenya. Respondents were therefore asked to indicate their level of agreement on the listed statements related to project knowledge and the findings were as presented in Table 4.1.

Table 4. 1: Descriptive Statistics on Project Knowledge

Statement	Mean	Std. Dev.
Investment in n Research & Development helps to acquire knowledge	3.993	0.432
Employees meet informally and learn from one another	3.983	1.198
Sponsoring project team members to various exchange programs enables them to acquire new knowledge	3.97	0.824
We have regular internal training sessions so as to share knowledge	3.892	0.708
Regular briefings are held to disseminate new knowledge among employees	3.847	0.387
New knowledge is disseminated through internal memos	3.824	0.738
Critical information is clearly documented for ease of reference	3.749	0.701
Brain storming is encouraged for knowledge creation	3.747	0.838
New knowledge is created in the institution by training employees	3.719	0.45
Aggregate Score	**3.858**	**0.697**

The findings show that the respondents agreed on average that investment in research and development helps to acquire knowledge (mean= 3.993, SD= 0.432); that employees meet informally and learn from one another (mean= 3.983, SD= 1.198); that sponsoring project team members to various exchange programs enables them to acquire new knowledge (mean= 3.970, SD= 0.824); and that they have regular internal training sessions so as to share knowledge (mean= 3.892, SD= 0.708). Respondents further agreed that regular briefings are held to disseminate new knowledge among employees (mean= 3.847, SD= 0.387); that new knowledge is disseminated through internal memos   (mean= 3.824, SD= 0.738); and that critical information is clearly documented for ease of reference (mean= 3.749, SD= 0.701). They were also in agreement that brain storming is encouraged for knowledge creation (mean= 3.747, SD= 0.838); and that new knowledge is created in the institution by training employees (mean= 3.719, SD= 0.45).

The findings above supported by an aggregate mean of 3.858 and a small standard deviation of 0.697 show that the respondents were in agreement that there exists a relationship between project knowledge and the successful implementation of high-rise building projects in Nairobi City County, Kenya. The study finding resonate with the findings of Li et al. (2020) who emphasize the importance of information exchange and knowledge integration in enhancing

project performance, while and Ali et al. (2018) underscore the significance of knowledge governance and sharing in improving project outcomes. Additionally, the endorsement of internal training sessions, regular briefings, and documentation of critical information aligns with the findings of Hislop et al. (2018), who emphasize the role of knowledge management activities in addressing project execution issues and supporting strategic planning. These findings underscore the pivotal role of project knowledge in ensuring the successful implementation of high-rise building projects, emphasizing the importance of fostering a conducive environment for knowledge sharing and creation within project teams.

Stakeholder Engagement

The final specific objective of the study was to examine the influence of stakeholder engagement on implementation of selected high-rise buildings projects in Nairobi city county, Kenya. Respondents were therefore requested to indicate their level of agreement on the listed statements related to stakeholder engagement. Table 4.2 presents summary of finings obtained.

Table 4. 2: Descriptive Statistics on Stakeholder Engagement

Statement	Mean	Std. Dev.
Stakeholder analysis is always done to identify extent of decision making before selecting a stakeholder	3.860	1.174
The stakeholders are always informed as the project progresses by sending updated information	3.785	1.011
The project manager map stakeholders according to different levels of engagement.	3.769	1.196
All Stakeholders have a medium to provide feedback to the project	3.701	0.946
Stakeholder mapping ensures anyone important in the project planning process is not missed out	3.689	0.666
Stakeholders are sufficiently prepared and briefed to have well-informed opinions and decisions	3.674	0.45
Stakeholder mapping helps to understand what the key stakeholders are looking for as an outcome of the project	3.659	0.469
Training is conducted for Key stakeholders involved in the projects	3.619	1.211
Aggregate Score	**3.720**	**0.890**

The findings how that the respondents agreed on average that stakeholder analysis is always done to identify extent of decision making before selecting a stakeholder (mean= 3.860, SD= 1.174); that the stakeholders are always informed as the project progresses by sending updated information (mean= 3.785, SD= 1.011); that the project manager map stakeholders according to different levels of engagement (mean=3.769, SD= 1.196); and that all Stakeholders have a medium to provide feedback to the project (mean= 3.701, SD= 0.946). Respondents also agreed that stakeholder mapping ensures anyone important in the project planning process is not missed out (mean= 3.689, SD= 0.666); that stakeholders are sufficiently prepared and briefed to have well-informed opinions and decisions (mean= 3.674, SD= 0.45); that stakeholder mapping helps to understand what the key stakeholders are looking for as an outcome of the project (mean= 3.659, SD= 0.469); and that training is conducted for Key stakeholders involved in the projects (mean= 3.619, SD= 1.211).

The aggregate mean score of 3.720 (SD= 0.890) show that the respondents agreed on average that stakeholder engagement has some level of influence on implementation of selected high-rise buildings projects in Nairobi city county, Kenya. This observation aligns the study by Novoa et al. (2017) which emphasizes the importance of stakeholder involvement in decision-making processes, knowledge sharing, and collaborative research activities, all of which are essential

components of effective stakeholder engagement. Additionally, the research by Omeka and Chege (2021) underscores the positive impact of stakeholder participation and management on project success and delivery. Furthermore, the findings of Tengan and Aigbavboa (2017) highlight the significance of stakeholder involvement in project execution and monitoring, indicating its crucial role in ensuring project success. These studies support the notion that stakeholder engagement plays a pivotal role in influencing the implementation of high-rise building projects in Nairobi City County, Kenya, emphasizing the importance of fostering effective stakeholder relationships and engagement strategies to enhance project outcomes and overall success.

Project Implementation

The main objective of this study was to assess the influence of project integration management practices on implementation of selected high-rise buildings projects in Nairobi city county, Kenya. Respondents were requested to indicate their level of agreement on the listed statements related to project implementation.

Table 4. 3: Descriptive Statistics on Project Implementation

STATEMENT	Mean	Std. Dev.
Projects were completed within the set budget	2.756	1.166
Projects were completed on time	2.929	1.154
Projects meet desired quality	3.847	0.528
There was less complaints from project beneficiaries	3.947	0.381

The findings reveal that respondents, on average, expressed varying levels of agreement regarding the implementation of selected high-rise building projects in Nairobi City County, Kenya. For instance, the mean score for "Projects were completed within the set budget" was 2.756 with a standard deviation of 1.166, indicating a lower level of agreement and higher variability among responses regarding adherence to budgetary constraints. Similarly, the mean score for "Projects were completed on time" was 2.929 with a standard deviation of 1.154, suggesting a somewhat higher but still moderate level of neutrality concerning project timeliness. In contrast, respondents showed a higher level of agreement with statements related to project quality and stakeholder satisfaction, as reflected in the mean scores for "Projects meet desired quality" (3.847) and "There was less complaints from project beneficiaries" (3.947), with relatively lower standard deviations, indicating greater consensus among respondents.

These findings resonate with the literature, particularly the research by Hassan, Ahmad, and Zuhairato (2018), which emphasizes the importance of accurately defining project scope and effectively managing project activities to ensure adherence to budget and schedule constraints. Additionally, the study by Namakhoma (2015) underscores the significance of project planning and design variables in influencing project outcomes, including cost, schedule, and quality performance. The findings suggest that while there may be challenges in adhering to budget and schedule constraints, effective project integration management can significantly contribute to achieving desired project quality and stakeholder satisfaction in high-rise building projects in Nairobi City County, Kenya.

Correlation Analysis

The study computed Correlation analysis to determine the strength and the direction of the relationship between the variables being studied. If the correlation values are r = ±0.1 to ±0.29 then the relationship between the two variables is small, if it is r = ±0.3 to ±0.49 the relationship

is medium, and when r= ±0.5 and above there is a strong relationship between the two variables under consideration. Table 4.4 presents the findings obtained.

Table 4. 4: Correlation Analysis

		Project implementation	**Project Knowledge**	**Stakeholder Engagement**
Project implementation	Pearson Correlation	1		
	Sig. (2-tailed)			
	N	57		
Project Knowledge	Pearson Correlation	.804[**]	1	
	Sig. (2-tailed)	.000		
	N	57	57	
Stakeholder Engagement	Pearson Correlation	.797[**]	.053	1
	Sig. (2-tailed)	.000	.173	
	N	57	57	57

The correlation analysis also reveals a significant positive correlation between project knowledge and project implementation (r = 0.804, p < 0.05), suggesting that as project knowledge scores increase, project implementation also tends to increase. This highlights the critical role of knowledge management in project success, as discussed by authors such as Binder (2016) and Webb (2017), who emphasize the importance of knowledge acquisition, sharing, and integration in enhancing project performance.

Finally, the analysis demonstrates a significant positive correlation between stakeholder engagement and project implementation (r = 0.797, p < 0.05), indicating that as stakeholder engagement scores increase, project implementation also tends to increase. This underscores the importance of engaging stakeholders throughout the project lifecycle, as emphasized by authors like Sharkleton et al. (2018) and Ulibarri, Scott, and Perez-Figueroa (2019), who discuss the benefits of stakeholder involvement in decision-making, knowledge sharing, and project success.

Multiple Regression Analysis

The study aimed to assess the influence of project integration management practices on implementation of selected high-rise buildings projects in Nairobi city county, Kenya. To achieve the objective, the study conducted regression analysis. Using multiple regression analysis, the study examined the combined effect of project integration management practices (project knowledge and stakeholder engagement) on the implementation of selected high-rise buildings projects in Nairobi city county, Kenya. The findings were presented in three tables discussed in sub-sections below.

Model summary was used to establish amount of variation in the implementation of selected high-rise buildings projects in Nairobi city county, Kenya that can be explained by changes in project knowledge and stakeholder engagement.

Table 4.5: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.842[a]	.708	.686	.47052

a. Predictors: (Constant), Stakeholder Engagement and Project Knowledge

The model summary indicates that the predictors included in the model, namely project charter, project knowledge and stakeholder engagement, collectively explain a significant proportion of the variance in the outcome variable. The coefficient of determination (R Square) value of 0.708 suggests that approximately 70.8% of the variability in project implementation can be accounted for by the combined influence of the predictor variables. The adjusted R Square, which adjusts for the number of predictors in the model, remains high at 0.686, indicating that the model's explanatory power remains robust even after considering the complexity of the predictor variables. Therefore, the model summary underscores the importance of project knowledge and stakeholder engagement in predicting project implementation, as supported by the literature highlighting the significance of these factors in enhancing project success (Webb, 2017; Chiluwal & Mishra, 2018; Sharkleton et al., 2018).

To determine the fitness of the model to predict the dependent variable (implementation of selected high-rise buildings projects in Nairobi city county, Kenya), the study conducted an F-test at 95% confidence level. The significance of the study variables was determined based on the P-value of the variable coefficients at 0.05 significance level. The decision in the fitness of the model was accepted if p-values was below 0.05 and rejected if it was above 0.05.

Table 4. 6: Analysis of Variance

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	27.940	2	13.97	65.59	.000[b]
1	Residual	11.512	54	.213		
	Total	39.453	56			
a. Dependent Variable: project implementation						
b. Predictors: (Constant), Stakeholder Engagement and Project Knowledge						

The ANOVA results indicate that the regression model, which includes the predictors project knowledge and stakeholder engagement, significantly predicts the variance in implementation of selected high-rise buildings projects in Nairobi city county, Kenya, as evidenced by a significant F-value of 65.59 at $p < 0.05$. This suggests that the overall regression model accounts for a considerable amount of the variability observed in project implementation scores. These results suggest that the regression model is a good fit for predicting implementation of selected high-rise buildings projects in Nairobi city county, Kenya based on the selected predictor variables. This aligns with previous literature emphasizing the importance of stakeholder engagement and project knowledge in influencing project success (Farag, 2021; Kerzner, 2018; Chiluwal & Mishra, 2018; Sharkleton et al., 2018).

Table 4.7: Beta Coefficients of Study Variables

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
	(Constant)	1.043	.407		2.563	.016
1	Project Knowledge	.359	.171	.338	2.099	.040
	Stakeholder Engagement	.333	.104	.306	3.202	.005
a. Dependent Variable: project implementation						

The findings from coefficients table helps to fit the regression model. From the findings, the following regression equation was fitted;

$$Y = 1.043 + 0.359 X_1 + 0.333 X_2$$

Regarding Project Knowledge, the beta coefficient of 0.359 with a p-value of 0.040 indicates a statistically significant positive relationship between Project Knowledge and implementation of selected high-rise buildings projects in Nairobi city county, Kenya. This suggests that higher levels of knowledge management within the project team are associated with better project implementation outcomes. This resonates with the findings of Binder (2016), emphasizing the relationship between knowledge management and project performance. Moreover, the results support the assertions of Mburia and Bett (2020), who highlight the impact of knowledge management practices such as knowledge sharing and integration on project success.

Regarding Stakeholder Engagement, the beta coefficient of 0.333 with a p-value of 0.005 indicates a statistically significant positive relationship between Stakeholder Engagement and implementation of selected high-rise buildings projects in Nairobi city county, Kenya. This suggests that active involvement and engagement of stakeholders positively impact project implementation. This is supported by the findings of Sharkleton et al. (2018), who highlight the importance of stakeholder involvement in project decision-making and knowledge generation. Furthermore, the results align with the assertions of Omeka and Chege (2021), who emphasize the impact of stakeholder participation in project monitoring and assessment on project success.

Conclusions

The study underscores the essential role of knowledge management practices in enhancing project performance. The positive perceptions among respondents regarding various knowledge-sharing mechanisms highlight the conducive environment for knowledge acquisition and integration within project teams. The significant positive correlation between project knowledge and project implementation, supported by correlation and regression analyses, demonstrates the critical impact of knowledge management on project success. Consequently, the study concludes that investing in fostering a culture of knowledge sharing and integration within project teams positively influences implementation outcomes of selected high-rise buildings projects in Nairobi city county, Kenya and contributes to overall project success.

The study emphasizes the importance of active stakeholder engagement throughout the project lifecycle in ensuring project success. The positive perceptions among respondents regarding stakeholder engagement strategies indicate an inclusive approach to decision-making and knowledge sharing. The significant positive correlation between stakeholder engagement and project implementation, supported by correlation and regression analyses, underscores the critical role of stakeholder involvement in project success. Consequently, the study concludes that fostering effective stakeholder relationships and engagement strategies positively influences implementation of selected high-rise buildings projects in Nairobi city county outcomes and contributes to overall project success.

Recommendations

In light of the findings concerning project knowledge, it is recommended that organizations invest in knowledge management initiatives to foster a culture of knowledge sharing and collaboration within project teams. This includes implementing mechanisms such as regular training sessions, knowledge exchange programs, internal communication channels, and documentation repositories to facilitate the acquisition, dissemination, and integration of project-related knowledge. Moreover, organizations should encourage cross-functional collaboration and create opportunities for employees to leverage their expertise and experiences to enhance project outcomes. By prioritizing knowledge management, organizations can equip project teams with the necessary skills and information to address challenges, innovate solutions, and improve project performance.

Based on the findings related to stakeholder engagement, it is recommended that project managers prioritize stakeholder involvement and communication to build trust, alignment, and support for high-rise building projects. This involves identifying key stakeholders, understanding their interests and concerns, and actively involving them in project decision-making processes. Project managers should establish regular communication channels, such as stakeholder meetings, progress reports, and feedback mechanisms, to solicit input, address issues, and provide updates on project developments. Moreover, project teams should proactively manage stakeholder expectations and cultivate positive relationships to foster a collaborative project environment. By prioritizing stakeholder engagement, project managers can leverage stakeholder insights and resources to overcome challenges, mitigate risks, and achieve project objectives.

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