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EFFECT OF CONTRACT PROCUREMENT METHODS ON THE PERFORMANCE OF PUBLIC CONSTRUCTION PROJECTS IN KENYA: A CASE OF KIAMBU COUNTY

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ABSTRACT

Purpose of the Study: This study assessed the effect of contract procurement methods on the performance of public construction projects in Kiambu County, Kenya.
Problem Statement: Kenya's public construction sector experiences systemic inefficiencies in project procurement methods, resulting in significant project delays and cost overruns. Previous studies indicate that 25% of government spending on public contracts is wasted due to procurement inefficiencies, with 70% of projects experiencing delays and 83% failing to achieve performance targets.
Methodology: The study employed a quantitative research approach using survey design. Data was collected through questionnaires administered to 158 projects, targeting Procurement Officers, Architects, Quantity Surveyors, and Civil Engineers. Data analysis was conducted using SPSS with descriptive statistics and correlation analysis.
Results: Traditional Design-Bid-Build (DBB) was the dominant procurement method (88.6% usage). Value for money emerged as the best-performing indicator (75.8%), while project timeliness was the poorest (53.4%). Correlation analysis revealed ten statistically significant relationships between procurement methods and project performance, with six positive and four negative correlations. DBB showed negative correlations with timeliness (ρ=-0.423) and quality (ρ=-0.280), while Design & Build positively correlated with timeliness (ρ=0.296).
Conclusions and Recommendations: While Traditional DBB remains predominant, it negatively impacts project timeliness and quality. Public projects in Kiambu County achieve good value for money but struggle with timely delivery. The study recommends adopting hybrid procurement models, implementing e-procurement systems, and strengthening contractor prequalification processes to improve overall project performance.

Keywords: *Contract Procurement, Methods, Performance Public Construction, Projects, Kiambu County*

INTRODUCTION

The success of public construction projects is inherently connected to contract procurement methods, a connection that varies across global, regional, and local settings. The construction industry worldwide has experienced significant changes in procurement strategies, with the design and build process reportedly achieving project completion 30% faster than conventional sequential methods (Idiake et al., 2015). International frameworks such as the Global Procurement Initiative advocate for lifecycle cost analysis and openness (Price, 2025; USTDA, 2025) yet, Kenya's public sector largely adheres to outdated open tendering practices that promote hostile contractor relationships and restrict value engineering prospects. Procurement inefficiencies in Africa result in annual economic losses of $148 billion due to corruption and other malpractices during project procurement (United Nations Economic Commission for Africa, 2017). A study by the Institute of Economic Affairs (IEA) in Kenya revealed an annual loss of approximately KShs 17 billion (USD 130 million) due to inefficient procurement practices in the energy sector (Waithanji & Thogori, 2023). The disparity between national policies and local implementation capabilities results in procurement obstacles, especially in multi-jurisdictional projects that necessitate standardized protocols.

Public procurement is a key economic activity of any government. It significantly affects how taxpayers' money is spent and is a function that remains most vulnerable to corruption. Worldwide, public procurement spending accounts for 13% to 20% of Gross Domestic Product in many countries (World Bank, 2020). It is therefore a crucial tool in the development process, drives innovation, and stimulates the local market (OECD, 2023). In Kenya, Public procurement constitutes the largest domestic market and contributes to economic development through job creation and capital formation as the government endeavors to meet its development needs through the provision of public buildings and other facilities (Kotoka, 2012). The Public Procurement and Disposal Act (2015) in Kenya provides comprehensive legal frameworks for procurement planning and asset management; yet, gaps in execution remain. For example, the PPRA audit report for 2023–24 indicates that 27 public entities achieved an average score of 55.5% and an average risk level of 44.5% (PPRA, 2025). The findings also indicated that certain public entities may be unable to achieve value for money, as the compliance risk was below the 60% threshold (PPRA, 2018).

While the construction sector contributes 9.2% to GDP, systemic challenges hinder this potential. First, there is regulatory-operational misalignment. Despite PPDA regulations for

quality weighting, 76% of projects continue to emphasize lowest-bidder selection, disregarding technical performance (PPRA, 2025). The Act's lack of provisions for alternate procurement methods renders county governments inadequately prepared for complicated projects, leading to 63% of road projects necessitating expensive budgetary adjustments (Waci et al., 2024). The second issue is technological stagnation. Merely 12% of county governments employ e-procurement platforms, despite a 94% mobile penetration rate, thereby sustaining manual processes that prolong tender reviews by an average of 22 weeks (PPRA, 2025). The third challenge is capacity asymmetries. A study conducted in Machakos County demonstrated a significant association (r=0.82) between the quality of procurement planning and project performance; yet, 58% of procuring entities neglect to perform adequate needs assessments (Mutuku et al., 2021). The study further established that 68% of procurement officers lack training in construction, highlighting a significant skills gap. Lastly, there are coordination failures. 54% of project delays in Kenya stem from communication breakdowns among implementing agencies, contractors, and regulatory authorities (Salim & Kitheka, 2019).

These issues are evident in Kenya's infrastructure sector, where public construction projects incur cost overruns 2.1 times greater than those of the private sector, highlighting procurement risks specific to the sector (Waci et al., 2024). The continued use of open tendering, employed in 89% of county projects, despite its 22% longer durations relative to restricted procedures, highlights institutional reluctance in embracing performance-driven procurement tactics (PPRA, 2025). As Kenya endeavors to meet the infrastructure objectives of Vision 2030, reconciling procurement policy development with practical implementation capabilities becomes essential for enhancing public construction results.

STATEMENT OF THE PROBLEM

Kenya’s public construction sector faces a systemic crisis rooted in inefficient project procurement methods, with profound implications for project delivery and national development goals. According to the World Bank (2022), inefficient procurement practices have led to significant wastage of funds, with an estimated 25% of government spending on public contracts being wasted due to inefficiencies. Empirical evidence indicates that 70% of public construction projects experience early delays, with 52% exceeding timelines by over 50% and escalating costs by 20% beyond contractual amounts, partly attributed to disjointed organizational structures and procurement inefficiencies (Mutuku et al., 2021; Ongòndo et al., 2019; Salim & Kitheka, 2019). 83% of projects fail to achieve performance targets, revealing

significant deficiencies in the alignment of procurement strategies with project objectives (Waci et al., 2024). A fundamental flaw exists in Kenya's public procurement processes. 90% of public projects resort to open tendering, despite evidence that alternative processes such as design and build could decrease deadlines by 22% and cost variations by 35% (PPRA, 2025; Price, 2025; USTDA, 2025). Therefore, the purpose of this paper was to assess the effect of project procurement methods on the performance of public construction projects in Kenya.

THEORETICAL FRAMEWORK

This study was guided by the Transaction Cost Economics (TCE) Theory. Transaction cost economics refers to various methods of structuring transactions (governance structures, such as markets, hybrids, enterprises, and bureaus) that aim to reduce transaction costs (Williamson, 1979). TCE theory asserts that the ideal organizational structure maximizes economic efficiency by reducing exchange costs (Williamson, 1986). The theory posits that every transaction type incurs coordination costs associated with monitoring, controlling, and managing transactions. Williamson (1986) has broadly defined transaction costs as the expenses associated with operating the economic system of enterprises. He contends that these expenses should be differentiated from production costs, asserting that a decision-maker can opt for either a firm structure or market sourcing by evaluating transaction costs against internal production costs. Consequently, cost is the principal factor influencing this decision (Young, 2013).

TCE has been extensively utilized to explain several economic phenomena, including company boundaries, vertical integration, outsourcing, and alliances (Abbas & Michael, 2022). TCE posits that organizations exist to minimize transaction costs by internally managing economic activity instead of depending on the market (Williamson & Ghani, 2012). TCE explains the rationale for corporations' decisions to outsource activities to third-party vendors or to form strategic alliances with other companies (Rindfleisch, 2020). In such instances, the transaction costs related to the activity are excessively high for the firm to absorb internally.

A key strength of TCE theory is its capacity to explain the presence of enterprises and their delineations. The theory offers a logical and methodical rationale for why companies opt to internalize specific operations while outsourcing others (Williamson, 2020). Nevertheless, several opponents contend that TCE often oversimplifies the intricacies of economic activity and undervalues the significance of social norms and trust in economic transactions (Abbas &

Michael, 2022). Another limitation of TCE is its restricted emphasis on transaction costs, neglecting other determinants of economic activities, including power dynamics, social standards, and cultural influences (Young, 2013). Critics contend that TCE fails to encapsulate the intricacies of economic transactions and is excessively deterministic in its methodology (Abbas & Michael, 2022).

In the context of procurement, TCE focuses on minimizing the costs of negotiating, monitoring, and enforcing contracts. Procurement methods differ in their transaction costs. For example, Design and Build may lower coordination costs by integrating services, whereas Traditional procurement might increase transaction costs due to its sequential nature. Selecting the right procurement strategy thus becomes essential for economic efficiency.

The TCE Theory provides a foundational understanding of the costs incurred during procurement transactions, including those related to searching for contractors, negotiating contracts, monitoring performance, and resolving disputes. In the Kenyan context, where public construction projects frequently experience delays and cost overruns, TCE helps explain how different procurement methods can either exacerbate or reduce these transaction costs. For example, traditional open tendering, a method prevalent in Kenya's public sector, often results in high transaction costs due to information asymmetry and fragmented contractual relationships. Conversely, integrated procurement methods such as Design and Build can reduce transaction costs by consolidating responsibilities, improving coordination, and minimizing contractual disputes. This theory thus guides the analysis of how procurement choices impact efficiency and project outcomes by focusing on minimizing the hidden and administrative costs associated with contract execution.

CONCEPTUAL FRAMEWORK

The study's conceptual framework has been presented in Figure 1. On the left are the independent variables which constitute the various procurement methods being used, while on the right is the dependent variable, which is the performance of public construction projects in Kiambu County. Such performance was evaluated based on the six presented parameters.

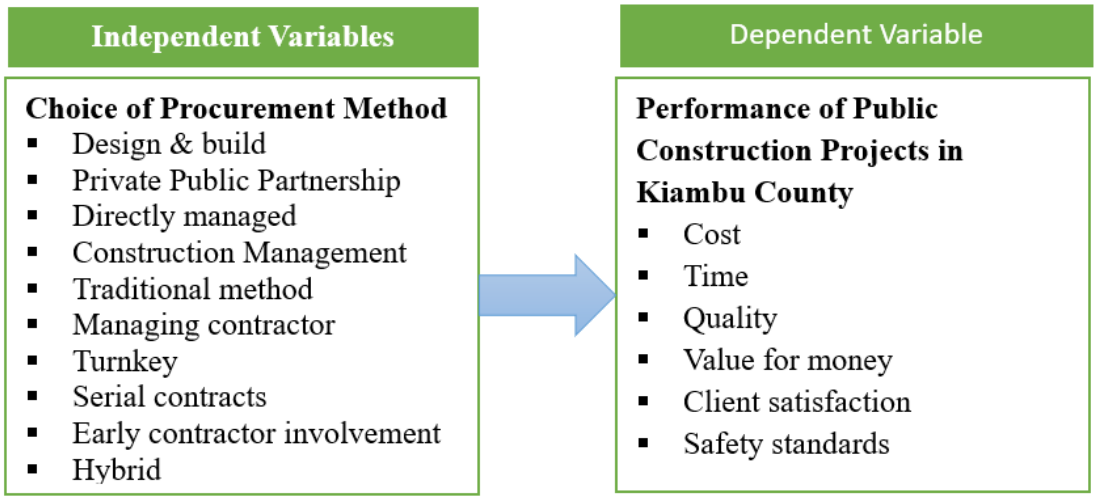

Figure 1: Conceptual Framework

RESEARCH METHODOLOGY

This study adopted a quantitative research strategy justified by the need to generalize findings on the population from which the sample was drawn. Further, a quantitative strategy minimized researcher bias by relying on pre-defined variables and closed-ended questions. The strategy also allowed for systematic data collection across diverse projects, from road upgrades to affordable housing initiatives. Additionally, policymakers require empirical evidence to reform procurement frameworks. Quantitative findings, such as the effect of the choice of procurement method on the performance of public projects in Kiambu, provide actionable metrics for drafting county-specific procurement guidelines. The researcher employed the survey research design, where data was collected from members of a population in a bid to determine the status of the population with regard to variables.

The selected unit of analysis for this study was the specific procurement method. This was because each procurement method constitutes a distinct unit for evaluating efficiency, effectiveness, transparency, and adaptability, among other aspects, and their influence on project performance. However, the study population was based on projects, which are subjected to these various procurement methods. Therefore, the target population consisted of all ongoing public construction projects for the financial year 2021/2022. The unit of observation was based on the following stakeholders dealing with public procurement: Architects, Quantity Surveyors, Procurement Officers, and Civil Engineers. The study selected this population since it is the decision-making organ in the procurement process.

According to the County Government of Kiambu (2021), the total number of construction (building) projects initiated in Kiambu county in the financial year 2021/2022 was 262. The following Yamane formula was used to calculate the sample size:

$$\mathbf{n = N / (1 + N(e)^2)}$$

Where;

n: The desired sample size.

N: The total population size.

e: The margin of error, representing the acceptable level of inaccuracy in the sample estimate. A smaller margin of error requires a larger sample size.

Therefore, the calculated sample size was;

$$\mathbf{n = 262 / (1 + 262(0.05)^2) = 158 \text{ building projects}}$$

Data collection was achieved through the administration of questionnaires. For every project, questionnaires were issued physically to either of the following, based on their availability: Architects, Quantity Surveyors, Procurement Officers, and Civil Engineers. That meant that for every project, a single questionnaire was administered. This was because the unit of analysis for the study was the project. The questionnaires comprised structured and open-ended questions to capture the required data and provide useful feedback. The selection of a questionnaire as the main tool for collecting data was guided by the nature of data required, as guided by the objectives of the study. The use of structured questions allows quantitative analysis while the open-ended ended allowed flexibility, which was vital for the study.

Data analysis was done using the computer package, Statistical Program for Social Science (SPSS). The analysis was based on the responses provided in the questionnaires collected. Descriptive statistical analysis was carried out to provide the researcher with profiles of the study population, the choice of the contract method and the factors affecting it, and the performance of the public construction projects based on the assertions by Rugenyi (2015). Correlations were used to determine the relationship between the procurement methods and the performance of construction projects. This was achieved by establishing if the means for the

indicators used to measure the project performance were the same or different across the different procurement methods.

RESULTS AND DISCUSSIONS

Procurement Methods Used in Public Construction Projects in Kiambu County

In an attempt by the researcher to get the uptake of the various methods of procurement in use in the construction industry currently, the respondents were asked to indicate how often various procurement methods were used. The results have been presented in Table 1.

Table 1: Procurement methods used in Kiambu County

Procurement Method	N	Min	Max	Mean	SD	Rank
Design & Build	86	1	5	2.07	.985	4
Private Public Partnership	86	1	4	2.53	1.141	2
Directly Managed	84	1	3	2.02	.780	5
Construction Management	86	1	3	1.86	.889	7
Traditional (Design Bid Build)	84	2	5	4.43	.859	1
Managing Contractor	86	1	5	2.02	.913	5
Turnkey	84	1	5	1.79	.976	11
Serial Contracts	82	1	4	1.80	.954	10
Early Contractor Involvement	82	1	4	1.85	.853	9
Hybrid	82	1	5	2.22	1.215	3
Alliances	80	1	5	1.85	1.231	8

The Traditional Design Bid Build (DBB) method was the most popular procurement approach, with an average score of 4.43. This is because it is deeply rooted in Kenya's public sector, thanks to the Public Procurement and Asset Disposal (PPAD) Act 2015, which puts open tendering first for cost control and transparency. Kiiru et al. 2025 found that 97% of Kenyan public projects use open tendering, but 65% of them are behind schedule because of strict contract terms. But its inflexibility when dealing with complicated projects shows that the method and the project needs are not aligned, as seen in recent criticisms of DBB's inefficiencies in changing environments (Morledge et al., 2021). DBB makes sure that PPADA 2015 is followed, but its dominance could make complex projects less efficient, which would make delays and cost overruns worse. Public-Private Partnerships (PPPs) got a relatively low score (Mean=2.53) because Kenya is still working on its policy goals for big infrastructure projects through the PPP Act (2021) and Vision 2030. PPP projects tend to stall because of funding gaps and political interference and problems with implementation, like bureaucratic delays and fear of risk (Asande et al., 2023; Owiti, 2022; Wandera et al., 2023).

The third most common method, hybrid (Mean=2.22), shows some experimentation, probably combining DBB with some other contemporary approaches. This is a trend that is becoming more common in countries that are having to deal with budget cuts. Construction Management (Mean=1.86), Alliances (1.85), and Early Contractor Involvement (1.85) got the lowest scores, which shows that people are not willing to use collaborative methods that require shared risk and integrated teams. This is different from what the best practices around the world say, which is that these kinds of methods should be used to boost innovation and efficiency. According to Transparency International Kenya (2023), this gap is due to Kenya's contractor-centered model, which focuses on cost control over creating long-term value.

Performance of Public Construction Projects in Kiambu County

Based on 11 indicators of performance, the research established the performance of public construction projects in Kiambu County. The results have been presented in Table 2. Value for money (Mean=3.79) got the highest score, meaning that stakeholders thought that projects were financially efficient even when they faced problems. This is in line with what the Kenya Roads Board (KRB, 2022) found: that road maintenance investments in Kenya brought in a return of 14.63:1, which shows that public infrastructure is cost-effective. In contrast, Makori et al. (2015) found that 45% of CDF projects in Western Kenya had problems with managing their budgets, which suggests that Kiambu's procurement frameworks may work better. The high scores for client satisfaction and project functionality (Mean=3.69) show that the finished projects met the needs and requirements of the end users. The lowest score for "project timeliness" (Mean=2.67) shows that there are always delays. This is in line with national trends, where more than half of road projects are late because of funding gaps and contractor inefficiencies.

Table 2: Performance of Public Construction Projects in Kiambu County

Performance Indicator	N	Min	Max	Mean	SD	Rank
Project cost	84	1	5	3.64	1.590	4
Timeliness	84	1	4	2.67	.954	11
Project quality	80	1	4	3.25	1.032	10
Value for money	84	1	5	3.79	1.353	1
Client's satisfaction	84	1	5	3.69	1.316	2
Project safety	84	1	5	3.48	1.065	7
Labour efficiency	84	1	5	3.48	1.065	7
Project utility	84	1	5	3.33	1.097	9
Environmental impact	84	1	5	3.50	1.215	6
Functionality	84	1	5	3.69	1.239	2
Cost benefit	84	1	5	3.60	1.398	5

Source: (Author, 2025)

The projects got good value for money (Mean=3.79), but their moderate cost performance (Mean=3.64) and low timeliness (Mean=2.67) suggest that there was a trade-off between sticking to the schedule and being financially efficient. This is similar to what happened in Kakamega County's CDF projects, where keeping costs down often pushed back deadlines. Also, project quality scored moderately (Mean=3.25), which shows that compromises were made to meet deadlines. This is similar to what happened in Naivasha, where rushed approvals led to poor-quality buildings. The environmental impact score was moderate (Mean=3.50), which means that the green agenda is not a priority in Kenya's public construction projects.

Effect of Procurement Methods on the Performance of Public Construction Projects in Kiambu County

In this section, the study evaluated stakeholders' perceptions of how procurement methods influenced the performance of public construction projects in Kiambu County based on three key performance metrics: cost reduction, completion period, and quality improvement. The results have been presented in Table 3.

Table 3: Effect of Procurement Methods on Project Performance

Statement	N	Min	Max	Mean	SD	Rank
To what extent do you think procurement methods contribute to the reduced cost of a project?	84	1	5	4.02	1.179	1
To what extent do you think the procurement method contributes to the reduced completion period of a project?	84	1	5	3.79	1.220	3
To what extent do you think the procurement method contributes to the improved quality of a project?	84	1	5	3.90	1.265	2

Source: (Author, 2025)

Stakeholders perceived that procurement methods had the biggest effect on lowering project costs. This fits with research that emphasizes procurement's role in financial efficiency, linking strategic procurement practices like consolidating suppliers and improving contracts to lower costs (Kristensen et al., 2021). Kiambu's use of competitive tendering (like Traditional DBB) probably helps keep costs down. For example, in Kakamega County's CDF projects, procurement planning cut cost overruns by 22%.

However, the high standard deviation (SD = 1.179) shows that the costs are not always the same, which could be because the procurement rules are not always followed or the contractors don't have enough capacity. The fact that cost reduction is more important than time efficiency is similar to what Muriithi (2006) found, that Kenya's public projects often have to slow down to stay within their budgets because of strict procurement rules. This trade-off is evident in Kiambu's high-value projects, where following the Public Procurement Act (2015) keeps costs down but prolongs tender evaluation periods.

Respondents perceived that procurement methods moderately improved quality. This is consistent with the role of methods like Design and Build in bringing in contractor expertise during the design phase. The moderate score (SD=1.265), on the other hand, shows that there are still problems, like how quickly approvals can change specifications, as seen in Naivasha's public building projects. Early Contractor Involvement and other collaborative methods have been shown to improve the quality of construction projects by making sure that everyone involved is working toward the same goals (Číž et al., 2021). The moderate quality score is in line with Owiti (2022) who found that rushed procurements led to choosing contractors based on price rather than skill, which negatively affected quality. On the other hand, research in Malaysia shows that choosing contractors based on more than one criterion improves quality without having a big effect on deadlines (Idrus et al., 2011).

Procurement methods had the weakest perceived impact on project timelines. This is in line with trends across Kenya, where 60% of road projects are delayed because of bureaucratic procurement processes. Kiambu's use of Traditional DBB, which is known for its sequential workflows and the need for rework, probably makes this problem worse. However, research in Mombasa shows that hybrid procurement models can cut delays by 18% by doing tasks at the same time (Nsimbe & Di, 2024). This means that there is still room for improvement in Kiambu. The lower score for reducing the time it takes to finish shows that there are problems with the system, such as late payments and land acquisition disputes.

Correlation Analysis

Table 4 presents the correlation results between procurement methods and the performance of public construction projects in Kiambu County. Ten (10) relationships were flagged to be statistically significant. Six (6) of these were found to be positive, while the rest were negative.

Table 4: Effect of Procurement Methods on Project Performance (Correlations)

	PM1	PM2	PM3	PM 4	PM5	PM6	PM 7	PM 8	PM9	PM1 0	PM1 1
PC	-.167	.076	.023	.055	.080	.137	-.165	-.077	-.043	-.216	.090
PT	.296**	-.302**	.288**	.008	-.423**	.145	-.105	-.113	-.019	-.149	-.124
PQ	-.144	-.042	.300**	.169	-.280*	.322**	-.070	-.122	-.003	-.138	.001
VM	-.058	-.050	.065	.108	.184	.129	-.196	-.059	-.085	-.267*	-.076
CS	-.025	-.022	-.103	.071	-.033	.052	-.040	-.090	.043	-.190	-.100
PS	-.046	-.028	.107	.098	-.138	.133	.113	-.014	.243*	-.003	.146
LE	-.080	.137	-.027	.059	.118	.075	.078	.123	.097	-.068	.127
PU	-.036	.122	-.018	-.050	.065	.020	.039	.113	-.036	-.173	.011
EI	-.084	.075	-.136	.042	.047	-.031	.100	.169	.117	-.212	.078
FU	.066	-.073	.025	-.090	.005	-.087	.016	.086	.303**	-.093	.092
CB	.162	.087	-.126	.039	.139	.031	.040	.144	.209	-.164	.179

There was a positive correlation ($\rho=0.296**$, $p=0.006$) between the adoption of the Design & Build procurement method and the timeliness of public projects. This means that the D&B method is strongly associated with improved project timeliness. D&B's integrated approach of combining design and construction reduces rework and accelerates decision-making. This aligns with studies that attribute 20–30% time savings to collaborative methods (Yap & Lim, 2023). In Kiambu, this method may mitigate bureaucratic delays common in traditional DBB procurement. The adoption of the traditional DBB procurement method correlated negatively with both project timeliness ($\rho=-0.423**$, $p=0.000$) and project quality ($\rho=-0.280*$, $p=0.013$) in Kiambu County's public projects. This means that increased use of traditional procurement leads to project delays and lower quality. The sequential nature of the traditional DBB method contributes to delays due to fragmented stakeholder coordination and change orders. This mirrors findings by Asande et al. (2023) in Kakamega County, where rigid tender evaluation criteria stalled 60% of projects.

The relationship between the adoption of Public-Private Partnerships (PPPs) and project timeliness was found to be negative ($\rho=-0.302**$, $p=0.005$). This means that the adoption of PPP leads to construction project delays. Complex PPP negotiations and financial arrangements prolong project initiation. Similar delays were observed in Kenya's Konza Technopolis PPPs, where land acquisition and risk-sharing debates caused 2-year setbacks (Vision 2030 Secretariat, 2023). The adoption of management contracting correlated positively ($\rho=0.322**$, $p=0.004$) with project quality. This means that the management contracting method enhances quality outcomes. Contractor-led oversight improves quality control through real-time problem-solving. Chepng'etich et al. (2020) corroborate this, noting 25% fewer defects when contractors manage technical specifications.

The relationship between Early Contractor Involvement (ECI) and project safety was found to be positive ($\rho=0.243*$, $p=0.030$). This can be interpreted to mean that ECI boosts safety performance. Early risk assessments in ECI enable proactive safety planning. Obiero and Ngugi (2024) found that digital risk tools in ECI reduced accidents by 40% through pre-construction hazard mapping. Hybrid procurement and value for money were found to have a negative correlation ($\rho=-0.267*$, $p=0.017$). This means that hybrid methods lead to reduced value for money in public construction projects. Poorly structured hybrid contracts (e.g., blending traditional and collaborative elements) increase transaction costs.

The negative impact of traditional and PPP methods on timeliness aligns with previous research (Kanyaru & Gekara, 2019), which attributes delays to bureaucratic bid evaluations and political interference. E-procurement tools (e.g., e-tendering) could mitigate through speedy delivery (Singh & Chan, 2022). The positive role of collaborative methods (Managing Contractor, ECI) supports the assertion that integrated procurement enhances technical oversight (Dudić et al., 2024; Olick & Moronge, 2019; Rono & Moronge, 2019). However, based on this study's findings, Kiambu's low adoption of these methods (<20% usage) remains a barrier. Finally, hybrid procurement's underperformance reflects systemic issues in Kenya's devolved system, where counties lack expertise to manage complex contracts (Chepng'etich et al., 2020).

CONCLUSIONS

Based on the findings, the study makes the following conclusions: Traditional Design-Bid-Build (DBB) is the most common method, but it correlates negatively with project timeliness and project quality. This reflects institutional inertia despite evidence that DBB

causes delays and defects. Collaborative methods like Design & Build and Early Contractor Involvement enhance outcomes. However, their adoption is low due to practitioner rigidity and lack of familiarity, echoing findings that Kenya's procurement culture resists innovation. Public construction projects in Kiambu County excel in value for money and client satisfaction but perform poorly in timeliness. This trade-off stems from prioritizing cost control (via Traditional DBB) over speed.

RECOMMENDATIONS

This study makes the following recommendations;

i. This means blending the traditional DBB with collaborative approaches such as Construction Management to balance cost, quality, and speed, as demonstrated in other countries like South Africa. Specifically, prioritize D&B and ECI for time-sensitive projects to accelerate delivery.
ii. The implementation of e-tendering and e-invoicing will help streamline processes, reduce delays, and enhance transparency.
iii. Quality and timeline metrics should be integrated into contractor selection criteria to mitigate delays and defects.
iv. The county should implement targeted training programs for procurement officers, clients, and contractors to enhance understanding and skills related to alternative procurement methods.

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