Journal of Entrepreneurship & Project Management



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ISSN: 2616-8464

Stratford Peer Reviewed Journals and Book Publishing
Journal of Entrepreneurship & Project Management
Volume 10||Issue 5||Page 27-46 ||October||2026|
Email: info@stratfordjournals.org ISSN: 2616-8464

Project Planning Practices and the Performance of Affordable Housing Projects in Nairobi County, Kenya: Evidence from Construction Professionals

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How to cite this article: **Weringa, W., Wanambisi, A. N. & Nambuswa, E. (2026). Project Planning Practices and the Performance of Affordable Housing Projects in Nairobi County, Kenya: Evidence from Construction Professionals.** ***Journal of Entrepreneurship & Project Management,*** **10(5), 27-46.** https://doi.org/10.53819/81018102t4434

Abstract

Delays, cost overruns, and quality challenges in affordable housing delivery indicate the need to understand the project management practices associated with project performance. This study examined the relationship between project planning practices and the performance of affordable housing projects in Nairobi County, Kenya, while considering project financing, project monitoring, and stakeholder engagement as additional predictors. A descriptive cross-sectional survey design was adopted, targeting construction professionals involved in seven government affordable housing project sites in Nairobi County, Kenya. A sample of 138 professionals was obtained from a target population of 210, and data were collected using structured Likert-scale questionnaires. The data were analysed using Pearson correlation, simple linear regression, and multiple linear regression. Project planning had a positive, statistically significant relationship with project performance ($r = .247$, $p = .003$) and explained 6.1% of the variance in performance in the simple regression model ($R^2 = .061$). In the multiple regression model, project planning remained the only statistically significant predictor ($\beta = .238$, $p = .006$). The full model was statistically significant, $F(4, 133) = 2.808$, $p = .028$, and explained 7.8% of the variance in project performance ($R^2 = .078$; adjusted $R^2 = .050$). Project financing, monitoring, and stakeholder engagement were not statistically significant unique predictors in the full model. The findings indicate that project planning practices, including formal scheduling, realistic timelines, clearly defined objectives, work breakdown structures, and advance resource planning, are significantly associated with affordable housing project performance. The study recommends strengthening planning processes, particularly realistic scheduling and risk consideration, to support project implementation.

Keywords: *Project Planning, Affordable Housing, Project Performance, Construction Professionals, Nairobi County*

Stratford Peer Reviewed Journals and Book Publishing
Journal of Entrepreneurship & Project Management
Volume 10||Issue 5||Page 27-46 ||October||2026|
Email: info@stratfordjournals.org ISSN: 2616-8464

1.0 Introduction

Housing is a fundamental human right and a cornerstone of sustainable urban development. Globally, the housing deficit has reached critical proportions: the United Nations estimates that more than 1.6 billion people lack access to adequate shelter, with projections indicating that this figure will rise to three billion by 2030 unless urgent systemic interventions are implemented (UN-Habitat, 2026). In sub-Saharan Africa, rapid urbanization, population growth, weak governance structures, and persistent financing gaps collectively constrain the delivery of affordable, quality housing at scale (Chileshe & Kavishe, 2024; Kamana et al., 2023). Within this context, the quality of project planning, encompassing scope definition, scheduling, resource allocation, and risk management, has emerged as a central determinant of project success across a range of infrastructure sectors (PMI, 2021). Systems Theory suggests that planning functions as the integrative mechanism that aligns project inputs with activity sequences, risk mitigation measures, and deliverable standards, making it an important project management practice that may help coordinate project scope, schedules, resources, and risk-management activities.

In Kenya, the housing challenge has reached a critical juncture. The National Housing Corporation (2023) estimates an annual housing deficit of approximately 250,000 units, concentrated predominantly in urban areas, particularly Nairobi County. The Government of Kenya responded through the Affordable Housing Project (AHP), launched under the Big Four Agenda of 2017 to 2022, with an ambitious target of constructing 500,000 affordable housing units within five years. Despite significant political will and initial funding commitments, project delivery across seven government-designated AHP sites in Nairobi County, namely Kibra Soweto B, Pangani, Starehe, Shauri Moyo A, Shauri Moyo B, Mukuru Phase Lot 1, and Mukuru Phase Lot 3, has lagged considerably behind targets. Chronic delays, cost overruns, quality shortfalls, and inadequate stakeholder participation continue to characterize implementation. A growing body of evidence from comparable public infrastructure contexts points to planning deficiencies, specifically the absence of clearly defined scopes, milestone-based schedules, integrated risk frameworks, and deliberate resource allocation plans, as proximate explanations for these implementation failures (Osei-Kyei & Chan, 2017).

Despite the importance of project planning in construction management, further empirical evidence is needed on its relationship with affordable housing project performance in Kenya, particularly when other project management practices are considered simultaneously. Previous Kenyan studies have examined project planning in other infrastructure and building project contexts (Otundo, 2025; Gangla et al., 2025). However, the extent to which project planning is associated with affordable housing project performance after accounting for financing, monitoring, and stakeholder engagement remains insufficiently established. This study addressed this gap using data from 138 construction professionals involved in affordable housing projects across seven sites in Nairobi County. By examining the four project management practices within a single multiple regression model, the study assessed whether project planning remained a statistically significant predictor of reported project performance after controlling for the other practices.

1.1 Statement of the Problem

Serious investments have been made in affordable housing projects in Nairobi County. However, many of these projects fail to meet stakeholder expectations, are delivered outside budget, and are of poor quality. These shortfalls point to weaknesses in how the projects are managed, yet the extent to which individual project management practices are associated with performance outcomes remains insufficiently understood. Such outcomes erode value for money and weaken public confidence in the Affordable Housing Projects.

https://doi.org/10.53819/81018102t4434

National data underscore the scale of the concern. Nairobi County faces intense housing pressure, with over 72 percent of urban households living in rental housing (Kenya National Bureau of Statistics (KNBS), 2025). On quality, only 47.2 percent of housing units had durable wall materials and only 58.9 percent had durable floor materials (KNBS, 2025). On stakeholder engagement, only 53.5 percent of the population were aware of the Affordable Housing Program, and just 11.9 percent of those who were aware had received any housing-related incentive (KNBS, 2025). On cost, construction input price inflation reached 7.48 percent in 2022, which put additional pressure on cost control and timely completion (KNBS, 2025).

Evidence from comparable public infrastructure contexts points to planning deficiencies, including the absence of clearly defined scopes, milestone-based schedules, integrated risk frameworks, and deliberate resource allocation plans, as possible explanations for implementation challenges (Osei-Kyei & Chan, 2017). Prior Kenyan studies have examined project planning in infrastructure and building project contexts (Munyoki, 2022; Mwangi & Mutuku, 2023; Otundo, 2025; Gangla et al., 2025). However, the relationship between project planning and affordable housing project performance in Kenya remains insufficiently established, particularly when project financing, project monitoring, and stakeholder engagement are considered simultaneously. This study addressed this gap by examining whether project planning remained a statistically significant predictor of reported performance when the other three management practices were included in the same regression model.

This gap matters because implementing agencies require empirical evidence to understand how different project management practices relate to affordable housing project performance. Without such evidence, decisions about capacity-building priorities may rely on assumptions rather than findings from the project context. This study addressed the gap by examining the individual and joint relationships of project planning, project financing, project monitoring, and stakeholder engagement with reported project performance. Project planning was the primary focus, while the other three practices were included to assess whether planning remained statistically significant when considered alongside them. The findings provide context-specific evidence to inform project planning improvement efforts, while recognizing that the four practices examined explain only part of the variation in project performance and that other factors may also contribute.

1.2 Research Objectives

i. To examine the relationship between projects planning practices and the performance of affordable housing projects in Nairobi County, Kenya.
ii. To assess the relationship between project financing practices and the performance of affordable housing projects in Nairobi County, Kenya.
iii. To examine the relationship between projects monitoring practices and the performance of affordable housing projects in Nairobi County, Kenya.
iv. To establish the relationship between stakeholder engagement practices and the performance of affordable housing projects in Nairobi County, Kenya.

1.3 Research Hypotheses

H_{01}: There is no statistically significant relationship between project planning practices and the performance of affordable housing projects in Nairobi County, Kenya.

H_{02}: There is no statistically significant relationship between project financing practices and the performance of affordable housing projects in Nairobi County, Kenya.

H_{03}: There is no statistically significant relationship between project monitoring practices and the performance of affordable housing projects in Nairobi County, Kenya.

H_{04}: There is no statistically significant relationship between stakeholder engagement practices and the performance of affordable housing projects in Nairobi County, Kenya.

2.1 Theoretical Review

2.1.1 Systems Theory

Systems theory views an organization or project as a complex system made up of interdependent components that worked together to achieve shared goals (Musheke & Phiri, 2021). Within project management, Lafhaj et al. (2024) noted that the theory stressed the value of structured planning processes that integrated human, technical, and financial elements in a coordinated way. Project planning was assessed through aspects such as realistic scheduling, resource allocation, and the use of a Work Breakdown Structure, suggesting that it was embedded systemically. PMI (2024) pointed out that effective planning ensured inputs such as time, resources, and scope were aligned across project phases to avoid disruptions.

Systems theory reinforced the view that poor planning in any subsystem could adversely impact the entire construction project. The theory also advocated feedback loops through iterative planning and control processes, allowing managers to adjust plans dynamically as projects grew complex (Mailani et al., 2024). This was especially pertinent to affordable housing projects in Nairobi County, where regulatory shifts, supply chain interruptions, and community dynamics often demanded adaptive management responses. The theory offered a valuable framework for examining project planning and could be supplemented by contemporary planning frameworks such as agile methods or earned value management.

2.1.2 Resource-Based View (RBV)

The Resource-Based View states that if the internal resources of an organization are valuable, rare, inimitable, and non-substitutable, they can be used to gain competitive advantage and better performance (Mailani et al., 2024). In the context of project management, RBV provides a compelling theoretical basis for examining project financing, since financial resources, technological assets, and skilled human capital are foundational to project execution capacity. Projects that secure stable, timely financing and deploy adequate material and human resources are inherently better positioned to achieve performance milestones (Richard & Amolo, 2025). The RBV thus guided the formulation of the second research hypothesis.

2.1.3 Goal-Setting Theory

Locke and Latham's (1990) Goal-Setting Theory argues that specific, measurable, achievable, relevant, and time-bound goals motivate behavior and guide effort allocation toward performance outcomes. Within project management, project monitoring operationalizes this principle by translating project goals into measurable indicators, establishing data collection routines, and deploying feedback mechanisms that enable corrective action. Studies in the Kenyan public housing construction sector have confirmed that proper monitoring frameworks, when effectively institutionalized, produce statistically significant performance improvements (Otieno et al., 2025). The theory thus guided the formulation of the third research hypothesis.

2.1.4 Stakeholder Theory

Stakeholder Theory asserts that project success is contingent upon the identification, engagement, and satisfaction of all parties who affect or are affected by the project (Edward et al., 2025). In housing projects, stakeholder engagement encompasses government agencies, development partners, contractors, professional consultants, and beneficiary communities.

Inclusive engagement processes reduce conflict, build social capital, and generate contextual intelligence that strengthens project design and implementation (Kabir, 2025; Hassan et al., 2025). The theory thus guided the formulation of the fourth research hypothesis.

2.2 Empirical Literature Review

2.2.1 Project Planning Practices and Performance

Project planning establishes the framework through which project objectives are translated into work packages, activity sequences, schedules, and resource requirements. In construction, planning quality is not only the existence of a plan; it also concerns whether the plan is realistic, coordinated, communicated, and useful during implementation. In affordable housing construction, planning provides a basis for coordinating design, procurement, labor, materials, construction activities, and inspections. A schedule that does not reflect activity dependencies or practical constraints may provide little protection against delays, even when a formal schedule exists. Moreover, Irfan et al. (2021) identify scope definition, scheduling, and risk planning as the three planning elements most strongly associated with on-time, on-budget delivery. Lin et al. (2024) analyzed questionnaire data from 214 megaprojects in China and established that project planning significantly enhances performance through the mediating role of integration which is the process by which planning aligns the activities and expectations of diverse project actors. Their findings suggest that planning's performance effect is not merely a product of documentation, but of the coordination it enables among stakeholders and project components. This mechanism is particularly relevant to affordable housing projects, where multiple government agencies, contractors, and community actors must be coordinated across complex delivery chains.

In planning, project timelines are important because they establish the sequence and expected duration of activities. A realistic timeline should account for dependencies between tasks, resource availability, procurement lead times, and potential implementation risks. In affordable housing projects, unrealistic schedules may contribute to missed milestones, poorly coordinated construction activities, and pressure to recover delays through costly adjustments. Okoye et al. (2025) conducted a descriptive survey on the effectiveness of planning and scheduling techniques in construction project performance in Nigeria. The study sampled 73 construction professionals and used Pearson correlation analysis. The results showed a significant correlation between Gantt chart use and performance ($r = 0.987$, $p = 0.029$), and between Critical Path Method use and performance ($r = 0.877$, $p = 0.033$). The authors concluded that effective use of scheduling techniques at the planning stage is critical for project delivery in terms of time, budget, and quality. Gantt charts and critical-path scheduling can help project teams identify task relationships and monitor whether implementation is progressing according to plan.

Clarity and documentation of project objectives also form a foundational dimension of planning. Irfan et al. (2021) identify scope definition as one of the three planning elements most strongly associated with project success, noting that projects with clearly documented scope, cost, time, and quality targets demonstrate higher levels of goal alignment and reduced scope creep. In the affordable housing context, where design changes and regulatory requirements frequently emerge during implementation, clear and communicated objectives provide the reference point against which changes can be assessed and controlled. Clarity of objectives and advance resource planning are complementary. Objectives define what must be achieved, while resource planning defines the labor, materials, and equipment required to achieve it.

Stratford Peer Reviewed Journals and Book Publishing
Journal of Entrepreneurship & Project Management
Volume 10||Issue 5||Page 27-46 ||October||2026|
Email: info@stratfordjournals.org ISSN: 2616-8464

Another important indicator of planning is the use of work breakdown structures. The robustness of a project's scope definition is fundamentally dependent on the quality of its Work Breakdown Structure (WBS). Recent empirical evidence demonstrates that the WBS is not merely a planning formality but a critical determinant of project success. Narvaez et al. (2020) conducted a questionnaire survey of 500 construction professionals to analyze whether integrating a Cost Breakdown Structure (CBS) with the WBS leads to more robust project definitions. The authors found that a WBS based on a standardized coding system was critical for avoiding task omissions, improving resource allocation, and anticipating schedule and budget deviations. Specifically, their structural equation modelling revealed a significant causal relationship between the integration of WBS and CBS and the achievement of project objectives, with strong direct effects on project success ($\beta = 0.985$ for managers). The study concluded that a clear definition of the project scope, achieved through a hierarchical and deliverable-oriented WBS, is the core of project management, as it allows for the implementation of planning, scheduling, budgeting, and risk management functions.

The choice of WBS orientation also has a direct impact on project completion time. Odedairo (2024) assessed the influence of two WBS orientations, Project Life Cycle (PLC-WBS) and Technology (T-WBS), on the completion time of two construction projects: the construction of a Liquefied Petroleum Gas (LPG) facility and the renovation of an office complex (ROC). Using a top-down decomposition methodology and the critical path method, the author found that the T-WBS orientation reduced the project completion time by 6 days (from 86 to 80 days) for the LPG project and by 2 days (from 128 to 126 days) for the ROC project, representing an 8% and 1.5% decrease in duration, respectively. The study concluded that the selection of WBS orientation influences the definition of project deliverables, network construction, and the aggregation of work packages, which in turn impacts the technological relationships between activities and the overall project schedule. In the context of affordable housing projects, where the scope is often complex and involves multiple stakeholders and work packages, a robust WBS is essential for coordinating material delivery, labor deployment, and contractor sequencing. The findings from both studies support the inclusion of WBS application as a critical indicator of project planning practice in affordable housing projects as it provides the structural foundation for accurate scheduling, resource allocation, and performance measurement.

2.2.2 Project Financing Practices and Performance

Project financing concerns the mobilization, availability, allocation, and timely release of financial resources required to implement project activities (Gatti, 2023). In affordable housing construction, financing affects the ability of project teams to procure materials, pay contractors and workers, maintain construction activities, and meet agreed project milestones. Its relevance can be assessed through timely disbursement of funds, availability of financial resources, resource allocation, and budget reliability. These dimensions are connected in that funds may be committed to a project, but delays in their release or weaknesses in their allocation can still interrupt implementation and affect delivery time, cost control, and quality. This means that the translation of financing into performance is not automatic.

In the affordable housing sector specifically, Gachigo (2026) examined financing constraints in public-private partnership (PPP) housing projects in Nairobi City County and found that while access to construction finance and financing structure positively influenced delivery performance, financing costs and payment delays constrained it. Government and PPP support positively moderated the relationship between financing constraints and delivery performance. This aligns with evidence from road infrastructure projects, where project financing had a positive and significant influence on performance, but delays in disbursement and payment

processes were identified as persistent challenges (Kirima et al., 2024). Furthermore, in their study of budget overruns in mega projects, Khan et al. (2025) found that inadequate cost estimation and the absence of contingency budgeting are significant contributors to financial overruns. The study concluded that meticulous cost estimation and contingency budgeting provide a financial buffer against unforeseen expenses.

In the Kenyan construction sector more broadly, Ngiri and Njagi (2022) found that strategic resource mobilization had a positive and significant influence on the performance of building construction companies in Nairobi ($r = 0.666$, $p < 0.001$), with the existence of a documented plan for resource use rated highly by respondents ($M = 4.57$). Together, these studies suggest that while financing adequacy and resource allocation are foundational, the timeliness of disbursement, budget reliability, and financial risk management are the binding constraints in Kenyan public projects like affordable houses. They also show why financing should remain part of the wider explanation of affordable housing performance, even where another practice emerges as the stronger unique predictor in a particular statistical model.

2.2.3 Project Monitoring Practices and Performance

Project monitoring involves systematically assessing implementation progress against planned objectives, timelines, and resource requirements. Monitoring enables project teams to identify deviations from the plan, document emerging challenges, and take corrective action. In affordable housing construction, this is relevant to identifying schedule slippage, cost variations, incomplete work, and failures to meet required quality standards. The frequency and effectiveness of supervision are foundational to monitoring. Onguti (2021) examined the completion of National Housing Corporation (NHC) housing projects in Nairobi County and found that monitoring had a positive influence on the efficiency of project completion (mean = 4.187, SD = 0.952) . This suggests that routine supervisory oversight is associated with better completion outcomes in public housing schemes.

The use and accuracy of monitoring tools determine whether supervision generates reliable information. Osman and Muchelule (2024) examined monitoring tools in affordable housing projects in Nairobi City County and found strong positive correlations between the utilization of logical frameworks ($r = 0.725$) and result frameworks ($r = 0.630$) with project performance, with the logical framework demonstrating the highest positive coefficient ($\beta = 0.421$, $p < 0.05$) . This suggests that when monitoring tools are structured to support decision-making rather than merely recording activity, they can significantly influence outcomes. Conversely, Jabongo (2025) assessed result-based monitoring in housing projects in Nairobi and found that while adoption was widespread, areas such as tool functionality and implementation fidelity required targeted improvement, noting that modern digital systems capable of real-time tracking were needed to enhance impact. Moreover, the regularity of progress reporting and its decision-support utility are the mechanisms through which monitoring translates into performance. Onyango and Ngugi (2026) examined government housing construction projects in Nairobi City County and found significant positive associations between data utilization and project performance, concluding that data-driven decision-making must be institutionalized to address budgetary inefficiencies and delayed implementation.

2.2.4 Stakeholder Engagement Practices and Performance

Stakeholder engagement in housing construction involves the identification, communication, and involvement of actors who affect or are affected by the project. Recent evidence from Nairobi's housing sector demonstrates a strong positive relationship between stakeholder engagement and project performance. Ombaki and Mbutu (2025) investigated project integration management practices across 102 public, private, and PPP housing projects in

Nairobi City County and found a strong positive correlation between stakeholder engagement and project performance ($r = 0.726$, $p < 0.05$). The study identified communication and stakeholder engagement as the strongest drivers of outcomes among all integration practices examined. This aligns with evidence from private residential building projects, where Wanjira (2024) reported that stakeholder engagement was a significant positive predictor of project performance ($\beta = 0.502$, $p < 0.001$).

However, in the context of affordable housing, the depth of engagement matters more than its mere presence. Beneficiary communities are directly affected by project outcomes, yet engagement often remains superficial. Jabongo et al. (2025) assessed stakeholder involvement in 127 housing projects by 15 real estate developers in Nairobi and found that while there was strong consensus on the value of stakeholder involvement, its effectiveness depended on whether stakeholders were meaningfully integrated into decision-making processes. When affordable housing projects rely on consultation rather than genuine participation, the engagement process fails to resolve conflicts or build community ownership, which are critical for the long-term sustainability of public housing schemes. This suggests that the quality of decision-making involvement, rather than just the frequency of communication, is what ultimately drives performance in affordable housing delivery.

3.0 Research Methodology

This study employed a descriptive cross-sectional survey design, which is appropriate for establishing the nature, magnitude, and direction of relationships among variables at a single point in time (Shinija, 2024).A quantitative approach facilitated the systematic measurement and statistical analysis of project management practices and project performance across the seven AHP sites. The target population comprised all construction and project management professionals engaged at these sites, including project managers, architects, professional engineers, and quantity surveyors, totaling 210 professionals.

3.1 Sample Size

The Yamane (1967) formula was applied to determine the minimum required sample size: $n = N / (1 + Ne^2)$, where $N = 210$ and $e = 0.05$, yielding $n = 138$. A stratified sampling technique was used to divide the professionals into four strata based on professional category. The strata comprised engineers (76), architects (49), project managers (44), and quantity surveyors (41), with corresponding sample sizes of 50, 32, 29, and 27, respectively. Simple random sampling was applied within each stratum to select individual respondents, with non-responding professionals replaced by other eligible professionals from the same category.

3.4 Data Analysis

Data were analyzed using SPSS Statistics Version 29. Descriptive statistics were used to summarize respondent characteristics and the study variables. Pearson correlation analysis examined the direction and strength of the relationships between the study variables. Simple linear regression was used to examine each project management practice individually, while multiple linear regression assessed the relationship between project planning and project performance after accounting for project financing, project monitoring, and stakeholder engagement. Relevant statistical assumptions were assessed before inferential analysis, including normality, homoscedasticity, multicollinearity, and independence of residuals. Statistical significance was evaluated at the .05 level.

4.0 Findings and Discussion

The study obtained 138 usable questionnaires from construction professionals across the seven affordable housing project sites in Nairobi County. Of the 138 professionals initially

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Email: info@stratfordjournals.org ISSN: 2616-8464

approached, 112 completed the questionnaire, representing an initial response rate of 81.2%. The remaining 26 non-completing respondents were replaced with eligible professionals from the same professional categories, resulting in 138 usable responses for analysis. The 14 construction professionals who participated in the pilot study were excluded from the main study and were not included in the final sample.

Demographic results revealed that male respondents constituted 73.2% of the sample, reflecting the historically male-dominated composition of the Kenyan construction industry. The largest age cohort was 31–40 years (45.7%), indicative of a relatively young professional workforce engaged in the AHP. A majority held bachelor's degrees (49.3%), with 34.1% holding postgraduate qualifications, suggesting a technically educated professional cadre. Engineers were the most represented profession (36.2%), followed by architects (23.2%), project managers (21.0%), and quantity surveyors (19.6%). Most respondents reported 5 to 10 years of experience (42.8%), and nearly half were employed by private contractors (47.8%), reflecting the public-private contractual structure of the AHP.

4.1 Descriptive Statistics

4.1.1 Project Financing

Table 1 presents the descriptive results for the project financing construct. The composite financing score (M = 15.261, SD = 3.490, theoretical range 5-25) indicates a moderate level of perceived financing adequacy, with respondents clustering predominantly at the neutral response category.

Table 1: Descriptive Statistics for Project Financing

Statement	SD f(%)	D f(%)	N f(%)	A f(%)	SA f(%)	Mean	Std. Dev.
Project funds were disbursed on time, ensuring that construction activities proceeded without financial interruptions	4 (2.9%)	21 (15.2)	58 (42.0)	45 (32.6)	10 (7.2)	3.261	0.907
Adequate financial resources were available throughout the entire project lifecycle	9 (6.5)	32 (23.2)	56 (40.6)	34 (24.6)	7 (5.1)	2.986	0.974
Financial resources were allocated to key project activities in a clear, planned, and transparent manner	1 (0.7)	18 (13.0)	58 (42.0)	54 (39.1)	7 (5.1)	3.348	0.798
The project budget was realistic and detailed, accurately reflecting actual costs	16 (11.6)	37 (26.8)	54 (39.1)	23 (16.7)	8 (5.8)	2.783	1.045
Contingency funds were available and effectively utilized when unexpected costs arose	14 (10.1)	28 (20.3)	59 (42.8)	34 (24.6	3 (2.2)	2.884	0.967

SD = Strongly Disagree, D = Disagree, N = Neutral, A = Agree, SA = Strongly Agree

The most positively rated item was B3 (M = 3.348), concerning transparent resource allocation, while the lowest-rated was item 4 (M = 2.783), addressing budget reliability and realism. The notable concentration of neutral responses across items (39.1% to 42.8%) suggests widespread ambivalence among professionals regarding the financial management environment. The low rating for budget reliability item four is particularly consequential, meaning that transparent

reporting is instrumental in maintaining contractor confidence and ensuring sustained commitment across project phases.

4.1.2 Project Planning

Table 2 presents descriptive results for project planning. The composite planning score (M = 17.116, SD = 3.720) was above the midpoint of the 5-25 scale, suggesting moderately positive perceptions of planning quality.

Table 2: Descriptive Statistics for Project Planning

Statement	SD f(%)	D f(%)	N f(%)	A f(%)	SA f(%)	Mean	Std. Dev.
A formal project schedule (e.g. Gantt chart, CPM network, or milestone plan) was developed and used	4 (2.9)	18 (13.0)	50 (36.2)	47 (34.1)	19 (13.8)	3.428	0.981
The project timeline was realistic and accounted for potential risks such as material supply delays, weather disruptions, and regulatory approvals	4 (2.9)	26 (18.8)	60 (43.5)	35 (25.4)	13 (9.4)	3.196	0.950
Project objectives including scope, cost, time, and quality targets were clearly defined, documented, and communicated	0 (0.0)	7 (5.1)	39 (28.3)	59 (42.8)	33 (23.9)	3.855	0.842
A Work Breakdown Structure (WBS) or similar task decomposition method was used to organize, assign, and track project activities	2 (1.4)	16 (11.6)	59 (42.8)	45 (32.6)	16 (11.6)	3.413	0.894
Labor, materials, and equipment were planned and scheduled in advance	4 (2.9)	26 (18.8)	58 (42.0)	35 (25.4)	15 (10.9)	3.225	0.974

Item which assessed whether project objectives including scope, cost, time, and quality targets were clearly defined, documented, and communicated, received the highest mean score (M = 3.855). In contrast, the item which assessed whether project timelines were realistic and accounted for potential risks, received the lowest mean score (M = 3.196). These findings suggest that respondents viewed the definition and communication of project objectives more favourably than the realism of project schedules and the consideration of potential disruptions. This difference highlights the importance of translating clearly defined objectives into realistic schedules that account for risks such as material supply delays, weather disruptions, and regulatory approvals. Strengthening the integration of scheduling, risk consideration, and advance resource planning may help project teams improve the implementation of affordable housing projects.

4.1.3 Project Monitoring

Table 3 presents the descriptive statistics for project monitoring. The composite monitoring score was M = 22.333 (SD = 4.149) on a possible range of 6–30. When expressed as an average per item, the mean was 3.722 on the five-point Likert scale, indicating generally favorable respondent ratings of monitoring practices.

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Email: info@stratfordjournals.org ISSN: 2616-8464

Table 3: Descriptive Statistics for Project Monitoring

Statement	SD f(%)	D f(%)	N f(%)	A f(%)	SA f(%)	Mean	Std. Dev.
The project received regular on-site supervision from project managers, consultants, or quality officers throughout implementation	1 (0.7)	4 (2.9)	44 (31.9)	65 (47.1)	24 (17.4)	3.775	0.792
Frequent supervision activities helped to identify and resolve implementation problems such as quality defects, delays, and material shortages at an early stage	3 (2.2)	11 (8.0)	47 (34.1)	52 (37.7)	25 (18.1)	3.616	0.946
Appropriate monitoring tools (e.g. site inspection checklists, progress trackers, defect logs, dashboards) were consistently used	1 (0.7)	11 (8.0)	43 (31.2)	49 (35.5)	34 (24.6)	3.754	0.942
The monitoring tools used provided accurate and timely information on project progress	0 (0.0)	6 (4.3)	40 (29.0)	58 (42.0)	34 (24.6)	3.870	0.836
Formal progress reports (weekly and/or monthly) were regularly prepared and submitted to relevant stakeholders	0 (0.0)	8 (5.8)	40 (29.0)	63 (45.7)	27 (19.6)	3.790	0.823
Progress reports supported effective decision-making and enabled corrective actions to be taken when the project deviated from the original plan	2 (1.4)	18 (13.0)	46 (33.3)	49 (35.5)	23 (16.7)	3.529	0.968

The fourth item (M = 3.870) received the highest rating, reflecting strong agreement that monitoring tools provided accurate and timely information. The sixth item (M = 3.529) , addressing the extent to which progress reports supported effective decision-making, was the lowest-rated item within the construct and the most practically consequential. This pattern shows a distinction between project monitoring as a data-gathering exercise and as a learning and decision-support system. The relatively weaker rating for item six suggests that while formal monitoring activities are conducted, their translation into actionable project improvements remains incomplete.

4.1.4 Stakeholder Engagement

Table 4 presents the descriptive statistics for stakeholder engagement. The composite score (M = 17.072, SD = 3.266) was comparable to that for project planning, indicating moderate perceived engagement quality.

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Table 4: Descriptive Statistics for Stakeholder Engagement

Statement	SD f(%)	D f(%)	N f(%)	A f(%)	SA f(%)	Mean	Std. Dev.
All key stakeholders including government agencies, contractors, consultants, and community representatives were actively and meaningfully involved throughout implementation	3 (2.2)	15 (10.9)	52 (37.7)	47 (34.1)	21 (15.2)	3.493	0.953
Frequent communication was maintained between the project team and all relevant stakeholders throughout the project lifecycle	3 (2.2)	14 (10.1)	58 (42.0)	53 (38.4)	10 (7.2)	3.384	0.849
The communication approaches used were effective in reducing misunderstandings, disputes, and conflicts among project stakeholders	2 (1.4)	25 (18.1)	59 (42.8)	44 (31.9)	8 (5.8)	3.225	0.863
Stakeholders were involved in key project decisions such as design modifications, budget reallocations, and schedule adjustments	6 (4.3)	21 (15.2)	49 (35.5)	44 (31.9)	18 (13.0)	3.341	1.029
Stakeholder involvement in decision-making enhanced accountability, community ownership, and acceptance of the project outcomes	1 (0.7)	5 (3.6)	50 (36.2)	70 (50.7)	12 (8.7)	3.630	0.726

The fifth item (M = 3.630) received the highest mean, reflecting positive perceptions of stakeholder involvement in enhancing accountability and ownership, while the third item (M = 3.225), concerning communication effectiveness in reducing conflicts, recorded the lowest rating. This divergence between nominal participation and substantive decision-making influence is widely documented in the public infrastructure literature (Osei-Kyei & Chan, 2017). The gap indicates that community voices, while present at engagement forums, are not meaningfully integrated into the implementation processes that shape project outcomes. Effective stakeholder engagement must move beyond informational and consultative levels to genuinely participatory modalities in which feedback demonstrably shapes project decisions.

4.1.5 Performance of Affordable Housing Projects

Table 5 presents the descriptive statistics for project performance. The composite score (M = 19.964, SD = 4.549, theoretical range 6-30) indicates moderate overall performance with notable variation across the six performance dimensions.

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Table 5: Descriptive Statistics for Project Performance

Statement	SD f(%)	D f(%)	N f(%)	A f(%)	SA f(%)	Mean	Std. Dev.
The project was completed within the originally agreed contractual timeframe	19 (13.8)	25 (18.1)	53 (38.4)	31 (22.5)	10 (7.2)	2.913	1.117
Schedule overruns, if any, were minimal and did not significantly delay the final handover of the project	15 (10.9)	32 (23.2)	54 (39.1)	31 (22.5)	6 (4.3)	2.862	1.027
The project was completed within the approved budget, with cost overruns kept to a minimum	4 (2.9)	26 (18.8)	56 (40.6)	38 (27.5)	14 (10.1)	3.232	0.969
Effective cost control measures such as value engineering, procurement management, and financial auditing were applied throughout the project	2 (1.4)	17 (12.3)	59 (42.8)	45 (32.6)	15 (10.9)	3.391	0.891
The completed housing units met the required construction quality standards and technical specifications	1 (0.7)	13 (9.4)	44 (31.9)	58 (42.0)	22 (15.9)	3.630	0.888
The housing units complied with Nairobi County building regulations, byelaws, and relevant statutory requirements	0 (0.0)	5 (3.6)	35 (25.4)	62 (44.9)	36 (26.1)	3.935	0.812

The descriptive results show a difference between the ratings for time and cost performance (M = 2.913; M = 2.862) and those for quality and regulatory compliance (M = 3.630; M = 3.935). The lower ratings for time and cost performance indicate that respondents viewed these aspects less favorably than quality and compliance with building regulations. These findings highlight the need to consider different dimensions of project performance rather than relying on a single overall assessment. However, the descriptive results alone do not establish the causes of the reported differences. The findings should therefore be interpreted as construction professionals' assessments of performance across the measured dimensions.

4.2 Correlation Analysis

Table 6 presents the Pearson correlation matrix for all study variables. Before regression analysis, statistical assumptions were assessed. Homoscedasticity was assessed using the Breusch–Pagan test, multicollinearity using variance inflation factors (VIFs), and residual independence using the Durbin–Watson statistic. The Breusch–Pagan test was non-significant (p = .798), all VIF values were below 1.03, and the Durbin–Watson statistic was 2.021. These results did not indicate substantial concerns regarding homoscedasticity, multicollinearity, or residual independence.

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Table 6: Pearson Correlation Matrix

Variable	**Mean**	**SD**	**1**	**2**	**3**	**4**	**5**
1. Project Financing	15.261	3.490	1.000	.055	−.133	.034	.035
2. Project Planning	17.116	3.720		1.000	−.087	.133	.247**
3. Project Monitoring	22.333	4.149			1.000	.027	.046
4. Stakeholder Engagement	17.072	3.266				1.000	.141
5. Project Performance	19.964	4.549					1.000

*** p < .01 (two-tailed). * p < .05 (two-tailed).*

Project planning demonstrated the only statistically significant positive correlation with project performance (r = .247, p = .003), indicating a weak but meaningful association. Project financing (r = .035, p = .687), project monitoring (r = .046, p = .593), and stakeholder engagement (r = .141, p = .099) did not attain statistical significance. The inter-predictor correlations were all low (|r| < .14), confirming minimal shared variance among the independent variables and supporting the interpretability of the subsequent regression models. The borderline result for stakeholder engagement (p = .099) merits interpretive caution, as a slightly larger sample or more granular operationalization of engagement quality might yield a significant result.

4.3 Regression Analysis

To address the primary objective of examining the relationship between project planning practices and project performance, a simple linear regression model was estimated with project planning as the predictor and project performance as the outcome. Project planning had a statistically significant positive association with project performance (r = .247, p = .003). The simple regression model was statistically significant, F(1, 136) = 8.867, p = .003, and explained 6.1% of the variance in project performance (R^2 = .061, adjusted R^2 = .054). The unstandardized regression coefficient was B = 0.302 (SE = 0.102), indicating that a one-unit increase in the planning composite score was associated with a 0.302-unit increase in the project performance score. The null hypothesis concerning project planning was rejected based on this simple regression analysis. However, because the study used a cross-sectional design, the result should be interpreted as a statistical association rather than evidence of causation.

The positive association between project planning and project performance is consistent with the emphasis placed on planning in project management research. Osei-Kyei and Chan (2017) examined critical success factors in the operational management of public-private partnership projects and provide a relevant regional point of comparison. However, their study context differs from the affordable housing projects examined here, so the findings should not be treated as directly equivalent. In the present study, the correlation coefficient indicates a positive but modest relationship between planning and reported performance. This suggests that planning is relevant to performance, while also indicating that other factors are likely to contribute to differences in project outcomes.

The item-level results provide further detail on the project planning practices assessed. Clear, documented, and communicated project objectives received the highest mean score (C3: M = 3.855), whereas realistic timelines that account for potential risks received the lowest mean score (C2: M = 3.196). The difference suggests that respondents rated objective clarity more favorably than the realism of project timelines and consideration of potential risks. The other indicators assessed formal project schedules, the use of a Work Breakdown Structure or a similar task-decomposition method, and advance planning for labor, materials, and equipment. These results suggest that planning improvement efforts could give particular attention to

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developing realistic schedules and incorporating potential risks into timeline preparation, alongside maintaining clear project objectives.

4.4 Contextual Analysis: Full Model and Competing Predictors

To contextualize the planning finding and test whether its significance was robust to the inclusion of competing predictors, a multiple linear regression model was estimated with all four practices as simultaneous predictors. Simple regression results for all four predictors are presented in Table 7, followed by the multiple regression results in Table 9.

Table 7: Simple Linear Regression Results: All Predictors

Variable	R	R^2	Adj. R^2	F	p	B	SE	β	T	p (t)
Project Financing	.035	.001	−.006	0.163	.687	0.045	0.111	.035	0.404	.687
Project Planning	.247	.061	.054	8.867	.003	0.302	0.102	.247	2.978	.003
Project Monitoring	.046	.002	−.005	0.287	.593	0.050	0.093	.046	0.536	.593
Stakeholder Engagement	.141	.020	.013	2.766	.099	0.197	0.118	.141	1.663	.099

B = unstandardised coefficient; SE = standard error; β = standardised coefficient

The simple regression results in Table 8 indicate a statistically significant positive relationship between project planning and reported project performance B = .302 (SE = .102, β = .247, p = .003). The null hypothesis (H01) was rejected, indicating that project planning was significantly associated with reported project performance when examined independently. However, the result does not establish causation because the study used a cross-sectional design.

In the simple regression analysis, project financing was not a statistically significant predictor of project performance (B = 0.045, β = .035, p = .687, R^2 = .001). The null hypothesis was therefore not rejected based on this analysis. The result indicates that project financing scores were not significantly associated with reported project performance when financing was examined on its own in this sample. However, this finding does not establish that financing is unimportant to affordable housing delivery. Its relationship with performance may depend on other conditions that were not directly examined in this analysis.

Project monitoring was not a statistically significant predictor of project performance in the simple regression analysis (B = 0.050, β = .046, p = .593, R^2 = .002). The null hypothesis was therefore not rejected based on this analysis. Although project monitoring received a relatively high composite mean score (M = 22.333), its descriptive rating did not correspond to a statistically significant relationship with project performance in the simple regression model. A high mean score describes respondents' ratings of monitoring practices; it does not by itself demonstrate that those practices are associated with better performance. Further research using objective monitoring records could help clarify this relationship.

Stakeholder engagement was not a statistically significant predictor of project performance in the simple regression analysis (B = 0.197, β = .141, p = .099, R^2 = .020). The null hypothesis was therefore not rejected based on this analysis. Although the coefficient was positive, the relationship did not reach the conventional .05 significance threshold. The result should not be interpreted as evidence that stakeholder engagement has no value. Further research could examine whether different forms or levels of stakeholder participation are associated with performance in affordable housing projects.

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Table 8: Multiple Linear Regression Results

Predictor	B	SE	*β*	t	P	VIF
(Constant)	10.269	3.756		2.734	.007	
Project Financing	0.035	0.110	.027	0.320	.750	1.021
Project Planning	0.291	0.103	.238	2.813	.006	1.028
Project Monitoring	0.074	0.092	.067	0.798	.426	1.026
Stakeholder Engagement	0.149	0.117	.107	1.270	.206	1.021

R^2 = .078, Adjusted R^2 = .050, F(4, 133) = 2.808, p = .028; Durbin-Watson = 2.021; Breusch-Pagan p = .798; all VIF < 1.03

The overall multiple regression model was statistically significant, F(4, 133) = 2.808, p = .028, explaining 7.8% of the variance in project performance (R^2 = .078; adjusted R^2 = .050). Project planning was the only statistically significant unique predictor in the model (B = 0.291, SE = 0.103, β = .238, t = 2.813, p = .006). The null hypothesis that there was no statistically significant relationship between project planning practices and project performance was rejected. Project financing (β = .027, p = .750), project monitoring (β = .067, p = .426), and stakeholder engagement (β = .107, p = .206) were not statistically significant unique predictors after the four practices were considered simultaneously. The corresponding null hypotheses were not rejected. These findings indicate that project planning was positively associated with reported project performance after accounting for the other three practices. However, the model's modest explanatory power indicates that other factors not included in the analysis may also be associated with project performance.

5.0 Conclusion

This study examined the relationship between project planning practices and the performance of affordable housing projects in Nairobi County, Kenya, while considering project financing, project monitoring, and stakeholder engagement. Project planning had a statistically significant positive association with project performance in the simple regression analysis (r = .247, p = .003). In the multiple regression model, project planning remained the only statistically significant unique predictor (β = .238, p = .006) after the other three practices were included. The full model was statistically significant, F(4, 133) = 2.808, p = .028, but explained a modest proportion of the variance in project performance (R^2 = .078; adjusted R^2 = .050). These findings suggest that project planning is an important correlate of reported performance in the affordable housing projects examined, while recognizing that other factors may also contribute to performance. Because the study used a cross-sectional design and self-reported data, it does not establish causal relationships.

The descriptive results identified differences among the project planning indicators. Clear, documented, and communicated project objectives received the highest mean score (M = 3.855), while realistic timelines that account for potential risks received the lowest (M = 3.196). The remaining indicators assessed formal project schedules, the use of a Work Breakdown Structure or a similar task-decomposition method, and advance planning for labor, materials, and equipment. The results suggest that project planning improvement efforts could focus on strengthening the realism of project timelines and the consideration of potential risks, while maintaining clear project objectives and systematic organization of activities.

Project financing, project monitoring, and stakeholder engagement were not statistically significant unique predictors of project performance in the multiple regression model. These results should not be interpreted as evidence that the practices are unimportant. Rather, their independent associations with performance were not statistically significant after the other practices were taken into account. Because the study used a cross-sectional design and self-reported data, it cannot establish causal relationships or determine the mechanisms underlying

these findings. Further research using longitudinal data, objective project records, and perspectives from additional stakeholder groups could provide a fuller understanding of the factors associated with affordable housing project performance.

6.0 Recommendations

Implementing agencies and project teams involved in affordable housing delivery should strengthen planning before construction begins. Project objectives and scope should be clearly documented, and project schedules should reflect realistic activity durations, dependencies, and potential implementation risks. Work Breakdown Structures or similar task-decomposition methods may be used, where appropriate, to organize activities and clarify their sequencing. Advance planning for labor, materials, and equipment should be linked to the project schedule to support coordinated implementation. Particular attention should be given to realistic timelines and risk consideration because this planning indicator received the lowest mean score in the study.

Although project financing was not a statistically significant unique predictor in the multiple regression model, implementing agencies should continue to monitor funding adequacy, disbursement timeliness, and alignment between approved budgets and work plans. Financial management arrangements should support transparent reporting and coordination between project activities and available resources. These recommendations are general management considerations; the present study did not directly test the effects of specific financing reforms.

Project teams should ensure that monitoring activities produce information that can inform management decisions and corrective action. Periodic reviews could assess progress against schedules, identify implementation challenges, and document actions taken in response to monitoring findings. Monitoring responsibilities and follow-up actions should be clearly assigned, and records should show whether identified issues were addressed. Since monitoring was not a statistically significant unique predictor in this study, further assessment is needed to determine which monitoring approaches are most closely associated with performance in affordable housing projects.

Implementing agencies should provide opportunities for relevant stakeholders to contribute to project discussions and should document how their feedback is considered in planning and implementation decisions. Engagement processes should go beyond recording attendance at consultation meetings and should include clear records of concerns raised, responses provided, and follow-up actions taken. Further research could examine whether different forms of stakeholder participation are associated with project performance and how engagement practices operate across the stages of affordable housing project delivery.

https://doi.org/10.53819/81018102t4434

REFERENCES

Chileshe, N., & Kavishe, N. (2024). Affordable housing and sustainable communities in sub-saharan Africa: Implementation drivers, challenges and practices. *Sustainable Development Goals Series*, 133–152. https://doi.org/10.1007/978-3-031-56241-9_9

Edward, F. R., Prem Sagar, M., & Grushka-Cockayne, Y. (2025). A stakeholder theory perspective for project management. *International Journal of Project Management*, *43*(7), 102764. https://doi.org/10.1016/j.ijproman.2025.102764

Gachigo, J. (2026). Financing constraints and delivery performance of affordable housing projects in Kenya: Evidence from public–private partnerships. *African Development Finance Journal*, *9*(4). https://doi.org/10.66563/tk839255

Gangla, I. S., Kingo'riah, G. K., & Nyagwachi, J. N. (2025). Project Management Practice and Performance of Building Projects in Kenya: Case of Migori, Homabay and Kisii Counties. *International Journal of Innovative Science and Research Technology*, Article IJISRT25SEP449. https://doi.org/10.38124/ijisrt/25sep449

Gatti, S. (2023). *Project finance in theory and practice* (4th ed.). Elsevier.

Hassan, A., Mohamed, A., Ebrahim, M., Micheal, J., & Ali, Z. (2025, June 14). *Stakeholder engagement and conflict management in mega projects: A systematic review and best practice framework*. https://www.researchgate.net/publication/392722948_Stakeholder_Engagement_and_Conflict_Management_in_Mega_Projects_A_Systematic_Review_and_Best_Practice_Framework

Irfan, M., Khan, S. Z., Hassan, N., Hassan, M., Habib, M., Khan, S., & Khan, H. H. (2021). Role of project planning and project manager competencies on public sector project success. *Sustainability*, *13*(3), Article 1421. https://doi.org/10.3390/su13031421

Jabongo, G. W. (2025). The influence of result-based monitoring on the performance of housing projects in Nairobi. *Journal of Entrepreneurship and Project Management*, *10*(2), 20–32. https://doi.org/10.47941/jepm.2852

Jabongo, G. W., Owino, F. O., & Nyamweno, I. (2025). The influence of stakeholder involvement on the performance of housing projects in Nairobi. *Journal of Business and Strategic Management*, *10*(13), 16–30. https://doi.org/10.47941/jbsm.3136

Kabir, H. T. (2025, February 13). *Citizens" participation and engagement in project conceptualization in local government*. https://www.researchgate.net/publication/388927797_Citizens

Kamana, A. A., Radoine, H., & Nyasulu, C. (2023). Urban challenges and strategies in African cities – A systematic literature review. *City and Environment Interactions*, *21*, 100132–100132. https://doi.org/10.1016/j.cacint.2023.100132

Khan, A., Ali, H., Mohamed, A., Jonson Micheal, & Ahmed, E. (2025, June 17). *Mitigation strategies in project management to control budget overruns in mega projects*. https://www.researchgate.net/publication/392768251_Mitigation_Strategies_in_Project_Management_to_Control_Budget_Overruns_in_Mega_Projects

Kirima, N. N., Minja, D., & Njoroge, J. (2024). Effect of project financing on the performance of road infrastructure development projects in Kenya. *Reviewed Journal of Social Science & Humanities*, *5*(1), 80–92. https://doi.org/10.61426/rjssh.v5i1.165

Kenya National Bureau of Statistics (KNBS). (2025, May 8). *2025 Economic survey - Kenya National Bureau of Statistics*. Kenya National Bureau of Statistics. https://www.knbs.or.ke/reports/2025-economic-survey/

Lafhaj, Z., Rebai, S., AlBalkhy, W., Hamdi, O., Mossman, A., & Alves Da Costa, A. (2024). Complexity in construction projects: A literature review. *Buildings*, *14*(3), 680. https://doi.org/10.3390/buildings14030680

Lin, W., Wang, G., Ning, Y., Ma, Q., & Chen, Y. (2024). Examining the effect of project planning on megaproject performance: The conditional mediating role of integration. *Developments in the Built Environment*, *18*, 100392–100392. https://doi.org/10.1016/j.dibe.2024.100392

Locke, E. A., & Latham, G. P. (1990). *A theory of goal setting and task performance*. Prentice Hall.

Mailani, D., Hulu, M. Z. T., Simamora, M. R., & Kesuma, S. A. (2024). Resource-based view theory to achieve a sustainable competitive advantage of the firm: Systematic literature review. *International Journal of Entrepreneurship and Sustainability Studies*, *4*(1), 1–15. https://doi.org/10.31098/ijeass.v4i1.2002

Munyoki, S. K. (2022). *Factors influencing completion of construction projects; a case of construction projects in Nairobi Kenya*. University of Nairobi. https://erepository.uonbi.ac.ke/server/api/core/bitstreams/4df1a0ba-7326-41ed-a92e-2c4e1c403ad4/content

Musheke, M. M., & Phiri, J. (2021). The effects of effective communication on organizational performance based on the systems theory. *Open Journal of Business and Management*, *9*(2), 659–671. https://doi.org/10.4236/ojbm.2021.92034

Mwangi, M. W., & Mutuku, M. (2023). Project governance and performance of affordable housing projects in Kenya. *Strategic Journal of Business & Change Management*, *10*(3). https://doi.org/10.61426/sjbcm.v10i3.2708

Narvaez, A. C., Fernández, A. P., Mateo, M. O., & Pérez, P. B. (2020). Integration of cost and work breakdown structures in the management of construction projects. *Applied Sciences*, *10*(4), 1386. mdpi. https://www.mdpi.com/2076-3417/10/4/1386

National Housing Corporation. (2023). *National Housing Corporation strategic plan 2023 – 2027*. https://www.nhckenya.go.ke/down/NATIONAL%20HOUSING%20CORPORATION%202023.2027.pdf

Ngiri, G. M., & Njagi, E. (2022). Influence of strategic resource mobilization on the performance of building construction companies in Nairobi Kenya. *International Journal of Business Management, Entrepreneurship and Innovation*, *4*(2), 69–78. https://doi.org/10.35942/jbmed.v4i2.271

Odedairo, B. O. (2024). Assessing the influence of various work breakdown structures on project completion time. *Engineering, Technology & Applied Science Research*, *14*(2), 13773–13779. https://doi.org/10.48084/etasr.7023

Okoye, C. U., Echeme, I. I., Anyanwu, C. I., & Akaun, G. (2025). *Effectiveness of project planning and scheduling techniques in construction project performance*. https://pmworldlibrary.net/wp-content/uploads/2025/10/pmwj157-Oct2025-Okoye-et-al-Effectiveness-of-Project-Planning-and-Scheduling-Techniques.pdf

Ombaki, M. K., & Mbutu, P. P. (2025). Project Integration Management Practices and performance of housing projects in Nairobi City, Kenya. *International Journal of Social Sciences Management and Entrepreneurship (IJSSME)*, *9*(3). https://sagepublishers.com/index.php/ijssme/article/view/999/

Onguti, M. N. (2021). *Human and operational factors influencing completion of housing projects in Kenya: A case of National Housing Corporation projects in Nairobi County, Kenya [Master's thesis, University of Nairobi]*. https://erepository.uonbi.ac.ke/server/api/core/bitstreams/9228b178-5b16-4b97-8698-932d7c0f4f61/content

Osei-Kyei, R., & Chan, A. P. C. (2017). Perceptions of stakeholders on the critical success factors for operational management of public-private partnership projects. *Facilities*, *35*(1/2), 21–38. https://doi.org/10.1108/f-10-2015-0072

Osman, I., & Yusuf Muchelule, D. (2024). Monitoring tools and performance of affordable housing projects in Nairobi City County, Kenya. *International Journal of Social Sciences Management and Entrepreneurship (IJSSME)*, *8*(2). https://sagepublishers.com/index.php/ijssme/article/view/487/

Otieno, E., Onyango, & Ngugi, L. (2025). Assessing the effectiveness of monitoring and evaluation frameworks in enhancing performance of public housing construction projects in Nairobi City County, Kenya. *International Journal of Management and Commerce Innovations*, *13*, 487–498. https://doi.org/10.5281/zenodo.18754834

Otundo, M. R. (2025, August 3). *Critical success factors for managing infrastructure projects under resource constraints: Evidence from county governments in Kenya*. https://www.researchgate.net/publication/394259932_Critical_Success_Factors_For_Managing_Infrastructure_Projects_Under_Resource_Constraints_Evidence_From_County_Governments_In_Kenya

PMI. (2021). *The standard for project management and a guide to the project management body of knowledge (PMBOK guide)*. (7th ed.). Project Management Institute.

Project Management Institute. (2024). *What Is Project Management, Approaches, and PMI*. Pmi.Org. https://www.pmi.org/about/what-is-project-management

Richard, N., & Amolo, A. E. J. (2025). Project resource management and performance in housing construction projects. *International Journal of Finance & Banking Studies (2147-4486)*, *14*(2), 118–129. https://doi.org/10.20525/ijfbs.v14i2.3979

Shinija, N. A. (2024). Descriptive research design. *ResearchGate*. ResearchGate. https://doi.org/10.13140/RG.2.2.19205.36325

UN-Habitat. (2026). *World cities report 2026: The global housing crisis: Pathways to action | UN-Habitat*. Unhabitat.Org. https://unhabitat.org/world-cities-report-2026

Wanjira, J. W. (2024). *Monitoring and evaluation process on performance of private residential building projects in Nairobi County Kenya*. Anu.Ac.Ke. http://repository.anu.ac.ke/handle/123456789/999

Yamane, T. (1967). *Statistics: An introductory analysis* (2nd ed.). Harper & Row.