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# Enhancing Water Project Success through Strategic Tendering and Governance in SEKEB Counties

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## Abstract

This study investigates the mediating role of corporate governance practices in the relationship between tendering processes and the performance of county-managed water projects in Kenya's South Eastern Kenya Economic Bloc (SEKEB), encompassing Machakos, Makueni, and Kitui counties. Despite substantial public investments in water infrastructure, persistent underperformance has raised concerns that extend beyond financial or technical deficits, calling attention to institutional and procedural inefficiencies. Grounded in Tendering Theory and Agency Theory, the study employed a pragmatist philosophy and a mixed-methods research design, integrating quantitative survey data from 213 stakeholders with qualitative insights to analyze how procurement systems interact with governance frameworks to influence project outcomes. Empirical analysis using Pearson correlation and Baron and Kenny's four-step regression method revealed that the tendering process has a strong and statistically significant direct effect on water project performance ( $\beta = 0.876$ ,  $p < 0.001$ ), explaining 67.9% of performance variance ( $R^2 = 0.679$ ). Corporate governance practices—including board oversight, transparency protocols, and accountability mechanisms—also exhibited a significant predictive relationship with project outcomes ( $\beta = 1.076$ ,  $p < 0.001$ ), accounting for 41.4% of the variance ( $R^2 = 0.414$ ). When both variables were included in the regression model, the effect of the tendering process remained significant but declined ( $\beta = 0.817$ ,  $p < 0.001$ ), while corporate governance lost statistical significance ( $p = 0.196$ ), indicating a partial mediation effect. These findings suggest that while efficient tendering procedures directly influence water project outcomes, their effectiveness is enhanced by robust governance structures. Corporate governance acts as a filtering mechanism that translates procedural compliance into tangible infrastructure performance. The study concludes that sustainable improvements in public project delivery within SEKEB require an integrated approach that combines transparent procurement systems with institutionalized governance practices. The results offer actionable insights for strengthening public procurement and infrastructure oversight frameworks under Kenya's devolved governance model.

**Keywords:** *Tendering process, corporate governance, mediation effect, project performance, public procurement, county governments, SEKEB, water infrastructure, regression analysis, procurement reforms.*

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## 1.1 Background of The Study

Ensuring sustainable water infrastructure remains a pressing imperative for Kenya's arid and semi-arid regions, particularly within the South Eastern Kenya Economic Bloc (SEKEB), which comprises the counties of Machakos, Makueni, and Kitui. Despite years of targeted investments in boreholes, dams, pipelines, and related infrastructure, the region continues to grapple with chronic water insecurity, which undermines not only public health and economic resilience but also broader environmental sustainability (Van Vliet et al., 2021; WASREB, 2022). The introduction of devolution in 2013 was intended to rectify historical inefficiencies in service delivery by decentralizing resource allocation, decision-making, and implementation to county governments (Wafula, 2013). In theory, devolved governance would enable localized problem-solving, community participation, and responsive infrastructure development. Nonetheless, systemic underperformance persists, with numerous projects either delayed, abandoned, or operationally dysfunctional, raising questions that extend beyond technical or financial limitations to the procedural and institutional architecture that governs public procurement and infrastructure delivery (Ondigo, Kavoo, & Kebwaro, 2018).

At the heart of this concern lies the tendering process, a critical conduit through which county governments engage suppliers and allocate public resources. In Kenya, public procurement is governed by the Public Procurement and Asset Disposal Act (PPADA) of 2015, which codifies principles of transparency, competitiveness, equity, and accountability (PPADA, 2015). The tendering process, encompassing stages such as needs identification, prequalification, bid solicitation, evaluation, award, and contract execution, is intended to deliver value for money while safeguarding public interest (Arrowsmith, 2014). However, scholars have noted that tendering in practice is more than an administrative function; it is a strategic determinant of project outcomes, particularly when procurement decisions are aligned with quality, cost efficiency, and supplier capacity (Kozik, 2019; De Boer, Labro & Morlacchi, 2006). In the context of SEKEB's water infrastructure projects, weaknesses in procurement planning, lack of clarity in technical specifications, insider bidding, and politicized evaluations have translated into cost overruns, implementation delays, and compromised service quality (Sunmola & Shehu, 2020; Office of the Auditor-General, 2021).

Although digital platforms such as the Integrated Financial Management Information System (IFMIS) were introduced to automate procurement and improve traceability, their limited functionality at the county level, coupled with capacity constraints, has yielded mixed results (Seo et al., 2018). Consequently, the tendering process has emerged not only as the gateway to project execution but also as a structural bottleneck that constrains infrastructure success in devolved units like SEKEB. The performance of water projects in this region is typically evaluated through multiple indicators, including adherence to timelines, budget control, operational uptime, and user satisfaction (WASREB, 2024). Yet, recent evaluations reveal troubling trends: over 80 percent of projects in SEKEB counties surpass their planned timelines, and more than half face operational failure within a year of completion (Ochieng & Onyango, 2019). These failures are not merely technical but institutional, exposing systemic flaws in procurement design, execution, and oversight.

While procurement theory emphasizes that transparent and competitive tendering enhances the probability of successful outcomes by improving contractor quality and reducing implementation risks (Snider & Rendon, 2008), real-world applications, particularly in developing economies,

often diverge from these ideals. In SEKEB counties, bid rigging, collusion, and poor contract enforcement remain prevalent (Ayoti, 2012; PPR, 2022). These challenges are compounded by the misconception that procedural compliance alone can guarantee infrastructure success. In practice, transparency without accountability can coexist with inefficiency and manipulation, leading to suboptimal results. This calls for a deeper examination of how institutional frameworks, particularly corporate governance systems, influence the operationalization of tendering processes and the extent to which they mediate project outcomes.

Corporate governance, in this regard, emerges not as a peripheral administrative mechanism but as a central institutional filter that determines how procurement processes translate into tangible results. Agency Theory (Jensen & Meckling, 1976) and Stewardship Theory (Donaldson & Davis, 1991) conceptualize governance as the system of controls, incentives, and oversight structures that align the actions of agents (procurement officers, contractors) with the interests of principals (county governments and citizens). In the water sector, governance practices encompass board effectiveness, audit mechanisms, disclosure protocols, and stakeholder participation, all of which are critical in constraining opportunism, promoting accountability, and enforcing performance standards (Ali & Oudat, 2021; Mwirichia, 2013; Kanyane & Sausi, 2015). Evidence from Kenya and other developing contexts suggests that when governance structures are robust, they enhance contract monitoring, prevent post-award manipulation, and ensure continuity between procurement decisions and service delivery goals (Nkonge & Itunga, 2023). Conversely, where governance is weak—characterized by politicized boards, fragmented oversight, or inadequate audit controls—procurement procedures often lose their integrity, undermining the prospects of project success (Chege & Mwangi, 2019; WASREB, 2022).

Empirical studies reinforce this institutional dynamic. Kaberia (2019) found that governance frameworks accounted for nearly half the variance in performance among Kenya's water utilities, while OECD (2015) emphasized the necessity of embedding governance safeguards, such as integrity pacts and contract disclosure, to bridge the gap between procurement theory and implementation outcomes. Transparency International (2014) likewise documents how audit-driven governance reforms have improved water infrastructure delivery in Latin America and South Asia. Yet, in Sub-Saharan Africa, governance systems remain unevenly developed, often constrained by political interference, resource deficits, and a lack of institutional capacity (UNDP, 2019). Kenya's policy instruments—such as the Mwongozo code for public sector governance, the Water Act (2016), and regulatory frameworks by WASREB—have attempted to formalize governance standards at both national and county levels. Nonetheless, implementation remains inconsistent, particularly in SEKEB counties, where governance arrangements are often fragmented, reactive, or nominal (Office of the Auditor-General, 2021).

It is against this backdrop that this study seeks to interrogate the mediating role of corporate governance in the relationship between tendering processes and water project performance in SEKEB. While existing literature affirms the independent influence of both tendering and governance on public project outcomes, there is a significant gap in understanding how these two interact, especially within Kenya's devolved systems. Most prior studies treat the relationship between procurement and performance as direct and linear, failing to account for the institutional filters that shape that trajectory (Mutava & Mwaura, 2021; Mwonga & Chebii, 2020). Moreover, the empirical focus tends to skew toward urban or national-level case studies, with little attention given to peripheral counties such as Machakos, Makueni, and Kitui, where decentralized governance and procurement practices present distinct challenges and opportunities (Kioko &

Were, 2014). This research responds to these gaps by conceptualizing corporate governance as a mediating construct—an institutional mechanism that either enables or inhibits the translation of tendering procedures into sustainable water infrastructure. Through a mixed-methods approach that integrates both statistical and qualitative evidence, the study aims to offer a grounded, empirically validated model for understanding how procurement and governance intersect to shape project outcomes within SEKEB’s county governments. This inquiry is not only timely but also necessary for informing reforms that move beyond procedural compliance toward institutional effectiveness in Kenya’s water sector.

## **2.1 Theoretical Framework**

### **2.1.1 Tendering Theory**

Tendering Theory, first articulated by Gates (1967), conceptualizes the bidding process as a rational economic exercise wherein contractors develop their bids based on estimated project costs, adjusted by strategic mark-ups that balance profit maximization with competitiveness. Subsequent extensions by Park and Chapin (1992) and Runeson and Skitmore (1999) introduced probabilistic and equilibrium models, demonstrating how contractor behavior stabilizes under conditions of intensified competition, thereby generating bid prices that theoretically reflect optimal economic efficiency. Within the context of public procurement, this theory underpins the assumption that transparent, price-driven tendering mechanisms can deliver value-for-money outcomes by promoting cost-efficiency and eliminating favoritism. In Kenya’s water infrastructure projects, Tendering Theory reinforces the prevailing policy orientation embedded in the Public Procurement and Asset Disposal Act (2015), which mandates competitive tendering as the principal mechanism for allocating public contracts (PPADA, 2015; Sama et al., 2021). The theoretical logic is clear: under conditions of full information, rational agents, and predictable risks, the market should reward efficient suppliers and optimize infrastructure delivery.

Nonetheless, a growing body of literature challenges the applicability of Tendering Theory’s idealized assumptions within developing economies, where market distortions, institutional weaknesses, and behavioral irregularities are pervasive. Contractors operating in Kenya’s devolved counties often contend with volatile input prices, incomplete design specifications, and unreliable data on local labor and materials—factors that constrain their capacity for precise cost estimation and strategic bidding (Odhiambo & Kamau, 2013; Gikonyo, 2017). Simon’s (1955) theory of bounded rationality further complicates the theoretical premise by illustrating that decisions are often made under cognitive limitations, incomplete information, and external pressures such as political patronage or speculative motivations. Moreover, empirical evidence from the World Bank (2020) and Transparency International (2014) documents widespread procurement malpractices in Kenya, including collusion, insider bidding, and arbitrary bid evaluations, all of which undermine the rationality and symmetry of information assumed by Tendering Theory. In response, contemporary scholars advocate for multi-criteria tendering models that integrate quality, contractor capacity, and sustainability alongside price in the evaluation process (Chan et al., 2009; Liu et al., 2016). Within Kenya’s county-managed water projects, this shift is critical, as reliance on lowest-price bids without robust post-award oversight frequently results in underperformance. As such, integrating performance audits, stakeholder engagement, and contractor evaluation mechanisms—aligned with the recommendations of Shash (1993) and Sama et al. (2021)—can bridge the gap between theory and practice. In this study, Tendering Theory provides a structural lens for analyzing procurement processes, while also

necessitating contextual adaptation to accommodate the complex realities of SEKEB's devolved infrastructure environment.

### **2.1.2 Agency Theory**

Agency Theory, developed by Jensen and Meckling (1976), frames public procurement within a principal-agent relationship where county governments (principals) delegate project execution to procurement officials, water utility managers, and contracted suppliers (agents). The theory posits that agents, being self-interested and rational, may pursue personal gains unless constrained by governance mechanisms such as transparency requirements, performance monitoring, and incentive structures (Mitnick, 2006). In the context of Kenya's county-managed water projects, the asymmetry of information between procurement officers and county oversight bodies generates vulnerabilities to opportunistic behaviors, such as bid manipulation, substandard contract execution, and delayed project delivery (Ahmed et al., 2022). Agency Theory thus underpins the study's conceptualization of corporate governance practices as a corrective institutional force capable of realigning agent behaviors with project goals.

Critically, agency challenges in Kenya's devolved water sector are exacerbated by political interference, weak internal audits, and limited capacity for regulatory enforcement. Studies by Tee, Wong, and Hooy (2022) and Kalantonis (2023) affirm that the absence of robust governance mechanisms heightens agency costs, manifesting in procurement leakages, project delays, and inflated contractor claims. Kenyan counties, including those in SEKEB, often exhibit structural weaknesses—such as fragmented procurement committees, discretionary bid evaluation, and inadequate contractor vetting—that amplify agent discretion and dilute oversight (EACC, 2018). In such contexts, Agency Theory explains the persistent deviation from optimal procurement outcomes, as agents exploit governance gaps to advance personal or political interests at the expense of public project performance.

Governance reforms rooted in Agency Theory offer a viable solution to procurement inefficiencies in SEKEB counties. Institutionalizing practices such as independent audits, conflict-of-interest disclosures, contractor evaluations, and community oversight helps reduce information gaps and curb agent opportunism (Osabiya, 2015; Sdiq & Abdullah, 2022). In this study, corporate governance is viewed as a mediating factor that influences how tendering processes translate into project performance. Agency Theory supports this role by showing how structured oversight improves accountability and procurement integrity.

## **2.2 Empirical Literature Review**

The performance of public infrastructure projects, particularly in the water sector, is critically shaped by the effectiveness of procurement systems and governance structures underpinning project delivery. Empirical studies affirm that tendering processes serve as the operational backbone of public procurement by anchoring principles of transparency, competitiveness, and accountability (Lysons & Farrington, 2016). In Kenya, the enactment of the Public Procurement and Asset Disposal Act (PPADA) of 2015 marked a decisive legislative step toward formalizing procurement integrity. Nonetheless, persistent irregularities—such as insider bidding, incomplete contractor vetting, and biased evaluations—continue to compromise project outcomes, especially at the county level where institutional capacities remain weak (Odhiambo & Kamau, 2013). Within devolved units like Kitui, Makueni, and Machakos counties, ineffective tendering has translated into procurement delays, cost escalations, and incomplete water infrastructure (EACC, 2018).

Global empirical assessments highlight that structured and transparent tendering systems directly correlate with infrastructure project performance. In Uganda, for instance, Sekabira et al. (2021) found that procurement cycles emphasizing prequalification, technical scoring, and post-award audits reduced cost overruns in water sector projects by 28%. In contrast, a study by Hope (2020) in Tanzania observed that the absence of competitive tendering frameworks led to frequent project discontinuities, with over 35% of water projects stalled or abandoned. Similar dynamics are observable in Kenya's SEKEB region, where reliance on price-only tender evaluations—without incorporating supplier technical competence or sustainability considerations—has resulted in substandard water infrastructure (WASREB, 2021). These findings resonate with the work of Dobler and Burt (2006), who argue that procurement efficiency in large-scale public projects demands integration of technical qualifications, market intelligence, and comprehensive price analysis into tendering structures to ensure optimal outcomes.

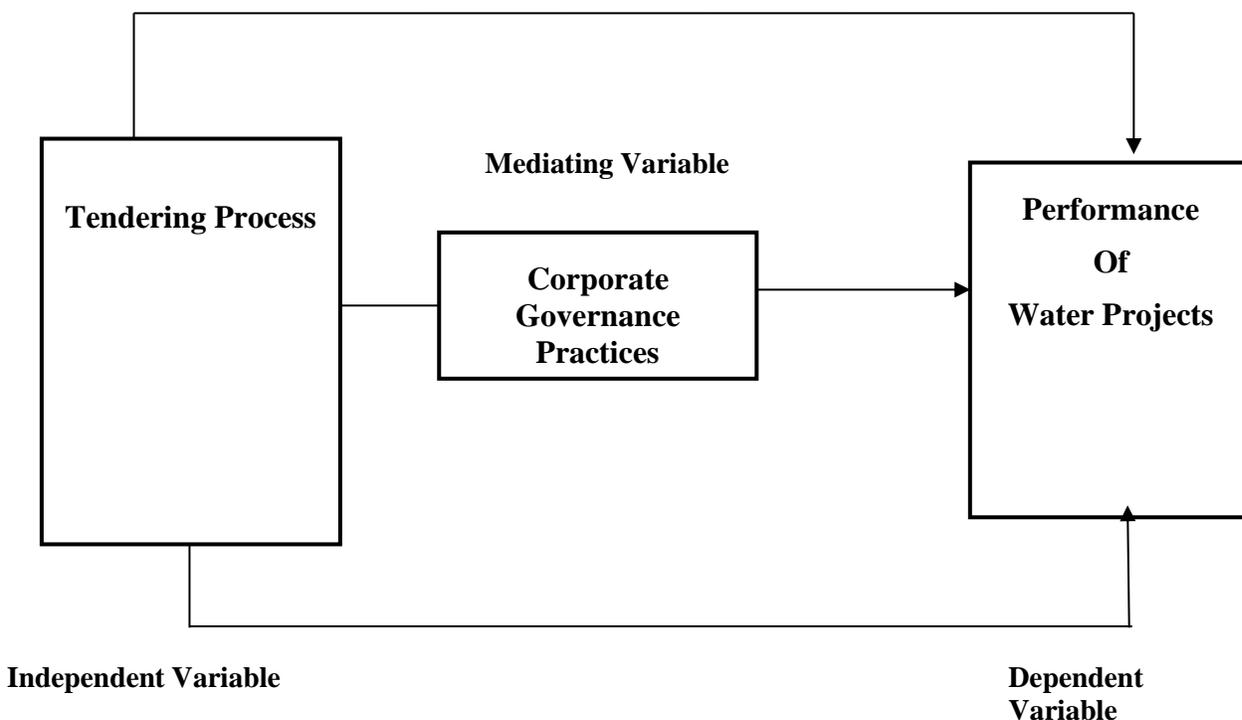
However, empirical evidence also illustrates that robust tendering systems alone do not guarantee project success in environments characterized by weak institutional controls. Corporate governance practices emerge as critical mediating structures that condition the efficacy of procurement procedures (Alabdullah et al., 2016). In Kenya's public sector, governance failures—such as politicized tender committees, absent internal audits, and lack of contract enforcement—have undermined the integrity of procurement, perpetuating inefficiency and wastage (Wafula, 2013). Nasrallah and El Khoury (2021) emphasize that sound governance frameworks—anchored on transparency, stakeholder oversight, and independent audit mechanisms—enable procurement systems to deliver desired performance outcomes by minimizing discretion and enforcing compliance. Within water service provision, WASREB (2024) underscores the role of governance boards in overseeing procurement processes, recommending contractor evaluations, and ensuring that project contracts align with broader service delivery goals.

At the county level, studies confirm the pivotal role of governance structures in enhancing project accountability and performance. Kaberia (2019), in a study of Tana Water Service Board, found that corporate governance mechanisms explained over 47% of variance in project performance, mediated through timely contractor vetting, robust project oversight, and financial transparency. Similar results are reported by Nkonge and Itunga (2023), who demonstrate that weak board independence and poorly enforced internal controls correlate with contractor underperformance and resource misallocation in Kenyan county water utilities. Furthermore, empirical findings by Asiedu and Mensah (2023) affirm that board composition, regular disclosure practices, and enforced governance codes enhance operational alignment with project objectives, ensuring that public procurement translates into tangible infrastructure outcomes.

Ultimately, project performance in Kenya's water sector is influenced by the interdependence between tendering processes and governance frameworks. While structured tendering initiates competitive contractor selection, governance practices regulate post-award contract management, budgetary control, and quality assurance (OECD, 2015). The failure of either pillar undermines project delivery. In the SEKEB context, where devolution has exposed systemic procurement vulnerabilities, corporate governance emerges as a necessary mediator—transforming procedural transparency into actual project efficacy. Thus, consistent with empirical studies across Africa and Asia (Sekabira et al., 2021; Hope, 2020), strengthening both tendering systems and governance integrity is essential for realizing sustainable water infrastructure development in Kenya.

### 2.3 Conceptual Framework

The conceptual framework graphically demonstrates the structural relationship between the tendering process (independent variable), corporate governance practices (mediating variable), and the performance of water projects (dependent variable). At its core, this framework conceptualizes that while competitive and transparent tendering procedures directly influence project outcomes, their full effectiveness in delivering successful water infrastructure projects depends on the intervening role of governance structures.



**Figure 1: Conceptual Framework**

The tendering process, represented as the independent variable, encompasses activities such as supplier prequalification, transparent bidding, bid evaluation, and contract award procedures. These stages determine not only who delivers the project but also at what cost, quality, and timeframe. Directly, efficient procurement should lead to better project performance, but empirical evidence suggests that tendering alone does not guarantee success due to systemic challenges like favoritism, non-compliance, and post-award inefficiencies.

Thus, the framework introduces corporate governance practices as the mediating variable, reflecting internal controls, audit functions, transparency measures, and accountability systems that shape how tendering outcomes translate into project delivery. Effective governance ensures that selected contractors are monitored, resources are managed transparently, and procurement rules are enforced, mitigating risks like corruption or misallocation. Therefore, governance mechanisms strengthen the procurement-performance link by institutionalizing compliance, ethical management, and performance oversight.

Water project performance, as the dependent variable, is reflected through outcomes such as timely completion, cost efficiency, infrastructure quality, and sustainability. While tendering initiates performance, internal governance practices ensure long-term delivery and service value. This framework enables the study to examine how procurement reforms, when supported by strong governance, improve water infrastructure outcomes in SEKEB. It also helps uncover structural and institutional gaps affecting project success in devolved settings.

### 3.0 Research Methodology

This study adopted a mixed-methods research design, anchored in the pragmatist philosophy, to investigate the influence of the tendering process on the performance of county government water projects, with corporate governance practices acting as a mediating variable. Pragmatism was chosen to integrate both qualitative and quantitative data, recognizing that understanding public procurement and project performance requires examining institutional structures alongside lived stakeholder experiences. A cross-sectional survey design was used to collect primary data from key institutional actors directly engaged in water project planning, procurement, execution, and oversight within Kitui, Machakos, and Makueni counties, which constitute the South Eastern Kenya Economic Bloc (SEKEB). The target population of 764 respondents—including procurement officers, water service board staff, chief officers, county executive committee members, and members of county assemblies (MCAs)—was stratified by role and sampled using stratified random sampling, yielding a sample size of 263 respondents as calculated using Yamane’s formula.

Primary data was collected using semi-structured questionnaires, designed to capture both quantitative metrics and qualitative insights. Quantitative data was processed using SPSS version 24, applying descriptive statistics and inferential analysis techniques, including multiple regression analysis to evaluate the direct relationship between tendering processes and project performance. Mediation analysis following Baron and Kenny’s (1986) four-step approach was conducted to assess the indirect influence of corporate governance practices. The model was specified as follows;

$$\text{Step 1: } PWP = \alpha + \beta_1 TP + \varepsilon \dots\dots\dots (1)$$

$$\text{Step 2: } CGP = \alpha + \beta_2 TP + \varepsilon \dots\dots\dots (2)$$

$$\text{Step 3: } PWP = \alpha + \beta_3 CGP + \varepsilon \dots\dots\dots (3)$$

$$\text{Step 4: } PWP = \alpha + \beta^4 TP + \beta^5 CGP + \varepsilon \dots\dots\dots (4)$$

### 4.0 Research Findings

This chapter presents the findings of the study based on the collected data and outlines the analytical processes employed to test the hypothesized relationships. It details descriptive statistics, correlation results, and mediation analysis to evaluate how tendering processes and corporate governance influence water project performance in SEKEB counties

#### 4.1 Descriptive Statistics

This section presents descriptive statistics for the two core constructs central to this study: the tendering process and corporate governance practices. By summarizing respondents’ perceptions using measures such as mean, standard deviation, skewness, and kurtosis, the analysis offers a

preliminary understanding of how these constructs are perceived across the sampled counties in the South Eastern Kenya Economic Bloc (SEKEB). These descriptive findings establish the operational environment surrounding public procurement and governance processes, laying a foundation for subsequent inferential analysis.

#### 4.1.1 Tendering Process

Descriptive results for the tendering process reveal a moderately strong consensus among respondents on the presence and functionality of procurement systems in SEKEB counties. The mean score of 3.80 suggests that, on average, respondents agreed that core elements of the tendering process—such as transparency in procurement, prequalification procedures, supplier compliance, and price control mechanisms—are effectively implemented. The low standard deviation of 0.23 points to minimal dispersion in responses, indicating uniformity in perceptions across counties. Skewness of 0.123 and kurtosis of -0.322 confirm that responses followed an approximately normal distribution, with no significant skew or concentration of extreme values. These findings imply that while tendering processes are institutionally present and relatively transparent, their effectiveness is perceived uniformly but not exceptionally across the counties. Respondents generally acknowledged compliance with procurement laws and guidelines, yet the absence of extreme values suggests moderate satisfaction rather than overwhelming approval.

#### 4.1.2 Corporate Governance Practices

Results for corporate governance practices depict a slightly more favorable assessment compared to the tendering process. The mean score of 3.98 indicates that respondents largely agreed with the effectiveness of governance frameworks overseeing water projects in SEKEB counties. The findings are as shown in Table 1;

**Table 1: Descriptive Statistics for Corporate Governance Practices**

Corporate Governance Practices	Statistics
N	213
Mean	3.9837
Median	3.99
Mode	4.01
Std. Deviation	0.20131
Skewness	0.13
Kurtosis	-0.314

Indicators such as disclosure transparency, board oversight, accountability mechanisms, and operational efficiency scored consistently high. The standard deviation of 0.20 reflects minimal variation, suggesting that perceptions of governance are consistent across respondents and counties. A skewness value of 0.13 and kurtosis of -0.314 further support a symmetric, platykurtic distribution, confirming the absence of outliers or polarized perceptions.

These descriptive statistics suggest that governance structures are relatively well institutionalized and functional. Respondents perceived mechanisms for accountability and oversight as contributing positively to water project performance. The findings support the theoretical view that corporate governance serves as an effective mediating mechanism by ensuring that procurement practices translate into tangible project outcomes. Nonetheless, the uniformly high perceptions may obscure underlying structural governance challenges such as politicized

appointments or weak enforcement, signaling the need for complementary qualitative assessments to verify the consistency between perceptions and actual governance performance in practice.

#### 4.2 Correlation Analysis

The correlation analysis revealed a strong and statistically significant positive relationship between the tendering process and the performance of water projects ( $r = 0.824$ ,  $p < 0.01$ ) as shown in Table 2.

**Table 2: Correlation Analysis**

		Performance	Tendering Process
Performance Tendering Process	Pearson Correlation	1.000	
	Pearson Correlation	.824**	1.000
	Sig. (2-tailed)	0.000	
Corporate Governance	Pearson Correlation	.643**	.739**
	Sig. (2-tailed)	0.000	0.000

\*\* Correlation is significant at the 0.01 level (2-tailed).

The correlation analysis revealed a strong and statistically significant positive relationship between the tendering process and water project performance ( $r = 0.824$ ,  $p < 0.01$ ), indicating that procurement factors such as supplier prequalification, bid transparency, and cost controls are highly predictive of project success. This finding supports assertions by Thai (2001) and Snider and Rendon (2008), who argue that transparent and competitive tendering enhances cost-efficiency, reduces implementation risks, and ensures value-for-money in public infrastructure delivery. The high correlation coefficient suggests that in SEKEB counties, the quality of tendering procedures is not merely administrative but a central determinant of project timelines, cost adherence, and infrastructure quality. This also aligns with observations by Kozik (2019), who found that inefficiencies in bid evaluation and contract award often translate into underperformance in water and sanitation projects across developing economies.

In parallel, corporate governance practices also demonstrated a statistically significant and moderately strong correlation with project performance ( $r = 0.643$ ,  $p < 0.01$ ), highlighting their critical role in supporting procurement outcomes. Mechanisms such as board oversight, internal audits, and stakeholder accountability reinforce procurement integrity and operational discipline, thereby reducing agency risks and resource misallocation (Kaberia, 2019; Ali & Oudat, 2021). These results affirm theoretical positions advanced by Jensen and Meckling (1976) and Donaldson and Davis (1991), which emphasize governance as a structural control system that aligns agent behavior with public service objectives. The observed interrelationship—where governance correlates strongly with both tendering ( $r = 0.739$ ) and performance—underscores its mediating function, consistent with findings from OECD (2015) and Transparency International (2014), which document that governance reforms significantly enhance procurement-driven project outcomes when institutionalized within public infrastructure programs.

#### 4.3 Hypothesis Testing

The study sought to examine whether corporate governance practices mediate the relationship between the tendering process and the performance of water projects in selected county

governments under SEKEB in Kenya. The mediation analysis followed the four-step approach proposed by Baron and Kenny (1986). The null hypothesis was stated as follows:

*H<sub>0</sub>: Corporate governance practices do not significantly mediate the relationship between tendering process and performance of water projects.*

To test this, regression analysis was conducted in four steps, with model fit evaluated using R, R<sup>2</sup>, adjusted R<sup>2</sup>, and the standard error of the estimate. Model summary results are presented in Table 3;

**Table 3: R<sup>2</sup> for Mediating Effect**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
Step 1	0.824	0.679	0.677	0.14096
Step 2	0.739	0.547	0.544	0.1001
Step 3	0.643	0.414	0.411	0.19046
Step 4	0.825	0.681	0.678	0.14073

Table 3 presents the model summary results that were used to assess the mediating role of corporate governance practices on the relationship between the tendering process and the performance of water projects in the SEKEB counties. The analysis followed the structured four-step procedure of Baron and Kenny (1986), systematically evaluating direct, indirect, and combined predictive effects. Each step offers unique insights into how procurement procedures and governance mechanisms interact to influence service delivery outcomes in Kenya's devolved water sector.

In the first step, where the tendering process was regressed directly against project performance, the model produced an R<sup>2</sup> value of 0.679. This indicates that 67.9% of the variance in water project performance is explained by the tendering process alone, demonstrating its strong direct predictive power. This result underscores the central role of procurement practices in determining efficiency, timeliness, and quality outcomes of water infrastructure projects. In the second step, where corporate governance was regressed on the tendering process, the model yielded an R<sup>2</sup> of 0.547. This confirms that 54.7% of the variability in corporate governance practices can be attributed to the tendering processes applied in the counties, reflecting the structural interplay between procurement systems and governance frameworks.

The third step, which regressed corporate governance directly against project performance, produced an R<sup>2</sup> of 0.414, revealing that governance alone accounts for 41.4% of the variance in project performance—highlighting its standalone importance in driving outcomes. Finally, when both the tendering process and corporate governance were introduced simultaneously in the fourth step, the combined model recorded an R<sup>2</sup> of 0.681. This marginal improvement over Step 1 (from 0.679 to 0.681) suggests the presence of a partial mediation effect, wherein corporate governance contributes to explaining project performance but does not fully substitute the direct effect of the tendering process.

Collectively, these model summary results affirm that while the tendering process exerts a dominant direct influence on project outcomes, corporate governance plays a complementary mediating role, shaping how procurement practices translate into actual service delivery and project performance across SEKEB counties. This interdependent relationship reflects the layered institutional dynamics within Kenya's public infrastructure sector, where procedural efficiency

must be reinforced by robust oversight and accountability mechanisms to achieve optimal project results.

Table 4 presents the Analysis of Variance (ANOVA) results, which were essential in determining the statistical significance and explanatory power of each regression model used in assessing the mediation effect of corporate governance practices.

**Table 4: ANOVA**

Model	Source	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	8.863	1	8.863	446.04	0.000
	Residual	4.192	211	0.02		
	Total	13.055	212			
2	Regression	2.549	1	2.549	254.373	0.000
	Residual	2.114	211	0.01		
	Total	4.663	212			
3	Regression	5.401	1	5.401	148.883	0.000
	Residual	7.654	211	0.036		
	Total	13.055	212			
4	Regression	8.896	2	4.448	224.586	0.000
	Residual	4.159	210	0.02		
	<b>Total</b>	<b>13.055</b>	<b>212</b>			

ANOVA tests evaluate whether the regression models significantly predict the dependent variable beyond what would be expected by chance, based on the computed F-statistic and its associated significance value (p-value). In the context of this study, the ANOVA results confirm whether the tendering process and corporate governance, individually and jointly, have meaningful explanatory power over the performance of county government water projects within SEKEB.

In Model 1, where the tendering process was regressed directly on project performance, the F-statistic of 446.04 ( $p < 0.001$ ) demonstrates a highly significant model, indicating that variations in the tendering process account for significant differences in project outcomes. This strong F-value underscores the strategic weight of procurement systems in driving performance across devolved water infrastructure projects. In Model 2, tendering was used to predict corporate governance practices, yielding an F-statistic of 254.373 ( $p < 0.001$ ). This indicates that the design and execution of procurement procedures significantly influence the quality and effectiveness of governance structures within county water management institutions, affirming their institutional interlinkage.

Model 3, where corporate governance practices were regressed on project performance, recorded an F-statistic of 148.883 ( $p < 0.001$ ), confirming that governance mechanisms significantly predict project outcomes, albeit less strongly than procurement practices alone. Finally, Model 4 combined both tendering process and corporate governance as joint predictors of project performance, yielding an F-statistic of 224.586 ( $p < 0.001$ ). This confirms that the integrated model is statistically significant, meaning that the combined influence of procurement procedures and governance practices offers a superior explanation of water project performance relative to either factor alone.

Overall, the consistently high and statistically significant F-values across all four models reinforce the robustness of the regression analyses. They validate the hypothesis that both tendering and governance structures play crucial roles in explaining variations in project performance, with governance acting as a partial mediator in the relationship between tendering processes and project outcomes in SEKEB counties. Further, the regression coefficient results are as presented in Table 5;

**Table 5: Regression coefficients for Mediating Effect**

Model		B	Std. Error	Beta	T	Sig.
1	(Constant)	0.201	0.158		1.271	0.205
	Tendering Process	0.876	0.041	0.824	21.12	0.000
2	(Constant)	1.56	0.112		13.897	0.000
	Tendering Process	0.47	0.029	0.739	15.949	0.000
3	(Constant)	-0.069	0.296		-0.233	0.816
	Corporate Governance	1.076	0.088	0.643	12.202	0.000
4	(Constant)	0.005	0.218		0.023	0.982
	Tendering Process	0.817	0.062	0.768	13.284	0.000
	Corporate Governance	0.126	0.097	0.075	1.298	0.196

**Model 1:**  $PWP = 0.201 + 0.876TP$

**Model 2:**  $CGP = 1.560 + 0.470TP$

**Model 3:**  $PWP = -0.069 + 1.076CGP$

**Model 4:**  $PWP = 0.005 + 0.817TP + 0.126CGP$

As shown in Table 5, all four regression models were statistically significant at  $p < 0.001$ , confirming the validity of the models. The regression coefficients in Table 29 reveal that the tendering process significantly predicted performance in both Step 1 ( $\beta = 0.876, p < 0.001$ ) and Step 4 ( $\beta = 0.817, p < 0.001$ ), although the beta coefficient dropped slightly in the latter, indicating a reduced direct effect. In contrast, corporate governance was significant in Step 3 ( $\beta = 1.076, p < 0.001$ ), but became statistically insignificant when both predictors were included in Step 4 ( $\beta = 0.126, p = 0.196$ ). This pattern suggests partial mediation, since the effect of tendering process remained significant but reduced when corporate governance was introduced into the model. The study therefore concludes that corporate governance practices partially mediate the relationship between tendering process and water project performance in the SEKEB region.

The findings of the study confirm that the tendering process plays a pivotal role in determining the performance of county government water projects within the South Eastern Kenya Economic Bloc (SEKEB). A strong positive correlation ( $r = 0.824$ ) and significant regression coefficient ( $\beta = 0.876, p < 0.001$ ) underscore the value of transparent, competitive, and well-regulated procurement systems in achieving timely, cost-effective, and technically sound project outcomes. These results support the arguments of Thai (2001), who maintained that efficient procurement enhances credibility in supplier selection and fosters value for money delivery. Likewise, Basheka (2009) emphasized that structurally sound procurement systems, including supplier vetting, compliance checks, and price control, are closely tied to effective public infrastructure performance. Overall,

the evidence highlights the critical role of procurement reform and institutional capacity building in strengthening project success within devolved governance.

Corporate governance practices emerged as both a significant direct predictor and a partial mediator in the tendering-performance relationship. The correlation between corporate governance and project performance ( $r = 0.643$ ) and its explanatory strength ( $R^2 = 0.414$  in Step 3) highlight the pivotal role of accountability mechanisms, board oversight, and disclosure transparency in public project execution. This resonates with Agency Theory (Jensen & Meckling, 1976), which posits that governance structures mitigate agency losses by aligning the actions of agents (project implementers) with the interests of principals (citizens). The partial mediation observed in the regression models suggests that while effective procurement systems drive performance, their impact is enhanced or constrained by the institutional quality of governance. This complements the findings of Githinji and Bichanga (2020), who documented that weak oversight and politicized appointments in county governments often dilute procurement gains, whereas strong governance structures reinforce procurement outcomes by safeguarding against mismanagement and corruption.

Moreover, the findings validate the argument advanced by OECD (2015) and Tricker (2015), which emphasizes that the effectiveness of governance frameworks depends not only on structural reforms but also on their operationalization within day-to-day project management. The high descriptive scores on corporate governance practices suggest that SEKEB counties have institutionalized governance mechanisms; however, the partial mediation outcome indicates that these practices may not fully translate into performance improvements without stronger integration with procurement and project management processes. This observation supports the work of Mutua and Kibua (2019), who stressed that capacity gaps in performance monitoring and enforcement undermine the governance reforms in Kenya's devolved units.

Overall, the synthesis confirms that sustainable performance in public sector water projects requires an integrated approach where competitive tendering processes are reinforced by robust governance structures. The findings underscore the need for counties within SEKEB and beyond to prioritize procurement professionalization alongside strengthening board accountability, ethical leadership, and transparency in decision-making. Procurement reforms alone are insufficient; their effectiveness is conditional upon the operational integrity of governance systems that ensure compliance, oversight, and strategic project delivery. This study thus offers empirical support for advancing synergistic procurement-governance frameworks to enhance public infrastructure outcomes in Kenya's devolved sectors.

## **5.0 Conclusion**

The study establishes that while the tendering process exerts a strong and direct influence on the performance of county-managed water projects in Kenya's South Eastern Kenya Economic Bloc (SEKEB), its impact is significantly shaped by the presence and functionality of corporate governance mechanisms. Mediation analysis confirms that introducing governance structures into the tendering-performance relationship reduces the strength of the direct effect of procurement, indicating that governance practices such as board oversight, financial transparency, and internal audits act as institutional filters that convert procedural compliance into real infrastructure outcomes. This finding affirms the central proposition that procurement reforms, when operating in isolation, are insufficient for guaranteeing effective public service delivery. Instead, their

success is contingent on robust governance systems that ensure accountability, monitor performance, and curb implementation gaps.

The implication for policy and practice is clear: sustainable improvements in water infrastructure delivery under Kenya's devolved system require a dual focus on strengthening both procurement systems and corporate governance capacity. Agency Theory supports this position by illustrating how governance mechanisms reduce agency costs and align contractor and official behavior with the performance mandates of county governments. As such, county administrations must institutionalize governance structures not as compliance add-ons but as core drivers of project success. This includes investing in independent oversight bodies, enhancing audit capabilities, enforcing disclosure standards, and building governance capacity at subnational levels. By anchoring procurement reforms within effective governance frameworks, counties in SEKEB—and across Kenya—can transition from procedural adherence to sustainable, accountable, and high-impact infrastructure development.

## 6.0 Recommendation

The study establishes that the effectiveness of tendering processes in improving water project performance in SEKEB counties is significantly shaped by the strength of governance structures. While transparent procurement procedures contribute directly to project outcomes such as timeliness, cost control, and quality delivery, these gains are more likely to be realized and sustained when supported by robust institutional mechanisms. Structures such as board oversight, internal audits, and disclosure protocols enhance accountability and ensure that procurement decisions lead to tangible infrastructure results. The analysis highlights that without strong governance, even well-designed tendering processes risk being undermined by implementation gaps. As such, sustainable improvements in water project performance require not only procurement reforms but also the operationalization of governance practices that align procurement actions with strategic service delivery goals. This underscores the imperative for counties to integrate governance into the core of project execution frameworks.

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