



Influence of Low Category Contractors on the Functional Quality of Public Building Projects in Kisumu and Vihiga Counties

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Abstract: *The quality of public building projects remains a critical concern in developing countries due to its implications for public safety, service delivery, infrastructure sustainability, and value for money. In Kenya, low-category contractors undertake a substantial proportion of county-level public construction projects; however, concerns persist regarding their capacity to consistently deliver functionally sound buildings. This study examined the influence of low-category contractors on the functional quality of public building projects in Kisumu and Vihiga Counties, Kenya. The study was anchored on the constructivist philosophical paradigm and employed a mixed methods research design to integrate quantitative and qualitative evidence. The target population comprised 51 completed public building projects implemented by low-category contractors during the 2021/2022 financial year. Data were collected through questionnaires, interviews, observation checklists, and document analysis, and analyzed using descriptive statistics and thematic analysis. The findings revealed that low-category contractors significantly influence the functional quality of public building projects through deficiencies in communication and interpretation of construction drawings, limited technical competence and workmanship, use of low-quality materials, inadequate supervision and quality control, non-compliance with regulatory and safety requirements, and financial and time-related operational constraints. The study also established that capacity-related limitations among low-category contractors undermine the ability of public buildings to achieve intended functional performance and long-term serviceability. The study concludes that contractor capacity is a critical determinant of functional quality outcomes in public building projects. Strengthening contractor training, enforcing capacity-based procurement practices, enhancing quality control mechanisms, improving regulatory compliance, and providing structured financial support are essential for improving functional performance in public construction.*

Keywords: *Low-category contractors, functional quality, public building projects.*

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1. Introduction

Functional quality is a fundamental indicator of success in public building projects because it determines the extent to which completed facilities effectively support their intended purposes throughout their operational life. Public buildings such as schools, hospitals, administrative offices, markets, and community facilities are expected to provide safe, accessible, durable, and user-friendly environments that facilitate service delivery and enhance societal well-being. Globally,

governments invest substantial resources in public infrastructure with the expectation that completed facilities will meet prescribed functional, technical, and operational standards. The buildings and construction sector accounts for a significant proportion of global investment and plays a critical role in achieving sustainable development goals through the provision of quality infrastructure (GlobalABC, 2024). Consequently, deficiencies in functional quality result in reduced usability, increased maintenance costs, user dissatisfaction, and diminished returns on public investment.

Recent construction research emphasizes that building quality extends beyond structural soundness to include functional performance, which encompasses accessibility, operational efficiency, safety, comfort, adaptability, and user satisfaction (Wuni & Shen, 2023; GlobalABC, 2024). Functional quality is achieved when buildings adequately support the activities for which they were designed while complying with established design specifications and regulatory standards. However, evidence from both developed and developing countries indicates that many public buildings experience functional deficiencies arising from design misinterpretation, poor workmanship, inadequate supervision, non-compliance with standards, and the use of substandard materials (Arowolo et al., 2019; Ofori-Kuragu et al., 2022). Such deficiencies often manifest through circulation problems, inadequate space utilization, accessibility challenges, premature deterioration, and reduced operational effectiveness.

Across Africa, rapid urbanization and growing demand for public infrastructure have increased pressure on governments to expand the provision of public facilities. While substantial investments have been made in schools, healthcare facilities, and administrative buildings, concerns regarding the functional quality of completed projects remain widespread. Studies conducted in Sub-Saharan Africa reveal that contractor-related factors significantly influence building performance, particularly where contractors face constraints in technical expertise, financial resources, quality management systems, and skilled labour availability (Wachira Kiiru et al., 2024; Ade-Ojo & Babalola, 2023). These challenges frequently lead to facilities that fail to fully satisfy user requirements despite meeting basic completion criteria.

In Kenya, public building projects constitute a major component of national and county government development expenditure. Significant investments have been directed toward educational institutions, health facilities, public offices, markets, and other social infrastructure. Nevertheless, concerns continue to emerge regarding buildings that exhibit operational inefficiencies, defects, accessibility limitations, and premature deterioration shortly after completion (JKNATCOM, 2024; Kimaru, 2021). Such challenges undermine service delivery, increase maintenance expenditures, and compromise the realization of value for money in public investment. Existing literature attributes many of these deficiencies to contractor-related factors including poor workmanship, inadequate supervision, weak quality control systems, and limited adherence to construction standards (Kimaru, 2021; Wachira Kiiru et al., 2024).

To regulate contractor participation and align project complexity with contractor capacity, Kenya's National Construction Authority (NCA) classifies contractors into categories ranging from NCA 1 to NCA 8 based on technical, financial, and organizational capabilities (NCA, 2023). Low-category contractors constitute the majority of registered contractors and play a significant role in implementing county-level and community-based

public building projects. Their involvement promotes local participation, employment creation, enterprise development, and equitable distribution of economic opportunities within the construction sector. Consequently, they are frequently engaged in constructing classrooms, health facilities, markets, social halls, and administrative buildings across the country.

Despite their importance, low-category contractors often operate under substantial constraints that may affect their ability to deliver functionally efficient buildings. Research indicates that many low-category contractors experience challenges related to limited financial capacity, inadequate technical expertise, dependence on semi-skilled labour, weak project management systems, and insufficient quality assurance mechanisms (Strategic Journals, 2022; NCA, 2023). These limitations can affect communication and interpretation of construction drawings, material selection, supervision practices, compliance with regulations, and overall project management effectiveness. The cumulative effect of these deficiencies may compromise the functional quality of completed facilities by reducing usability, safety, accessibility, and operational performance.

Although considerable research has examined construction project performance in Kenya, relatively few studies have specifically focused on how low-category contractors influence the functional quality of public building projects. Existing studies largely examine project quality from a general perspective without isolating functional quality outcomes or systematically investigating the role of contractor classification in determining building performance. Consequently, empirical evidence remains limited regarding the mechanisms through which low-category contractors affect usability, operational efficiency, compliance with design intentions, and long-term serviceability of public buildings.

This study therefore sought to examine the influence of low-category contractors on the functional quality of public building projects in Kisumu and Vihiga Counties. Specifically, the study investigated how communication and interpretation practices, technical competence and workmanship, material selection, supervision and quality control, regulatory compliance, and project management constraints associated with low-category contractors influence the functional performance of completed public buildings. The findings are expected to contribute to policy formulation, contractor capacity development, procurement decision-making, and regulatory interventions aimed at improving the functional quality and sustainability of public infrastructure in Kenya.

1.1 Statement of the Problem

Functional quality is a critical measure of the success of public building projects because it determines the extent to which completed facilities effectively support intended user activities, ensure safety, facilitate accessibility, and sustain service delivery throughout their lifecycle (Wuni & Shen, 2023; Ofori-Kuragu et al., 2022). However, despite substantial public investment in schools, healthcare facilities, administrative offices, and

other public infrastructure in Kenya, concerns persist regarding buildings that exhibit operational inefficiencies, accessibility limitations, safety deficiencies, poor space utilization, and premature deterioration shortly after completion (GlobalABC, 2024; JKNATCOM, 2024; Wachira Kiiru et al., 2024). Such deficiencies undermine the functional performance of public facilities and reduce the value derived from public expenditure.

Evidence from construction research indicates that contractor-related factors, including inadequate technical competence, poor workmanship, weak supervision, non-compliance with specifications, ineffective quality control systems, and inappropriate material selection, significantly contribute to poor building performance outcomes (Kimaru, 2021; Arowolo et al., 2019; Ade-Ojo & Babalola, 2023). In Kenya, low-category contractors undertake a substantial proportion of county-level public building projects and contribute significantly to local economic participation and infrastructure development (NCA, 2023). However, these contractors frequently operate under constraints associated with limited financial capacity, inadequate technical expertise, dependence on semi-skilled labour, and weak project management systems, all of which may negatively affect the functional quality of completed facilities (Strategic Journals, 2022; Wachira Kiiru et al., 2024).

Although previous studies have examined construction quality and contractor performance in general, limited empirical evidence exists on how low-category contractors specifically influence the functional quality of public building projects. Most available studies assess project performance broadly without isolating functional quality outcomes or examining how contractor category affects building usability, operational efficiency, safety, and compliance with design intentions (Wuni & Shen, 2023; Ofori-Kuragu et al., 2022). This knowledge gap limits evidence-based procurement decisions, contractor capacity development initiatives, and regulatory interventions aimed at improving public infrastructure performance. Therefore, this study sought to examine the influence of low-category contractors on the functional quality of public building projects in Kisumu and Vihiga Counties, Kenya.

1.2 Significance of the Study

This study contributes to the body of knowledge on construction project performance by providing empirical evidence on how low-category contractors influence the functional quality of public building projects in Kenya. Given the limited research focusing specifically on the relationship between contractor category and functional building performance, the study addresses an important knowledge gap by examining how contractor-related factors affect building usability, operational efficiency, safety, accessibility, and compliance with design specifications (Ofori-Kuragu et al., 2022; Wuni & Shen, 2023). The findings are expected to enrich scholarly discourse on contractor capacity and infrastructure quality while providing a basis for future research in public construction management.

The study is also significant to policymakers, regulatory agencies, procurement practitioners, and construction professionals by generating evidence that can inform contractor classification, procurement decisions, quality assurance practices, and capacity development interventions. The findings may assist the National Construction Authority, county governments, and other stakeholders in strengthening oversight mechanisms and enhancing the technical and managerial capabilities of low-category contractors, ultimately improving the functionality, sustainability, and value for money of public building projects in Kenya (NCA, 2023; Kimaru, 2021; Wachira Kiiru et al., 2024).

2. Literature Review

Kenya's construction sector operates under a regulatory framework established through the National Construction Authority (NCA), a state body created to register contractors, accredit workers, and enforce quality and safety standards across the industry (Structrum Limited, 2025). The NCA's core mandate includes maintaining a registry of qualified contractors so as to reduce the incidence of rogue operators and substandard works that had previously plagued the sector (Structrum Limited, 2025). Contractors are graded into eight tiers, from NCA-1, which handles projects of unlimited value, down to NCA-8, the entry tier reserved for small-scale works such as minor renovations (Huduma Global, 2026a). This tiered system is meant to match a contractor's technical personnel, equipment, and financial strength to the scale and complexity of the project they are permitted to undertake (EAGO Co. Ltd., 2025). Devolution has since expanded the number of public building projects procured directly by county governments, including Kisumu, creating new entry points through which lower-category contractors participate in public works (County Government of Kisumu, 2025). Kisumu County's own procurement notices, for instance, list building, renovation, and demolition works open to prequalified contractors across multiple categories (County Government of Kisumu, 2025).

The classification structure itself reflects an assumed hierarchy of capability, where higher categories are associated with a longer track record of completed projects and stronger organizational maturity (Huduma Global, 2026a). A contractor's career trajectory typically begins at NCA-8 and progresses upward only after demonstrating capacity through project history, meaning newly registered or low-category firms by definition possess limited prior experience (Huduma Global, 2026a). Common reasons firms remain capped at lower tiers include insufficient capital, thin technical personnel, and equipment inadequate for larger works (Huduma Global, 2026a). The National Construction Authority has itself acknowledged this entry-level population directly, having sensitized over a hundred newly registered youth-category contractors in Kisumu County on how to grow their technical and professional standing (National Construction Authority, 2026). This suggests that low-category contractors are not a marginal feature of the

industry but a substantial and growing segment actively being brought into the formal public procurement system in the very counties under review.

Functional quality, as distinct from mere aesthetic finish, refers to whether a completed building performs its intended structural, safety, and operational purpose over its design life. Kenyan construction-performance literature typically treats quality as one of several core project performance indicators alongside cost, time, and stakeholder satisfaction (Kiiru et al., 2024). Kiiru et al. (2024) explicitly listed quality specifications, alongside budget and time compliance, procuring-entity satisfaction, environmental sustainability, and fulfillment of public need, as the dimensions against which public construction project performance in Kenya should be judged. This framing situates functional quality as a measurable outcome influenced by contractor-related variables rather than a purely subjective judgment. Mue (2015) similarly operationalized project outcomes for public buildings in terms of schedule compliance, budget compliance, and quality of completion, treating contractor technical capacity as one of the explanatory factors behind these outcomes.

Empirical evidence from Kenyan public building studies has linked contractor technical capacity directly to project outcomes. Mue (2015), studying public building construction in Machakos County, found a fairly strong positive correlation between contractors' technical capacity and project completion, alongside a strong association between effective communication and completion outcomes. That same study measured technical capacity through indicators such as staff qualifications, class of NCA registration, and managerial education level, directly tying the NCA category variable to project performance (Mue, 2015). This provides a directly transferable analytical model for examining how the categorical standing of a contractor shapes outcomes on public building projects in other counties, including Kisumu and Vihiga.

Other studies on contractor attributes have produced more findings regarding which specific capacities matter most. Kiiru et al. (2024) found that a contractor's tender price, innovation capacity, and occupational health and safety practices were significant predictors of overall public construction project performance in Kenya. The same study, however, concluded that contractor management ability alone did not significantly predict performance outcomes, suggesting that capacity effects on quality are multidimensional rather than reducible to a single managerial variable (Kiiru et al., 2024). This body of work indicates that low-category status may operate through several channels simultaneously, including pricing behavior, technical innovation, and safety compliance, rather than through management competence in isolation.

A parallel strand of literature connects contractor capacity constraints directly to physical building failure.

The National Construction Authority's 2019 assessment found poor workmanship responsible for the largest share of building collapses in Kenya, at 35 percent, with substandard construction materials accounting for 28 percent and unethical or unprofessional contractor conduct implicated in 34 percent of cases (Kenya Institute for Public Policy Research and Analysis, n.d.). Murugi (2022) reviewed comparable evidence from other developing contexts, noting that contractors in some Malaysian cases used lower-grade materials and unauthorized construction methods, while Nigerian studies attributed the majority of building failures to inferior materials and substandard cement use. These international comparisons are directly relevant to the Kenyan case because they consistently implicate contractor-level decisions about materials and methods, precisely the areas where lower-category firms face the greatest capital and equipment constraints (Murugi, 2022). Notably, one of the most widely cited local incidents of building collapse specifically occurred within Kisumu town, underscoring that this is not merely an abstract national concern but one with a direct local history in the counties under review (Kenya Engineer, 2013).

Beyond contractor-level factors, regulatory and enforcement gaps compound the risk posed by low-category firms. Otido and Omwenga (2019) examined how NCA regulatory practices affected building construction quality in Nairobi City County and explicitly called for further research into how contractors' competency levels influence building quality outcomes. Coordination gaps among agencies responsible for building approval, including the NCA, the National Environment Management Authority, and county governments, have been identified as a persistent weakness that slows quality assurance processes and allows non-compliant practices to persist (Kenya Institute for Public Policy Research and Analysis, 2025). Manual approval processes and limited public awareness of the NCA contractor database further reduce the practical effectiveness of the categorization system as a quality safeguard (Kenya Institute for Public Policy Research and Analysis, 2025). These enforcement weaknesses are particularly consequential for low-category contractors, since the classification system's protective intent depends heavily on consistent verification and monitoring that appears unevenly applied.

At the county level, devolution has substantially increased the volume of publicly funded building activity, with Kisumu County's infrastructure and public works department accounting for the largest single share of county-funded projects in recent synthesis reporting (County Government of Kisumu, n.d.-b). Existing studies specific to Kisumu County, however, have concentrated primarily on stakeholder participation, monitoring and evaluation practices, and donor-funded project performance rather than on contractor categorization as a determinant of building quality (Amuni et al., 2025). Amuni et al. (2025) examined donor-funded project performance in Kisumu's informal

settlements through the lens of participatory monitoring and evaluation, illustrating that county-level project scholarship has so far emphasized governance and community engagement variables over contractor capacity variables. This leaves the specific mechanism connecting NCA category to functional building quality within Kisumu County comparatively unexplored in published literature.

2.1 Theoretical Underpinning

This study was anchored on the Resource-Based View (RBV) of the firm. The RBV traces its theoretical roots to Penrose's (1959) *Theory of the Growth of the Firm*, which conceptualized firms as bundles of productive resources whose growth and performance depend on the internal resources available to them, rather than solely on external market conditions. Wernerfelt (1984) formalized this idea into the resource-based view proper, arguing that a firm's competitive position and performance are shaped by the tangible and intangible resources it controls, such as capital, equipment, skilled personnel, and managerial expertise. Barney (1991) later refined the theory by proposing that sustained competitive advantage accrues to firms whose resources are valuable, rare, inimitable, and non-substitutable (the VRIN criteria), thereby distinguishing firms that merely possess resources from those whose resource configuration confers a durable performance edge over rivals. Collectively, these foundational works establish that differences in organizational performance are, at their core, differences in resource endowment and resource deployment capability.

Applied to the construction sector, the RBV offers a coherent lens for understanding why contractors of differing NCA categories produce systematically different project outcomes. A contractor's NCA classification is, in effect, a codified proxy for its resource base: financial strength, plant and equipment holdings, and the technical qualifications of directors and staff are precisely the criteria the National Construction Authority uses to assign category (National Construction Authority, 2011). Viewed through Barney's (1991) VRIN framework, higher-category contractors possess resource bundles bonding capacity, specialized equipment, and experienced technical staff, established supply-chain relationships that are comparatively rare and difficult for lower-category firms to replicate quickly, giving them an advantage in consistently meeting technical and functional specifications. Low-category contractors, by contrast, operate with resource deficits in exactly the dimensions the theory identifies as performance-determining: limited working capital, minimal owned equipment, and thinner technical personnel, all of which constrain their capacity to sustain workmanship standards once a project is underway.

This theoretical framing is consistent with, and helps explain, the empirical patterns identified in the Kenyan construction-management literature already reviewed. Okweto's (2012) finding that weak organizational

structure and leadership undermine public building project performance in Nairobi reflects a managerial-resource deficit in RBV terms. Simiyu's (2018) finding that local contractors' technical, financial, and managerial capacity significantly shapes adherence to project specifications in Nairobi City County is a direct empirical instantiation of the RBV proposition that resource capability drives performance outcomes. Similarly, Akali and Sakaja's (2018) finding that financial capacity and equipment-holding capacity correlate with both timely completion and quality of road projects in Kakamega County illustrates how deficits along RBV's core resource dimensions manifest as tangible quality shortfalls on the ground. Read together, these studies support the theoretical premise that contractor category is not merely an administrative label but a meaningful indicator of the resource capability that ultimately determines project quality

3. Methodology

This study was anchored on the constructivist philosophical paradigm and adopted a mixed methods research design to facilitate a comprehensive understanding of how low-category contractors influence the functional quality of public building projects. The study was conducted in Kisumu and Vihiga Counties and targeted 51 completed public building projects implemented by low-category contractors during the 2021/2022 financial year. The projects comprised public facilities such as schools, health centres, administrative offices, and community buildings. Purposive sampling was employed to select the projects and key informants with relevant experience in the implementation, supervision, and use of the selected facilities.

Data were collected using interview schedules administered through face-to-face interviews with the selected respondents after obtaining informed consent. The instruments focused on factors associated with functional quality, including communication and interpretation of construction drawings, technical competence and workmanship, material selection and quality, supervision and quality control practices, regulatory compliance, safety requirements, and project management constraints. Instrument validity was established through expert review and pilot testing, while reliability was determined using the test-retest technique, yielding coefficients above the acceptable threshold of 0.70. Qualitative data were transcribed, coded, and analyzed thematically to identify recurring patterns and emerging themes. Ethical approval was obtained from the University of Eldoret, while research authorization was granted by the National Commission for Science, Technology and Innovation (NACOSTI) and the relevant county authorities. Respondents were assured of confidentiality, anonymity, and voluntary participation throughout the study.

4. Results and Discussions

To establish research-based findings on this objective, the researcher administered an interview schedule to low category contractors who had rendered their services in construction of the selected projects. The schedules were

directed by such themes as communication and interpretation, technical competence and workmanship, material selection and quality, supervision and quality control, regulatory compliance and safety, and project management and operational constraints. The table below provides the summary of the results.

Table 1: Analysis of Themes on Influence of Low Category Contractors on the Functional Quality of Public Building Projects

Theme	Key Issues Identified	Functional Impact
Communication and Interpretation	Misreading drawings, poor guidance	Circulation errors, misaligned spaces
Technical Competence and Workmanship	Semi-skilled labor, improper installation	Reduced usability, comfort, safety
Material Selection and Quality	Low-quality, cost-driven materials	Frequent repairs, poor durability
Supervision and Quality Control	Limited oversight, weak defect management	Persistent functional defects
Regulatory Compliance & Safety	Non-compliance with codes	Unsafe, inaccessible, non-inclusive spaces
Project Management & Operational Constraints	Financial & time limitations	Reduced performance, delayed corrective action

The results demonstrate that ineffective communication and poor interpretation of drawings and guidance significantly compromise the functional outcomes of construction projects implemented by low-category contractors in Kenya. Misinterpretation of design drawings often results in circulation errors and spatial misalignment, manifesting in built spaces that do not reflect the original design intent, which, in practice, leads to user frustration and additional corrective work. These communication challenges mirror the systemic communication barriers documented in Kenyan construction literature where unclear information exchange among contractors, clients, and supervisors contributes to quality failures (Gitahi, 2019; Mureithi, 2026) and complicates coordination on sites dominated by informal labour with varied technical backgrounds. Poor stakeholder communication reduces the clarity of expectations and increases the likelihood of deviations from specifications during execution, reinforcing evidence that communication breakdowns are pivotal in shaping functional deficiencies in the built environment.

Technical competence and workmanship deficits were identified as central to the poor performance of constructed facilities. Low-category contractors, often operating with semi-skilled or untrained labour, struggle to execute specifications accurately, leading to defects such as uneven finishes and structural misalignment that diminish usability, comfort, and safety. This pattern aligns with documented evidence in Kenyan construction contexts that links inadequate workmanship to defects and compromised quality, particularly on sites where supervision is minimal and labour skills are inconsistent (Monyenye, 2026; Mureithi, 2026). Stakeholders report that many construction operatives apply inappropriate methods learned informally, which perpetuates a cycle of substandard construction practices and reinforces the need for targeted skills training to elevate workmanship standards among lower-tier contractors. Consequently,

poor technical execution not only degrades physical performance but also burdens facilities with repeated repairs and corrective works.

Material selection and quality significantly influence the durability and long-term functional performance of constructed spaces. The data indicate that low-category contractors frequently opt for inexpensive or locally available materials that do not meet performance standards, which accelerate wear and increase the frequency of repairs. This challenge is consistent with reports concerning the Kenyan construction industry, where inconsistent quality standards and limited access to reliable suppliers make sourcing high-quality materials difficult (CramerRaoConstruction, 2023). Poor material quality undermines structural integrity and leads to premature deterioration of finishes, fixtures, and structural components. In the Kenyan context, high material costs coupled with limited market transparency push many contractors toward substandard inputs, reflecting broader systemic constraints that disadvantage smaller firms in procurement processes and weaken overall functional outcomes.

Limited supervision and weak quality control practices were identified as persistent drivers of functional defects in projects delivered by low-category contractors. Many sites operate with minimal oversight due to cost constraints, resulting in undetected mistakes, inconsistent implementation of design details, and delayed corrections. Studies focusing on Kenyan construction practices reveal that inadequate supervision directly contributes to rework, project delays, and quality shortfalls (Mureithi, 2026; Munyoki, 2026). When supervision is intermittent or conducted by personnel lacking technical authority, errors proliferate and corrective actions are often reactive rather than preventive. Low-category contractors, operating under tight budgets and timelines, frequently de-prioritize

systematic quality control, which reinforces defect persistence and diminishes functional performance. Therefore, enhancing supervisory capacity and integrating robust quality control routines are crucial to improving built outcomes across all contractor categories.

Non-compliance with building codes and safety regulations was a significant concern, resulting in unsafe and non-inclusive environments. Regulatory compliance levels in Kenyan construction projects have been characterized as medium, with structural deficiencies and safety gaps observed even in registered works (Lagat et al., 2025). Low-category contractors often lack resources and procedural knowledge to fully comply with regulatory requirements, contributing to unchecked deviations from standards that jeopardize occupant safety and accessibility. Inadequate enforcement and inconsistent awareness of statutory obligations further entrench compliance challenges, particularly among smaller contractors who may view regulatory processes as burdensome rather than integral to project success (Lagat et al., 2025; Omollo, 2019). These compliance gaps undermine functional integrity and highlight the need for regulatory sensitization, capacity building, and enforcement strategies tailored to smaller firms to improve safety outcomes and conformity with statutory expectations.

Financial and time constraints emerged as significant operational limitations impeding functional performance. Low-category contractors frequently operate with limited capital, which affects planning, procurement, labour retention, and quality assurance processes. When budgets are tight and schedules compressed, project teams often resort to shortcuts that compromise construction quality and delay corrective works, a pattern observed in studies on Kenyan construction performance (Monyenye, 2026; Auka, 2018). Resource scarcity undermines robust project management practices, creating situations in which poor planning, inadequate resource allocation, and weak monitoring collectively diminish functional performance. These operational constraints not only affect the immediate quality of delivery but also restrict contractors' capacity to absorb variations and implement improvements during execution, thereby reinforcing systemic performance deficits.

5. Conclusion and Recommendations

5.1 Conclusion

This study concludes that low-category contractors significantly influence the functional quality of public building projects in Kisumu and Vihiga Counties. The findings demonstrate that limitations in communication and interpretation of construction drawings, technical competence, material selection, supervision and quality control, regulatory compliance, and project management practices contribute to functional deficiencies in completed public buildings. These shortcomings manifest through reduced usability, accessibility

challenges, safety concerns, operational inefficiencies, and increased maintenance requirements, thereby limiting the ability of public facilities to effectively meet user needs and intended service delivery objectives.

The study further concludes that contractor capacity is a critical determinant of functional building performance. Financial constraints, inadequate technical expertise, reliance on semi-skilled labour, and weak quality management systems among low-category contractors undermine adherence to design specifications and regulatory standards, resulting in compromised functionality of public infrastructure. Therefore, improving contractor capacity through targeted training, strengthened quality assurance mechanisms, enhanced regulatory oversight, and capacity-based procurement practices is essential for improving the functional quality, sustainability, and long-term performance of public building projects in Kenya.

5.2 Recommendations

Based on the findings of the study, the following recommendations are made:

1. County governments, procurement entities, and the National Construction Authority should enforce strict capacity-based contractor selection and project allocation practices at the tendering stage to ensure that public building projects are undertaken by contractors with adequate technical, financial, and managerial capacity, thereby enhancing the functional quality of completed facilities.
2. The National Construction Authority, professional bodies, and county works departments should institute mandatory continuous professional training and certification in construction drawing interpretation, quality management, regulatory compliance, and functional performance standards for low-category contractors to strengthen their ability to deliver safe, accessible, and operationally efficient public buildings.
3. Engineers, architects, quantity surveyors, and project consultants should strengthen site supervision, quality control inspections, and compliance monitoring throughout project implementation to ensure adherence to design specifications, building regulations, and functional performance requirements, thereby minimizing defects that compromise building usability and serviceability.
4. National and county governments should establish mechanisms for timely project financing and payment while supporting access to affordable credit for low-category contractors, in order to improve resource availability for quality materials, skilled labour, and effective project management, ultimately enhancing the functional performance and long-term sustainability of public building projects.

5.3 Suggestions for Further Study

This study suggested that further investigations are done under the following areas:

1. The extent to which contractor capacity differences influence the functional performance of public building projects in other counties in Kenya.
2. The effectiveness of capacity-building interventions in improving contractors' competence in construction drawing interpretation, quality management, regulatory compliance, and overall project delivery outcomes.
3. The combined influence of procurement systems, project supervision mechanisms, and financing structures on the functional quality of public buildings.
4. Influence of contractor selection procedures, supervision intensity, and payment processes on compliance, resource adequacy, and long-term building performance.

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