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# Project Management Practices and Performance of National of National Housing Corporation Projects in Nairobi City County, Kenya

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*Abstract:* **Adequate housing is fundamental to sustainable urban development, supporting access to infrastructure, essential services, economic participation, safety, and improved living conditions. In Kenya, the Affordable Housing Programme seeks to expand access to quality and affordable housing, particularly for low- and middle-income earners, with the National Housing Corporation (NHC) playing a central role in achieving national development goals under Vision 2030. Despite these efforts, the housing construction sector continues to face challenges including cost and time overruns, material wastage, quality concerns, and project failures. This study examined the influence of project management practices on the performance of National Housing Corporation projects in Nairobi City County, Kenya. Specifically, the study assessed the effects of communication management, risk management, stakeholder management, and scope management on project performance. A descriptive research design was adopted, and data were collected from a proportionately stratified and randomly selected sample using semi-structured questionnaires. Data were analyzed using descriptive and inferential statistics. The findings revealed that all four project management practices significantly and positively influenced project performance. Risk management emerged as the strongest predictor ($\beta = 0.510$, $p < 0.001$), followed by stakeholder management ($\beta = 0.277$, $p < 0.001$), communication management ($\beta = 0.172$, $p < 0.001$), and scope management ($\beta = 0.101$, $p = 0.003$). The study concludes that effective project management practices are critical to improving the performance of housing projects. Strengthening communication systems, institutionalizing comprehensive risk management processes, enhancing stakeholder engagement, and ensuring effective scope control can significantly improve project outcomes. The study recommends that the NHC adopt robust project management frameworks to enhance project efficiency, effectiveness, and sustainability.**

*Keywords:* **Affordable housing, project management practices, communication management, risk management, stakeholder management, scope management, project performance, National Housing Corporation, Kenya.**

## 1. INTRODUCTION

Housing construction is a critical driver of socio-economic development and urban sustainability. In Kenya, the housing sector faces a substantial deficit, with annual demand exceeding 250,000 units while only about 50,000 units are supplied, resulting in widespread housing shortages and the growth of informal settlements (Giti, K'Akumu, & Ondieki, 2020). The challenge is compounded by rapid urbanization, inadequate infrastructure, and limited investment in affordable housing, particularly for low-income households (Njogu, Namusonge, & Oluoch, 2021). Recognizing the importance of housing to national development, Kenya's Vision 2030 identifies housing and urban development as key priorities, while the construction sector continues to make a significant contribution to the country's GDP (KNBS, 2023; GOK, 2020).

Globally and across Africa, housing projects frequently experience performance challenges, including cost overruns, schedule delays, and quality deficiencies. Studies from Ghana, Nigeria, Uganda, and Tanzania attribute these challenges to ineffective planning, weak stakeholder engagement, inadequate risk management, financing constraints, and poor project coordination (Aljohani, Ahiaga-Dagbui, & Moore, 2020; Oke, Aghimien, & Aigbavboa, 2017; Kisitu & Ngoma, 2019; Kikwasi, 2018). These findings underscore the importance of effective project management practices in enhancing project outcomes.

Project performance is commonly assessed using indicators such as cost, time, quality, and stakeholder satisfaction (Ali et al., 2018; Cserháti & Szabó, 2021). Existing literature suggests that project management practices, particularly communication management, risk management, stakeholder management, and scope management, play a critical role in achieving project success (PMI, 2020; Schwalbe, 2020). However, despite extensive research on project management, evidence on the influence of these practices on housing project performance in Kenya remains limited.

The National Housing Corporation (NHC), established to facilitate affordable housing delivery in Kenya, plays a central role in implementing government housing programmes (NHC, 2024). Despite this mandate, housing projects continue to face challenges related to delays, cost overruns, funding constraints, and quality concerns (NHC, 2024; Deloitte, 2019). While previous studies have examined project management practices in various sectors, limited attention has been given to housing projects implemented by NHC. This study therefore sought to examine the effect of project management practices—specifically communication management, risk management, stakeholder management, and scope management—on the performance of National Housing Corporation projects in Kenya.

## 2. LITERATURE REVIEW

Project performance remains a central concern in the construction sector, particularly in housing projects where delays, cost overruns, scope changes, and stakeholder conflicts frequently undermine project success. Existing literature suggests that project management practices play a critical role in determining project outcomes. This study is grounded in Participatory Communication Theory (Freire, 1970), Enterprise Risk Management Theory (Bernoulli, 1738; Nocco et al., 2006), Stakeholder Theory (Freeman, 1984), and Triple Constraints Theory (Goldratt, 1984). Collectively, these theories emphasize the importance of effective communication, proactive risk management, stakeholder engagement, and scope control in achieving project objectives.

Participatory Communication Theory argues that project success is enhanced when stakeholders actively participate in communication and decision-making processes. The theory views communication as a dialogical process that promotes knowledge sharing, consensus building, and collective problem-solving (Mefalopulos, 2008). Through stakeholder participation, project teams can improve transparency, foster ownership, and strengthen commitment to project objectives. Similarly, Stakeholder Theory posits that organizations and projects operate within networks of individuals and groups whose interests must be recognized and managed effectively (Freeman, 1984). The theory suggests that project managers who engage stakeholders throughout the project lifecycle are more likely to gain stakeholder support, reduce conflicts, and enhance project performance. Enterprise Risk Management Theory complements these perspectives by advocating for systematic identification, assessment, and mitigation of risks that may affect project outcomes. The theory views risk management as an organization-wide responsibility that improves decision-making and project resilience (Nocco et al., 2006). Triple Constraints Theory further highlights the interdependence of scope, cost, and time, arguing that project success depends on balancing these constraints while maintaining expected quality standards (Dobson, 2004).

Empirical evidence supports the importance of communication management in project performance. Joslin and Muller (2023) found that effective communication positively influenced project performance through improved stakeholder engagement and stronger social networks. Similar findings were reported by Aminahi (2022), who observed that inadequate participatory communication in agricultural development projects in Indonesia led to poor decision-making and weak project outcomes. In the Kenyan context, Mwangi and Kihoro (2021) established that timely information sharing, clear project objectives, and effective feedback mechanisms significantly improved the performance of donor-funded infrastructure projects. Likewise, Karanja and Muturi (2020) found that communication planning and structured stakeholder communication enhanced coordination and project success in public construction projects. These studies collectively suggest that communication management facilitates collaboration, minimizes misunderstandings, and contributes positively to project performance.

Risk management has also been identified as a critical determinant of project success. Ali et al. (2023) found that construction projects in Malaysia that adopted structured risk management practices achieved superior performance outcomes compared to projects lacking formal risk management systems. Similarly, Alsadi and Norhayatizakuan (2023) reported that risk identification, assessment, and response strategies significantly improved construction project performance in Oman. Carvalho and Rabechini (2022) further demonstrated that both technical and behavioral aspects of risk management contribute to project success across multiple industries. Within the African context, Kikwasi and Mhando (2021) found that risk management practices significantly improved cost control, schedule adherence, and quality outcomes

in Tanzanian public construction projects. Ofori and Asamoah (2020) similarly reported that proactive risk management reduced delays and budget overruns in Ghanaian road construction projects. These findings indicate that organizations that systematically identify and manage project risks are more likely to achieve successful project outcomes.

The role of stakeholder management in project performance has also received considerable scholarly attention. Mukundi and Ondara (2024) found that stakeholder engagement, communication, and conflict resolution significantly improved project performance among humanitarian organizations in Kenya. Maina (2023) similarly reported that effective identification and management of stakeholder expectations enhanced project success in market development projects. Furthermore, Ochieng and Kiarie (2021) established that stakeholder involvement positively influenced project acceptance, cost management, and timely project completion in county-funded infrastructure projects in Kenya. Nguyen et al. (2022) also emphasized that effective stakeholder identification and engagement are particularly important in complex projects involving multiple actors with competing interests. These findings suggest that successful projects depend heavily on the ability of project managers to understand stakeholder needs, manage expectations, and maintain constructive relationships throughout the project lifecycle.

Scope management has likewise been linked to improved project performance. Parrish and Gibson (2023) demonstrated that comprehensive scope definition and front-end planning significantly enhanced cost control and schedule performance in industrial construction projects. Ajmal, Khan, and Al-Yafei (2023) found that effective scope communication minimized scope creep and improved project success rates. In Kenya, Mwangi and Yusuf (2022) reported that scope management positively influenced the implementation of health infrastructure projects, while Karanja and Wanjiku (2021) established that clearly defined scope, regular reviews, and effective change management improved the performance of public housing projects. Similarly, Oluoch and Nyongesa (2020) found that poor scope management contributed to project delays, cost overruns, and poor-quality deliverables in road construction projects. These studies underscore the importance of clearly defining project boundaries and effectively managing scope changes throughout project implementation.

Despite the extensive literature linking communication management, risk management, stakeholder management, and scope management to project performance, most existing studies have focused on infrastructure, telecommunications, humanitarian, and road construction projects. Limited empirical attention has been given to housing projects implemented by the National Housing Corporation in Kenya. Furthermore, previous studies have often examined these project management practices independently rather than assessing their combined influence on project performance. Consequently, there remains a contextual and empirical gap regarding the effect of project management practices on the performance of housing projects in Kenya. This study seeks to address this gap by examining how communication management, risk management, stakeholder management, and scope management influence the performance of projects undertaken by the National Housing Corporation.

## 3. RESEARCH METHODOLOGY

This study employed a descriptive research design to examine the effect of project management practices on the performance of National Housing Corporation (NHC) projects in Kenya (Creswell & Creswell, 2018). The target population comprised 355 respondents drawn from six NHC departments and customers from four housing projects. Using proportionate stratified and simple random sampling techniques, a sample of 188 respondents was selected based on Yamane's (1967) formula. Primary data were collected through a semi-structured questionnaire comprising five-point Likert scale items. A pilot study involving 20 respondents from NHC projects in Kiambu County was conducted to test the instrument. Construct validity was used to assess the appropriateness of the instrument, while reliability was evaluated using Cronbach's Alpha, with all coefficients exceeding the acceptable threshold of 0.70. Data were analyzed using the Statistical Package for Social Sciences (SPSS). Descriptive statistics, including frequencies, percentages, means, and standard deviations, were used to summarize the data, while correlation and multiple regression analyses were employed to determine the relationship between project management practices and project performance. The study model was specified as:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon,$$

where project performance was the dependent variable and communication management, risk management, stakeholder management, and scope management were the independent variables. Ethical approval was obtained from Kenyatta University and a research permit secured from NACOSTI. Participation was voluntary, and confidentiality and anonymity of respondents were maintained throughout the study.

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## 4. RESEARCH FINDINGS

### 4.1 Descriptive Statistics

Descriptive statistics were used to assess respondents' perceptions of project management practices and project performance. Mean scores and standard deviations were computed to determine the level of agreement and variability of responses.

#### 4.1.1 Communication Management

**Table 4.1: Communication Management**

| Statements | M | SD |
|---|---|---|
| Stakeholder communications are made in a timely way in relation to the project. | 3.742 | 0.528 |
| The sharing of information is done in a variety of communication methods. | 3.681 | 0.544 |
| Communication between members of the project team is directed by standardized ways. | 3.544 | 0.563 |
| All communication is done through a feedback mechanism of the project team members. | 3.402 | 0.601 |
| I am sufficiently aware of the goals of the projects. | 3.789 | 0.517 |
| I consider myself sufficiently familiar with the progress and issues of projects. | 3.655 | 0.540 |
| Proper communication practices play a significant role in goal achievement. | 3.636 | 0.550 |
| Stakeholder communications are made in timely way in relation to the project. | 3.721 | 0.533 |
| **Aggregate Score** | **3.646** | **0.545** |

*Source: Field Data (2026)*

Respondents moderately agreed that communication management practices were effectively implemented (M = 3.646, SD = 0.545). Awareness of project goals recorded the highest mean score (M = 3.789), while feedback mechanisms received the lowest rating (M = 3.402). The findings suggest that communication supports project coordination and performance, although feedback processes require improvement.

#### 4.1.2 Risk Management

**Table 4.2: Risk Management**

| Statements | M | SD |
|---|---|---|
| Various risks are defined before the start of a project. | 3.721 | 0.529 |
| Identified risks are reported to all stakeholders. | 3.655 | 0.547 |
| Risk evaluation workshops are held to identify high-impact risks. | 3.544 | 0.562 |
| Risk areas in our project are common to stakeholders. | 3.402 | 0.598 |
| Sharing costs/responsibilities due to risks has a set framework. | 3.789 | 0.515 |
| A risk register monitors risk incidence and expenses. | 3.681 | 0.541 |
| Project development has been more successful through risk identification. | 3.636 | 0.553 |
| **Aggregate Score** | **3.633** | **0.549** |

*Source: Field Data (2026)*

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The aggregate mean of 3.633 indicates moderate agreement regarding risk management practices. Formal frameworks for sharing risk-related responsibilities received the highest rating (M = 3.789), while stakeholder awareness of risk areas recorded the lowest mean (M = 3.402). The findings demonstrate that risk identification, monitoring, and assessment contribute positively to project implementation and performance.

### 4.1.3 Stakeholder Management

**Table 4.3: Stakeholder Management**

| Statements | M | SD |
|---|---|---|
| Stakeholders identify their needs and expectations. | 3.742 | 0.531 |
| Project team members are chosen to contribute most effectively. | 3.681 | 0.546 |
| The project team/organization can influence the project. | 3.544 | 0.563 |
| Selected people raise concerns without fear. | 3.402 | 0.601 |
| Decision-making involves stakeholders. | 3.789 | 0.517 |
| Labor is provided by the surrounding community. | 3.655 | 0.540 |
| Community leaders participate in project selection. | 3.636 | 0.550 |
| **Aggregate Score** | **3.635** | **0.550** |

*Source: Field Data (2026)*

Stakeholder management recorded a moderate aggregate mean of 3.635. Stakeholder involvement in decision-making achieved the highest score (M = 3.789), while freedom to raise concerns scored lowest (M = 3.402). The results indicate that stakeholder engagement contributes to project success, although greater emphasis on open communication and community participation is needed.

### 4.1.4 Scope Management

**Table 4.4: Scope Management**

| Statements | M | SD |
|---|---|---|
| Activities are familiar since project inception. | 3.721 | 0.529 |
| Project outcome quality is influenced by changes in activities. | 3.655 | 0.547 |
| A second plan exists in case scope increases. | 3.544 | 0.562 |
| Scope change requests are completed and approved by stakeholders. | 3.402 | 0.598 |
| Change in project cost results from change in activities. | 3.789 | 0.515 |
| Alteration in activities leads to schedule/time changes. | 3.681 | 0.541 |
| Project team evaluates resources before undertaking the project. | 3.636 | 0.553 |
| **Aggregate Score** | **3.633** | **0.549** |

*Source: Field Data (2026)*

Respondents moderately agreed that scope management practices were applied in projects (M = 3.633, SD = 0.549). Cost implications of scope changes recorded the highest rating (M = 3.789), whereas stakeholder approval of scope changes received the lowest score (M = 3.402). These findings highlight the importance of scope control, resource assessment, and change management in project performance.

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### 4.1.5 Project Performance

**Table 4.5: Project Performance**

| Statements | M | SD |
|---|---|---|
| Projects delivered are of high quality. | 3.544 | 0.562 |
| Projects are delivered on a timely basis. | 3.402 | 0.598 |
| Delivered projects are within the set budget. | 3.621 | 0.537 |
| Clients are satisfied with the end product. | 3.645 | 0.529 |
| Projects are priced reasonably. | 3.412 | 0.589 |
| Projects rarely need to be redone. | 3.298 | 0.612 |
| **Aggregate Score** | **3.487** | **0.571** |

*Source: Field Data (2026)*

Project performance was rated moderately high (M = 3.487, SD = 0.571). Client satisfaction (M = 3.645) and budget adherence (M = 3.621) were the strongest performance indicators, while rework minimization (M = 3.298) and timely delivery (M = 3.402) received relatively lower ratings. This suggests that projects generally meet client expectations and budget targets, although schedule management and quality consistency require improvement.

### 4.2 Multiple Regression Analysis

**Model Summary**

**Table 4.6: Model Summary**

| Model | R | R Square | Adjusted R Square | Std. Error of Estimate |
|---|---|---|---|---|
| 1 | 0.899 | 0.808 | 0.754 | 0.01315 |

*Source: Field Data (2026)*

The regression model showed a strong positive relationship between project management practices and project performance (R = 0.899). The model explained 80.8% of the variation in project performance ($R^2$ = 0.808), indicating substantial explanatory power.

**ANOVA Results**

**Table 4.7: ANOVA**

| Model | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| Regression | 11.299 | 4 | 2.825 | 16343.361 | .000 |
| Residual | 0.026 | 151 | 0.000 | | |
| Total | 11.325 | 155 | | | |

*Source: Field Data (2026)*

The ANOVA results indicate that the regression model was statistically significant (F = 16343.361, $p < 0.001$), confirming that communication management, risk management, stakeholder management, and scope management jointly influence project performance.

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**Regression Coefficients**

**Table 4.8: Regression Coefficients**

| Variable | B | Std. Error | Beta | t | Sig. |
|---|---|---|---|---|---|
| Constant | 0.067 | 0.022 | - | 2.969 | 0.003 |
| Communication Management | 0.163 | 0.036 | 0.172 | 4.526 | 0.000 |
| Risk Management | 0.447 | 0.020 | 0.510 | 22.196 | 0.000 |
| Stakeholder Management | 0.339 | 0.009 | 0.277 | 37.495 | 0.000 |
| Scope Management | 0.063 | 0.021 | 0.101 | 3.008 | 0.003 |

*Source: Field Data (2026)*

All four project management practices significantly influenced project performance ($p < 0.05$). Risk management was the strongest predictor ($\beta = 0.510$), followed by stakeholder management ($\beta = 0.277$), communication management ($\beta = 0.172$), and scope management ($\beta = 0.101$). These findings demonstrate that effective management of project risks, stakeholders, communication, and scope significantly enhances project performance, with risk management exerting the greatest influence.

## 5. CONCLUSIONS AND RECOMMENDATIONS

The study concluded that project management practices significantly influence the performance of National Housing Corporation (NHC) projects in Nairobi City County. Communication management was found to have a positive and significant effect on project performance. Effective communication practices, including timely information sharing, clear project objectives, and structured communication channels, enhanced coordination among project stakeholders, minimized conflicts, and contributed to the successful achievement of project goals.

Risk management emerged as the most influential determinant of project performance. The findings demonstrated that systematic risk identification, assessment, monitoring, and mitigation improved project outcomes by reducing delays, controlling costs, and enhancing quality. Projects that adopted proactive risk management approaches were more likely to achieve their objectives efficiently and sustainably.

The study further established that stakeholder management positively and significantly affected project performance. Active stakeholder engagement, participation in decision-making processes, and consideration of stakeholder expectations improved project acceptance, reduced resistance, and facilitated successful project implementation. Effective stakeholder management was therefore identified as a critical factor in achieving favorable project outcomes.

Additionally, scope management was found to have a significant positive influence on project performance. Clear definition of project requirements, effective control of scope changes, and continuous monitoring of project activities contributed to improved cost control, schedule adherence, and overall project efficiency. Although its influence was comparatively lower than that of the other project management practices, scope management remained an essential component of project success.

Based on these findings, the study recommends that the National Housing Corporation strengthen communication systems through the implementation of comprehensive communication policies, standardized feedback mechanisms, and regular training on communication skills. The organization should also institutionalize proactive risk management frameworks that support continuous risk identification, assessment, monitoring, and contingency planning throughout the project lifecycle.

Furthermore, stakeholder participation should be enhanced by involving stakeholders in planning, implementation, and evaluation processes while creating mechanisms that encourage open feedback and continuous consultation. Finally, the Corporation should establish robust scope management procedures that emphasize clear scope definition, formal approval processes, effective change control, resource assessment, and contingency planning to ensure projects are completed within the desired cost, quality, and time parameters.

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