

International Journal of **Supply Chain and Logistics**

(IJSCL)

**Public Procurement Law Compliance and Performance of
Technical and Vocational Education Training Institutions in
North Rift Region, Kenya**



**CARI
Journals**

Public Procurement Law Compliance and Performance of Technical and Vocational Education Training Institutions in North Rift Region, Kenya

 ^{1*}David Otera Ipaat, ²Dr. Paul Machoka

¹Masters Student, Jomo Kenyatta University of Agriculture and Technology

²Lecturer, Jomo Kenyatta University of Agriculture and Technology

Accepted: 25th June, 2026, Received in Revised Form: 2nd July, 2026, Published: 19th July, 2026



ABSTRACT

Purpose: This study sought to examine the effect of public procurement law compliance on performance among Public Technical and TVET institutions in North Rift Region counties, Kenya. The study also sought to determine the effect procurement law enforcement and automation of procurement process on performance of Public and Vocational Education Training Institutions in North Rift Region, Kenya.

Methodology: This study adopted a descriptive research design. The unit of analysis was conducted among TVET licensed in TVET institutions in the North Rift Region. The unit of observation were heads of procurement and finance departments in the TVET institutions. The target population was 220 heads of procurement and finance departments in 110 TVET institutions in TVET institutions in the North Rift Region. Given the small size of the target population, a census approach was adopted. This study used a semi-structured questionnaire comprising both open-ended and closed-ended questions. The research instrument generated both qualitative and quantitative data. Qualitative data from open-ended questions was analyzed using thematic analysis. Quantitative data was analyzed using both descriptive and inferential statistics with the aid of Statistical Package for the Social Sciences (SPSS) version 28. In this study, descriptive statistics included the mean, standard deviation, frequencies, and percentages. Inferential statistics consisted of Pearson correlation analysis and linear regression analysis. Tables and charts were used to summarize responses, facilitate comparison, and enhance clarity in data presentation.

Findings: The study found that procurement law enforcement and automation of procurement processes had a positive and significant effect on performance of Public Technical and Vocational Education Training institutions in North Rift Region, Kenya.

Unique Contribution to Theory, Policy and Practice: Based on the findings, the study recommends that institutions should fully adopt and integrate technology platforms in procurement initiation processes to enhance efficiency and accountability.

Keywords: *Public Procurement Law Compliance, Procurement Law Enforcement, Automation of Procurement Processes, Public Technical and Vocational Education Training Institutions*

Background of the Study

The study focus on examining the global perspective of procurement, regional and local perspectives. The chapter provides the background information, statement of the problem, research objectives and research questions that inform the study, significance, scope and limitations of the study.

Public procurement refers to the acquisition by governments and state-owned enterprises of goods, services and works. It is a crucial pillar of services delivery for governments. As it accounts for a large share of the taxpayers' money, governments are expected to carry it out efficiently and with high standards of integrity to ensure the quality-of-service delivery and safeguard the public interest. As a key activity for governments, well governed public procurement can and must play a major role in fostering public sector efficiency, establishing citizens' trust and contributing to key governmental agenda's like the digital transformation and green growth (OECD, 2021).

Public procurement refers to the acquisition of goods and services by government or public sector organization (Uyarra & Flagan, 2010) and is one the government's key activities (Stephen & Hellen, 2009). Kipchilat (2006) quoting Comesa report (2004) noted that procurement absorbs 60 Percent of government expenditure and this means that accountability at all levels is important. This figure 60 percent indicates that public procurement is important in the economies of both developed and developing countries. Further Public procurement can be described as the process of acquisition by government and state-owned enterprises of goods, services and works and is guided by the Public Procurement and Asset Disposal, 2015 (Thiankolu, 2019). Procurement starts with need identification and planning for its requirements. The organization then does risk assessment, evaluates the possible solutions and identifies the qualified supplier, award contract and payment for goods and services. The process enables an institution to get right quality a product, for the right price, with the quantity which is right, at the right time, the goods has to come from the sources which are appropriate (Muthomi, 2019).

The study therefore was examining the global, Regional and local views of procurement issues. The study provides the background information, statement of the problem, research objectives and research questions that underpin the study, its importance, scope and limitations. In the 21st century, by the impact technology progress and global economic integration, the supply chain between different countries and different regions are becoming more and more common (Stadtler, 2015).

Public procurement is the cornerstone of government operations, facilitating the acquisition of goods, services, and works essential for delivering public services. This intricate process involves various stages, from identifying needs and soliciting bids to awarding contracts and managing supplier relationships.

At its core, public procurement aims to fulfill organizational requirements while maximizing value for taxpayers' money. Transparency, fairness, and accountability are foundational principles guiding procurement activities, ensuring that public funds are spent wisely and equitably. By adhering to these principles, governments enhance trust among citizens and foster a competitive business environment conducive to economic growth.

Key objectives of public procurement include securing high-quality products and services, promoting competition among suppliers, fostering innovation, and supporting socio-economic development objectives such as sustainability and diversity. Achieving these goals necessitates robust procurement processes that prioritize efficiency, effectiveness, and ethical conduct.

Central to the success of public procurement are its stakeholders, which include government agencies, procurement professionals, suppliers, civil society organizations, and citizens. Collaboration and engagement among these stakeholders are crucial for optimizing procurement outcomes, mitigating risks, and addressing emerging challenges such as corruption, fraud, and geopolitical factors.

This guide delves into the intricacies of public procurement, offering insights into the various stages, methods, and best practices employed in procurement processes. From strategic planning and market research to contract management and performance evaluation, each aspect plays a vital role in ensuring the successful delivery of public goods and services.

By fostering a deeper understanding of public procurement principles and practices, this guide aims to empower stakeholders to navigate the complexities of procurement processes effectively, drive innovation, and uphold integrity in public spending. Ultimately, a well-functioning procurement system is essential for promoting economic development, advancing public sector efficiency, and delivering value to society as a whole.

Statement of the Problem

Public Technical and Vocational Education and Training (TVET) institutions in Kenya play a critical role in equipping youth with practical, hands-on skills that are aligned with the country's national development goals, including job creation and industrial growth. These institutions are essential for fostering innovation and reducing youth unemployment. However, their operational effectiveness is increasingly undermined by persistent challenges in public procurement compliance. This remains a significant concern despite the enactment of the Public Procurement and Asset Disposal Act (2015), which was intended to enhance transparency and accountability in public spending. Additionally, the establishment of oversight bodies such as the Public Procurement Regulatory Authority (PPRA) and the Technical and Vocational Education and Training Authority (TVETA) has not fully resolved these compliance issues.

The performance of Public Technical and Vocational Education Training (TVET) institutions in Kenya has been on a declining trend, particularly in relation to procurement compliance indicators. According to data from the Public Procurement Administrative Review Board (PPARB, 2024), the number of complaints against procurement decisions in TVETs rose from 46 in 2021 to 58 in 2022, increased further to 71 in 2023, and peaked at 84 in 2024, indicating growing dissatisfaction among suppliers and stakeholders. In addition, the recent audit reports by the Office of the Auditor-General (2024) showed that the rate of irregular procurements increased steadily, with audit findings showing non-compliance rates of 21% in 2021, 28% in 2022, 33% in 2023, and 39% in 2024. These rising figures point to systemic weaknesses in procurement planning, enforcement of procurement laws, and institutional capacity, all of which undermine the ability of TVET institutions to utilize resources effectively and deliver quality training. It is therefore necessary to examine how compliance with public procurement law influences the performance of TVET institutions, particularly in North Rift Region counties where these challenges remain acute.

Various studies have been conducted on public procurement law compliance and institutional performance. For instance, Mohammed and Osoro (2023) examined procurement law compliance in Isiolo County Government; Mutangili (2024) investigated its impact on supply chain performance; and Nyakundi and Muturi (2021) studied compliance in procurement regulations at Kisii University. However, these studies employed structured questionnaires and stratified random sampling, while the current study adopts a census approach and semi-structured questionnaires. Conceptually, they measured compliance using personnel, records, and procedures compliance (Mohammed & Osoro, 2023), evaluation, tendering, and contract management (Mutangili, 2024), and transparency, bidding, and professionalism (Nyakundi & Muturi, 2021). Contextually, they focused on counties, the public sector, and universities, hence their findings cannot be generalized to TVET institutions in North Rift Region, Kenya. Therefore, this study sought to examine the effect of public procurement law compliance on TVET institutions in North Rift Region counties, Kenya.

Objectives of the Study

General Objective

The general objective was to examine the relationship of public procurement law compliance on performance among Technical and Vocational Education Training institutions (TVET) in North Rift Region counties, Kenya.

Specific Objectives

- i. To determine the effect procurement law enforcement on performance of Public Technical and Vocational Education Training institutions in North Rift Region, Kenya.

- ii. To ascertain the effects of automation of procurement process on performance of Public and Vocational Education Training Institutions in North Rift Region, Kenya.

Theoretical Review

Theory of Enforcement

The Theory of Enforcement was advanced by Oliver Wendell Holmes in 1881 and has been further elaborated by modern scholars such as Michael D. Gilbert (2022). The theory argues that laws alone cannot guarantee compliance unless there is a mechanism to enforce them (Mohammadi & Mohammadaghaee, 2023). It highlights deterrence as a central component, where individuals weigh the potential benefits of lawbreaking against the costs of punishment. Holmes illustrated this through the concept of the “bad man,” who is not motivated by morality or duty but by material consequences. For such individuals, laws must be backed by credible enforcement measures to influence behavior. In essence, the theory posits that effective enforcement is inseparable from the law, as unenforced laws lose their meaning and effectiveness (Farah, 2022).

The assumptions of the theory of enforcement are grounded in deterrence and rational choice. First, it assumes that individuals are motivated by self-interest, meaning compliance with the law depends on whether the perceived costs of violation outweigh the benefits. Second, it assumes that enforcement institutions, such as inspectors, auditors, and courts, are crucial in creating credible threats of punishment (Shelton, 2020). Third, the theory assumes that not all individuals are guided by morality or duty; therefore, punishment must exist to ensure compliance, especially for those who act irrationally or pursue personal gain at the expense of societal rules (Mohammadi & Mohammadaghaee, 2023). In addition, it assumes that laws without enforcement mechanisms are ineffective, since enforcement is seen as intrinsic to the existence and success of any legal framework.

The theory of enforcement was used in this study to explain how procurement law enforcement influences the performance of Public Technical and Vocational Education Training (TVET) institutions in the North Rift Region. Procurement laws are designed to ensure accountability, transparency, and value for money in resource utilization. However, without proper enforcement by relevant agencies, these laws may be disregarded, leading to mismanagement, inefficiency, and corruption. By applying enforcement mechanisms such as audits, compliance checks, and penalties, institutions are deterred from engaging in malpractice and motivated to adhere to legal requirements. This compliance, in turn, enhances institutional performance through prudent use of resources, timely procurement processes, and achievement of organizational goals in service delivery.

Diffusion of Innovations Theory

The Diffusion of Innovations Theory was originally developed by Everett Rogers in 1962 and has since been widely applied to explain how new technologies, practices, and systems are adopted across organizations and societies. The theory posits that innovations are communicated over time through specific channels within a social system and that adoption follows a predictable pattern, often characterized by innovators, early adopters, early majority, late majority, and laggards (Rogers, 2003). In the context of procurement automation, the theory explains how institutions adopt and integrate new technological processes to improve efficiency and performance. Recent studies have emphasized its relevance in public institutions, where adoption of digital innovations often faces cultural, structural, and resource-based barriers (Ali & Mukhongo, 2021; Mensah, 2023).

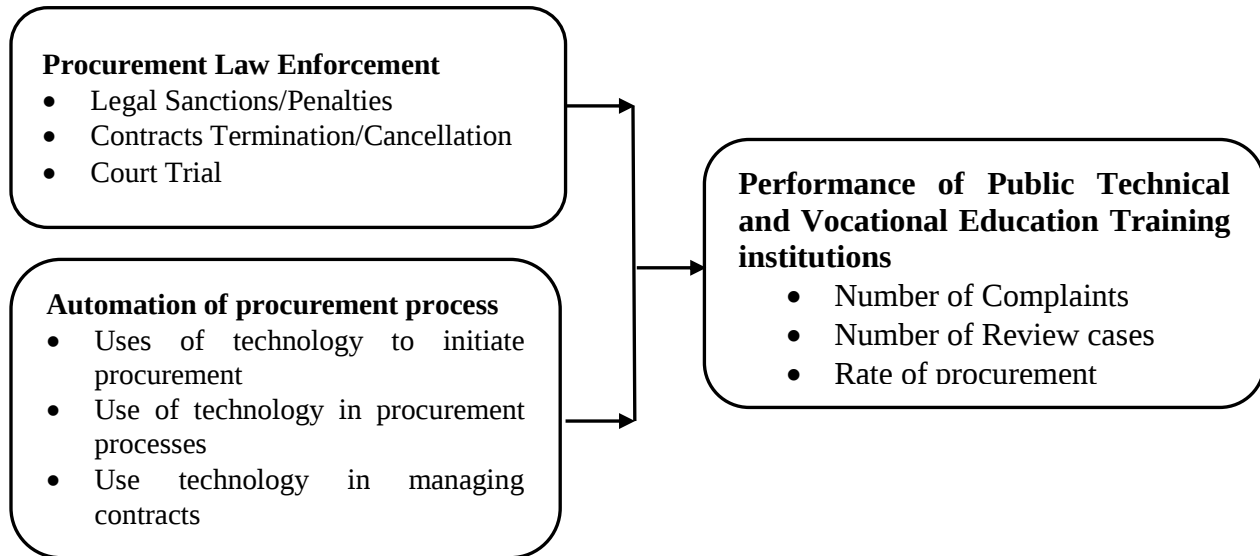
The assumptions of the diffusion of innovations theory are grounded in communication, perception, and social influence. First, it assumes that individuals and organizations adopt innovations at different rates based on perceived benefits, compatibility with existing systems, and complexity of use. Second, it assumes that adoption is influenced by information channels and social systems, meaning leaders, peers, and institutional culture affect decision-making (Sahin & Thompson, 2020). Third, the theory assumes that adoption occurs over time, following stages of knowledge, persuasion, decision, implementation, and confirmation. Finally, it assumes that innovations that demonstrate clear relative advantage, trialability, and observability are more likely to be adopted and sustained (Kaba & Osei-Bryson, 2021). These assumptions make the theory particularly suitable for studying technological change in public procurement systems.

The Diffusion of Innovations Theory was used in this study to explain how automation of procurement processes affects the performance of Public Technical and Vocational Education Training (TVET) institutions in the North Rift Region, Kenya. Automation represents an innovation that can enhance transparency, reduce delays, and minimize manual inefficiencies in procurement. According to the theory, successful adoption of automation depends on how TVET institutions perceive its usefulness, ease of use, and alignment with existing processes (Mensah, 2023). Early adopters of automation are likely to experience improved compliance with procurement regulations, faster service delivery, and better resource management. Over time, as more institutions adopt automation, the cumulative effect is enhanced institutional performance and accountability. Thus, the theory provides a framework to understand how innovation adoption drives procurement efficiency and organizational success.

Conceptual Framework

A conceptual framework is a figure that shows the relationship between the dependent variables and the independent variable (Babbie, 2021). In this study the dependent variable is performance of TVET's Institutions while the independent variables are procurement law enforcement and

automation. A conceptual framework presents the relationship between the dependent variable and the independent variables.



Independent variables

Dependent Variable

Figure 1: Conceptual Framework

Procurement Law Enforcement

Procurement law enforcement plays a vital role in ensuring compliance with established procurement regulations and maintaining accountability in the use of public resources (Baskoro, 2025). It encompasses three main mechanisms: legal sanctions and penalties, contract termination or cancellation, and court trials. These mechanisms are designed to uphold transparency, prevent malpractice, and safeguard institutional performance. Legal sanctions and penalties represent the first line of enforcement against procurement malpractice. They are corrective and deterrent measures imposed on individuals or institutions that fail to adhere to procurement regulations. Such measures may include fines, blacklisting of suppliers, suspension of procurement officers, or other disciplinary actions deemed appropriate by oversight authorities (Williams-Elegbe, 2020).

Contract termination or cancellation is another critical component of procurement law enforcement, often invoked when suppliers or contractors fail to fulfill contractual obligations or violate procurement laws (Williams-Elegbe, 2020). This measure ensures that institutions are not exposed to risks of financial loss, poor-quality deliverables, or delays caused by non-compliance. Contract termination reinforces the principle of value for money by holding suppliers accountable for meeting agreed-upon standards and timelines. In addition, it underscores the importance of honoring both legal and contractual provisions, thereby strengthening trust

between public institutions and their stakeholders. Court trials form the judicial aspect of procurement law enforcement, providing a formal legal process for addressing serious breaches such as corruption, fraud, or gross violations of procurement regulations (Williams-Elegbe, 2020). Through litigation, offenders are held accountable, and appropriate legal remedies are pursued to deliver justice and reinforce compliance. Court trials also establish legal precedents that deter future violations by demonstrating the seriousness of procurement offenses and the likelihood of facing judicial consequences. In the context of public institutions, court proceedings promote transparency and build public trust by showing that breaches of procurement laws are not tolerated (Baskoro, 2025).

E-Procurement Adoption

E-procurement adoption has become a critical driver of efficiency, transparency, and accountability in public institutions. It refers to the integration of information and communication technologies (ICTs) into procurement functions to streamline operations and improve service delivery. By shifting from manual to automated systems, institutions reduce paperwork, minimize delays, and enhance compliance with procurement regulations. The use of technology to initiate procurement is one of the first indicators of e-procurement adoption. This involves leveraging electronic platforms to raise requisitions, identify suppliers, and advertise tenders online (Nandankar & Sachan, 2020). By digitizing initiation processes, institutions improve accessibility and broaden competition by enabling more suppliers to participate. E-requisition systems also allow for faster processing and approval of procurement needs, reducing bureaucratic delays associated with manual systems.

The use of technology in procurement processes extends automation to the evaluation, selection, and awarding stages. Through electronic tendering and bidding systems, institutions can conduct evaluations more efficiently, reduce human interference, and ensure fairness in supplier selection (Yevu & Yu, 2020). E-procurement platforms also facilitate secure document handling and real-time communication with suppliers, thereby increasing efficiency. By adopting technology at this stage, institutions reduce risks of corruption, errors, and inefficiencies, as decisions are better documented and traceable. The use of technology in managing contracts represents the final dimension of e-procurement adoption. It involves applying digital tools to monitor contract implementation, track supplier performance, and ensure timely delivery of goods and services (Chan & Owusu, 2022). Electronic contract management systems provide platforms for storing, updating, and sharing contract information, making it easier to enforce terms and conditions. They also enable institutions to track progress, flag delays, and identify risks early, thus safeguarding service delivery. By using technology to manage contracts, institutions enhance accountability, reduce disputes, and ensure compliance with contractual obligations (Pattanayak & Punyatoya, 2020).

Empirical Literature Review

Procurement law enforcement and Performance of TVETs

In the Philippines, Manuel (2025) studied the role of procurement reforms and digital transformation on institutional performance in higher education institutions. The study adopted a conceptual and case analysis research design, drawing insights from universities implementing digital procurement systems. Data was obtained from document reviews, procurement reports, and interviews with institutional procurement officers. The findings indicated that strong enforcement mechanisms, such as legal sanctions and contract cancellation, positively influenced procurement performance. Specifically, the integration of technology with strict compliance improved transparency, reduced delays, and minimized procurement disputes. Furthermore, the study revealed that enforcement embedded within digital platforms enhanced accountability and improved service delivery outcomes, which can be applied to TVETs.

In Tanzania, Jaffu (2023) investigated the mediating role of career development in the relationship between training and the performance of public procurement professionals. The study employed a cross-sectional survey research design, targeting 204 procurement officers working across various public institutions. Data was collected through structured questionnaires and analyzed using confirmatory factor analysis and structural equation modeling. The findings revealed that enforcement of procurement laws—through clear penalties and compliance checks—was significantly associated with improved procurement performance. Specifically, combining capacity-building efforts with strong law enforcement reduced non-compliance, improved procurement efficiency, and minimized legal disputes. The study concluded that institutional performance improves when procurement law enforcement is complemented by employee training and development.

In Kenya, Nakhwanga (2020) examined the influence of procurement best practices, including enforcement mechanisms, on procurement performance in Busia County. The study employed a descriptive survey research design targeting procurement officers and county government staff. Data was collected through structured questionnaires and analyzed using descriptive and inferential statistics. The findings indicated that effective enforcement of procurement laws—such as applying sanctions, canceling underperforming contracts, and legal redress—enhanced procurement performance. Specifically, strict enforcement improved transparency, reduced procurement-related complaints, and ensured value for money. The study concluded that procurement law enforcement is a crucial determinant of institutional performance, making it directly relevant to TVET institutions operating under Kenya's procurement framework.

E-Procurement Adoption and Performance of TVETs

Robinson (2021) investigated the relationship between e-procurement adoption and procurement performance in higher education institutions in the United Kingdom. The study adopted a cross-

sectional survey design, collecting data from 312 procurement officers and administrative managers across 24 universities. Data were gathered using structured questionnaires and institutional e-procurement usage logs. Findings indicated that institutions with integrated e-procurement modules (e-sourcing, e-tendering, e-invoicing) recorded shorter procurement cycle times, fewer invoice disputes, and improved compliance metrics. The study concluded that digital procurement systems materially enhance procurement efficiency and transparency — outcomes that can directly improve the procurement-dependent performance of TVET institutions.

Mensah (2023) examined determinants of e-procurement adoption and its effect on procurement performance in public sector institutions, including training colleges in Ghana. The study used a descriptive correlational design with 210 respondents (procurement officers and administrators) from ministries, agencies, and training institutions. Data were collected via structured questionnaires and analyzed using regression techniques. Findings showed that institutional support, supplier readiness, and enforcement of procurement rules positively influenced e-procurement uptake; higher adoption levels were associated with reduced procurement complaints, fewer review cases, and faster order fulfilment. The author argued that for TVETs, e-procurement adoption improves service delivery by ensuring timely availability of training inputs.

In Uganda, Achieng (2024) assessed how e-procurement adoption affected operational performance in public training institutions. Employing a quasi-experimental design, the study compared six training institutions that implemented e-procurement with six matched institutions that relied mainly on manual procurement. Primary data were collected through questionnaires, interviews, and procurement records. Results revealed that institutions with e-procurement experienced fewer procurement delays, improved contract monitoring, and lower incidences of procurement irregularities. The study emphasized that strong enforcement mechanisms and supplier training amplified the performance benefits of e-procurement adoption in public TVET settings.

Karanja (2022) investigated e-procurement practices and procurement performance in county government training centres and technical institutes in Kenya. The research adopted a descriptive survey design, collecting data from 190 procurement officers and finance staff across six counties using structured questionnaires and document review. Findings indicated that e-sourcing and e-payment modules were associated with improved transparency, faster payments, and fewer supplier complaints. However, the study also found that inadequate ICT infrastructure and limited staff skills constrained the full benefits of e-procurement; where these constraints were addressed, performance gains were more pronounced — a clear lesson for TVET institutions.

RESEARCH METHODOLOGY

Research Design

This study adopted a descriptive survey research design in view of the research problem highlighted earlier and research philosophy adopted. A descriptive research design reports what happened or is happening to the variables in their current situation (Greene & Dreyer, 2021). It is used to obtain information on the status of the phenomena to describe what exists with respect to variables or conditions in a situation as they naturally occur.

Target Population

Target Population refers to the entire group of individuals, objects, or elements that a researcher is interested in studying and drawing conclusions about (Babbie, 2021). The unit of analysis was conducted among TVET licensed in TVET institutions in the North Rift Region. According to TVET Authority (2025), there are 110 licensed TVET institutions in the North Rift Region. The unit of observation was heads of procurement and finance departments in the TVET institutions. The target population was 220 heads of procurement and finance departments in 110 TVET institutions in TVET institutions in the North Rift Region.

Table 1: Target Population

Category	TVET institutions	Target Population
Baringo	18	36
Elgeyo Marakwet	13	26
Nandi	15	30
Samburu	2	4
Trans Nzoia	26	52
Turkana	12	24
Uasin Gishu	16	32
West Pokot	8	16
Total	110	220

Source: TVET Authority (2026)

Sampling Frame

A sampling frame is the actual list from which the study sample is drawn and serves as the operational representation of the target population (Kothari, 2022). It must be comprehensive, accurate, and up to date to ensure that each unit has a known and non-zero chance of selection. In this study, the sampling frame comprised of 220 heads of procurement and finance departments

in 110 TVET institutions in TVET institutions in the North Rift Region. This frame was deemed appropriate because these departmental heads are directly involved in procurement processes and institutional performance, making them the most relevant respondents for providing reliable data for the study.

Sample and Sampling Technique

Given the small size of the target population, a census approach was adopted, whereby all members of the population were included in the study. A census sampling method, also known as a complete enumeration survey, involves collecting data from every single member of the target population for a study (Latwal, 2020). This method is typically used when the population is small and researchers need highly accurate, detailed data about each unit, such as in government population counts or in-depth studies of a single organization (Kumar, 2019).

Data Collection Instruments

This study used a semi-structured questionnaire comprising both open-ended and closed-ended questions to capture comprehensive data from respondents. The closed-ended questions were designed to generate quantitative data, making it easier to analyze using statistical tools while also reducing the time, cost, and effort required for data collection (Mukherjee, 2020). They further ensured consistency in responses, thereby enhancing comparability across different respondents. In contrast, the open-ended questions provided an avenue for participants to give more elaborate and detailed responses, allowing them to express personal opinions, experiences, and suggestions on issues not fully addressed by structured items (Punch, 2020). Combining both question types enriched the study by ensuring the collection of reliable quantitative data while also capturing valuable qualitative insights for deeper understanding.

The questionnaire for this study was structured into several sections aligned with the research objectives. The first section captured respondents' demographic information, while subsequent sections focused on procurement law enforcement and automation of procurement processes. The final section of the questionnaire addressed the performance of public TVET institutions in the North Rift Region, Kenya.

Pilot study

A pilot study is a small-scale preliminary study conducted to test the feasibility, reliability, and validity of research instruments and procedures before the main study (Schindler, 2021). Its importance lies in helping the researcher identify and address potential weaknesses, refine data collection tools, and assess the validity and reliability of the research instrument, thereby enhancing the overall quality and accuracy of the research. In this study, a pilot was conducted in Bomet County using 10% of the sample size. This proportion was considered appropriate for pilot testing, as Babbie (2021) recommend that 10% of the sample is sufficient for a pilot study

in social science research. The results obtained from the pilot study were included in the main study but were only used to improve the research instrument.

Data Analysis and Presentation

The research instrument generated both qualitative and quantitative data. Qualitative data from open-ended questions was analyzed using thematic analysis, which is appropriate as it enables the identification, organization, and interpretation of patterns and themes within respondents' views, thereby providing deeper insights into issues not captured by structured questions. The results were presented in narrative form. Quantitative data was analyzed using both descriptive and inferential statistics with the aid of Statistical Package for the Social Sciences (SPSS) version 28. Descriptive statistics refer to statistical methods used to summarize and describe the main features of a dataset (Krishna, 2020). In this study, descriptive statistics included the mean, standard deviation, frequencies, and percentages. Inferential statistics consisted of Pearson correlation analysis and linear regression analysis to establish the relationships between variables. Tables and charts were used to summarize responses, facilitate comparison, and enhance clarity in data presentation. To quantify the strength of the relationship between the variables, the researcher used the model:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \varepsilon$$

Where;

Y = the dependent variable (Performance of TVET institutions)

β_0 = Constant;

β_1, β_2 = Coefficients of determination;

X_1 = Procurement law enforcement;

X_2 = Automation of procurement process; and

ε = Error term

RESEARCH FINDINGS AND DISCUSSIONS

Response Rate

The study's target population was 220 heads of procurement and finance departments in 110 TVET institutions in TVET institutions in the North Rift Region. The response rate results were as shown in Table 2.

Table 2: Response Rate

County	Sample Size	Response	Response Rate
Baringo	36	32	88.89
Elgeyo Marakwet	26	23	88.46
Nandi	30	27	90.00
Samburu	4	3	75.00
Trans Nzoia	52	49	94.23
Turkana	24	21	87.50
Uasin Gishu	32	29	90.63
West Pokot	16	13	81.25
Total	220	197	89.55

Out of 220 questionnaires that were distributed, 197 responses were obtained, which gives a 89.55% response rate. According to Kothari (2022), a response rate of 50% is sufficient for effective analysis and reporting, a response rate of 60% is good while a response rate of 70% is regarded as excellent. This implies that the response rate (89.55%) in this study was within acceptable limit for drawing conclusions and making recommendations

Descriptive Analysis

Procurement Law Enforcement

The respondents were requested to indicate their level of agreement with various statements relating to different statements on procurement law enforcement. The results are presented in Table 3.

Table 3: Procurement Law Enforcement

	N	Mean	Std. Deviation
Our institution institutes procurement sanctions/penalties for procurement irregularities.	197	4.102	.580
Enforcement of procurement penalties discourages repeat violations and promotes accountability.	197	4.041	.569
Sanctions and penalties enhance the efficient use of resources, thereby improving institutional performance.	197	3.954	.48754
Our institution carries out contracts termination/cancellation when irregularities are experienced.	197	3.980	.451
Cancelling irregular procurement contracts safeguards financial performance in TVET institutions.	197	3.969	.504
Strict termination of non-compliant contracts ensures value for money in institutional projects.	197	3.990	.614
Our institution handles procurement irregularities through judicial processes.	197	4.132	.600
Referring procurement offenders to court promotes fairness and transparency in institutional procurement.	197	4.005	.479
Judicial processes act as a deterrent to procurement malpractice and enhance institutional performance.	197	3.985	.519

With a mean of 4.132 (Std. Deviation = 0.600), as shown in Table 3, the respondents agreed with the statement indicating that their institution handles procurement irregularities through judicial processes. These findings are consistent with Manuel (2025) observations that institutions address procurement irregularities through judicial processes. The respondents agreed with a mean of 4.102 (Std. Deviation = 0.580) that their institution institutes procurement sanctions/penalties for procurement irregularities. The respondents agreed with a mean of 4.041 (Std. Deviation = 0.569) that enforcement of procurement penalties discourages repeat violations and promotes accountability.

The respondents agreed with a mean of 3.990 (Std. Deviation = 0.614) that strict termination of non-compliant contracts ensures value for money in institutional projects. The respondents also agreed with a mean of 3.985 (Std. Deviation = 0.519) that judicial processes act as a deterrent to procurement malpractice and enhance institutional performance. These findings are in line with Nicolas-Carlock and Luna-Pla (2024) observations that judicial processes serve as a deterrent to

procurement malpractice and contribute to improved institutional performance. The respondents agreed with a mean of 3.980 (Std. Deviation = 0.451) with the statement indicating that their institution carries out contract termination/cancellation when irregularities are experienced.

Further, with a mean of 3.969 (Std. Deviation = 0.504) the respondents that cancelling irregular procurement contracts safeguards financial performance in TVET institutions. The respondents agreed with a mean of 4.005 (Std. Deviation = 0.479) with the statement indicating that referring procurement offenders to court promotes fairness and transparency in institutional procurement. The respondents agreed with a mean of 3.954 (Std. Deviation = 0.488) with the statement indicating that sanctions and penalties enhance the efficient use of resources, thereby improving institutional performance. These findings align with Jaffu (2023) observations that enforcement of sanctions and penalties promotes efficient resource utilization and consequently enhances institutional performance.

The respondents were asked to indicate how procurement law enforcement influences performance in Public Technical and Vocational Education and Training (TVET) institutions in the North Rift Region, Kenya. The findings indicated that procurement law enforcement enhances compliance with procurement laws and regulations, thereby reducing cases of fraud, corruption, and mismanagement of public resources. The respondents also indicated that enforcement mechanisms such as sanctions, audits, and legal actions promote accountability and deter unethical procurement practices among staff. Further, the respondents indicated that procurement law enforcement improves transparency in procurement processes, which enhances stakeholder confidence in institutional operations. Also, it was noted that strict enforcement ensures better planning and timely execution of procurement activities, reducing delays in service delivery. In addition, the respondents indicated that procurement law enforcement promotes efficient utilization of financial resources, thereby improving overall institutional performance in TVET institutions.

Automation of the Procurement Process

Respondents were asked to indicate the degree to which they agree with numerous statements on automation of the procurement process. Results were as illustrated in Table 4.

Table 4: Automation of the Procurement Process

	N	Mean	Std. Deviation
Our institution uses technology platforms to initiate procurement requests.	197	4.122	.558
The use of technology in initiating procurement has reduced delays in the procurement cycle.	197	4.269	.680
Automating procurement initiation enhances efficiency and accountability in our institution.	197	4.457	.673
Our institution applies technology in procurement processes to ensure transparency.	197	4.102	.580
Technology adoption in procurement processes has improved accuracy and reduced errors.	197	3.954	.528
The use of technology in procurement processes contributes to better institutional performance.	197	3.985	.434
Our institution uses technology to track and manage procurement contracts effectively.	197	3.980	.494
Technology adoption in contract management helps ensure compliance with procurement timelines.	197	3.990	.463
The use of technology in managing contracts has enhanced accountability and overall institutional performance.	197	4.005	.479

With a mean of 4.457 (Std. Deviation = 0.673), the respondents agreed with the statement indicating that automating procurement initiation enhances efficiency and accountability in their institution. The respondents agreed with a mean of 4.269 (Std. Deviation = 0.680) that the use of technology in initiating procurement has reduced delays in the procurement cycle. The respondents agreed with a mean of 4.122 (Std. Deviation = 0.558) that their institution uses technology platforms to initiate procurement requests. These findings conform to Robinson (2021) observations that the use of technology platforms for initiating procurement requests improves institutional performance.

In addition, the respondents agreed with a mean of 4.102 (Std. Deviation = 0.580) that their institution applies technology in procurement processes to ensure transparency. The respondents agreed with a mean of 4.005 (Std. Deviation = 0.479) that the use of technology in managing contracts has enhanced accountability and overall institutional performance. The findings are in line with Bennett (2022) observations that use of technology in contract management improves

accountability and enhances overall institutional performance. The respondents agreed with a mean of 3.990 (Std. Deviation = 0.463) that technology adoption in contract management helps ensure compliance with procurement timelines.

Moreover, the respondents agreed with a mean of 3.985 (Std. Deviation = 0.434) that the use of technology in procurement processes contributes to better institutional performance. The respondents agreed with a mean of 3.980 (Std. Deviation = 0.494) that their institution uses technology to track and manage procurement contracts effectively. The respondents agreed with a mean of 3.954 (Std. Deviation = 0.528) that technology adoption in procurement processes has improved accuracy and reduced errors. These findings align with Mensah (2023) observations that the adoption of technology in procurement processes enhances accuracy and reduces errors.

Respondents were asked to indicate other ways in which automation of the procurement process influences performance in Public Technical and Vocational Education Training institutions in North Rift Region, Kenya. The findings indicated that automation enhances real-time monitoring of procurement activities, enabling management to track progress and make timely decisions. The respondents also indicated that automation improves data accuracy by reducing manual errors and ensuring consistency in procurement records. Also, automation improves communication between departments and suppliers by providing integrated digital platforms, thereby reducing delays and misunderstandings. In addition, the respondents indicated that automation enhances financial control through accurate budgeting, expenditure tracking, and reporting. The respondents further indicated that automation promotes transparency, reduces procurement risks, and supports evidence-based decision-making in institutional procurement processes.

Performance of Public Technical and Vocational Education Training institutions

Respondents were asked to indicate the extent to which they agree with different statements on performance of public technical and vocational education training institutions. Results were as shown in Table 5.

Table 5: Performance of Public Technical and Vocational Education Training institutions

	N	Mean	Std. Deviation
Our institution receives minimal complaints regarding procurement activities.	197	4.096	.540
Effective procurement practices in our institution have reduced the number of complaints.	197	4.005	.479
Addressing procurement complaints promptly has improved institutional performance.	197	4.015	.468
The number of procurement review cases in our institution has significantly reduced.	197	4.000	.452
Fewer review cases in procurement processes indicate improved compliance with procurement laws.	197	3.954	.583
Reduction in review cases has enhanced institutional efficiency and performance.	197	4.020	.404
Increased automation in procurement has improved institutional service delivery.	197	3.995	.549
Adoption of automation in procurement processes has enhanced efficiency and transparency.	197	4.117	.555
High levels of procurement automation have positively impacted institutional performance.	197	4.066	.572

As shown by a mean of 4.117 (Std. Deviation = 0.555), the respondents agreed that adoption of automation in procurement processes has enhanced efficiency and transparency. The respondents agreed with a mean of 4.096 (Std. Deviation = 0.540) that the institution receives minimal complaints regarding procurement activities. These findings conform to Wambui (2024) observations that institutions tend to experience minimal complaints related to procurement activities. The respondents agreed with a mean of 4.066 (Std. Deviation = 0.572) that high levels of procurement automation have positively impacted institutional performance.

The respondents agreed with a mean of 4.020 (Std. Deviation = 0.404) that reduction in review cases has enhanced institutional efficiency and performance. The respondents agreed with a mean of 4.015 (Std. Deviation = 0.468) that addressing procurement complaints promptly has improved institutional performance. The respondents agreed with a mean of 4.005 (Std. Deviation = 0.479) that effective procurement practices in the institution have reduced the number of complaints. These findings are in concurrence with Mwangi and Cherono (2025)

observations effective procurement practices contribute to reducing the number of complaints within institutions.

The respondents agreed with a mean of 4.000 (Std. Deviation = 0.452) that the number of procurement review cases in the institution has significantly reduced. These findings are consisted with Ndungu (2021) observations that institutions have experienced a significant reduction in procurement review cases. The respondents agreed with a mean of 3.995 (Std. Deviation = 0.549) that increased automation in procurement has improved institutional service delivery. The respondents agreed with a mean of 3.954 (Std. Deviation = 0.583) that fewer review cases in procurement processes indicate improved compliance with procurement laws.

Inferential Statistics

Inferential statistics is the branch of statistics that uses sample data to draw conclusions or make predictions about a larger population. In this study, inferential statistics consisted of Pearson correlation analysis and linear regression analysis to establish the relationships between variables.

Correlation Analysis

The Pearson product-moment correlation coefficient was employed to examine the strength and direction of relationships between the independent variables (procurement law enforcement and automation of procurement processes) and the dependent variable (performance of Public Technical and Vocational Education Training institutions in North Rift Region, Kenya), with the results illustrated in Table 6.

Table 6: Correlation Coefficients

			Performance	Procurement	law	Automation	of
				enforcement		procurement	process
Performance	Pearson	1					
	Correlation						
	Sig. (2-tailed)						
Procurement enforcement	N	197					
	Pearson	.828**		1			
	Correlation						
Automation of procurement process	Sig. (2-tailed)	.000					
	N	197		197			
	Pearson	.749**		.167		1	
	Correlation						
	Sig. (2-tailed)	.004		.098			
	N	197		197		197	

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

From the results, procurement law enforcement had a positive and significant relationship with performance of Public Technical and Vocational Education Training institutions in North Rift Region, Kenya ($r = 0.828$, $p = 0.000$). As the p-value is below the 0.05 significance threshold, the relationship is considered statistically significant. These findings align Nakhwanga (2020) who found that strict enforcement of procurement laws enhances institutional compliance and improves overall performance.

The study also found a positive and significant relationship between automation of procurement processes and the performance of Public Technical and Vocational Education Training institutions in North Rift Region, Kenya ($r = 0.749$, $p = 0.004$). Since the p-value falls below the 0.05 significance threshold, the relationship is deemed statistically significant. These findings are in agreement with Karanja (2022) observations that automation enhances efficiency, transparency, and overall institutional performance.

Regression Analysis

A multivariate regression analysis was conducted to examine the relationship between the independent variables (procurement law enforcement and automation of procurement processes)

and the dependent variable (performance of Public Technical and Vocational Education Training institutions in North Rift Region, Kenya).

Table 7: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.823 ^a	.677	.513	.12919

a. Predictors: (Constant), procurement law enforcement and automation of procurement processes

From the findings, the R-squared value for the model was 0.677. This indicates that 67.7% of the variance in the performance of Public Technical and Vocational Education Training institutions in North Rift Region, Kenya was explained by the independent variables; procurement law enforcement and automation of procurement processes.

Table 8: Analysis of Variance

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	34.533	2	17.267	198.471	.000 ^b
Residual	16.789	194	0.087		
Total	51.322	196			

a. Dependent Variable: Performance

b. Predictors: (Constant), ; procurement law enforcement and automation of procurement processes

ANOVA was performed in this research to determine whether the model adequately fit the data. As illustrated in Table 7, the calculated F-value was 198.471, which is significantly high, indicating strong model fitness. In addition, the p-value was 0.000, which is below the 0.05 significance level. Therefore, the model was considered a good fit for the data, indicating that procurement law enforcement and automation of procurement processes collectively have a statistically significant effect on the performance of Public Technical and Vocational Education Training institutions in North Rift Region, Kenya.

Table 9: Regression Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients		Sig.
	B	Std. Error	Beta	t	
1(Constant)	.474	.080		5.898	.000
Procurement law enforcement	.378	.102	.434	3.696	.018
Automation of procurement process	.389	.117	.354	3.325	.000

a. Dependent Variable: Performance

Regression equation for the unstandardized coefficients was:

$$Y = 0.474 + 0.378X_1 + 0.389X_2$$

The study found that procurement law enforcement has a positive and significant effect on the performance of Public Technical and Vocational Education Training institutions in North Rift Region, Kenya ($\beta_1 = 0.378$, p-value = 0.018). Since the p-value (0.000) is below the 0.05 significance level, the relationship is considered statistically significant. This suggests that a unit increase in procurement law enforcement leads to a 0.378 unit improvement in institutional performance. These findings are consistent with Mohamed (2023) observations that strict enforcement of procurement regulations enhances compliance, accountability, and overall institutional efficiency. In addition, the findings align with Nakhwanga (2020) observations that strong enforcement mechanisms help reduce procurement irregularities, thereby improving service delivery outcomes in public institutions.

Moreover, the study found that automation of procurement processes has a positive and significant effect on performance ($\beta_4 = 0.389$, p-value = 0.000). Given that the p-value (0.018) is below 0.05, the relationship is regarded as statistically significant. This implies that improvements in automation of procurement processes result in a 0.389 increase in institutional performance. These findings align with Wambui (2024) observations that automation enhances efficiency, transparency, and accountability in procurement systems. In addition, these findings conform to Karanja (2022) observations that automation reduces human error and processing time, which contributes to faster and more reliable procurement outcomes.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

The study found that procurement law enforcement had a positive and significant effect on the performance of Public Technical and Vocational Education Training institutions in North Rift Region, Kenya. The study found that procurement law enforcement in terms of legal

sanctions/penalties, contract termination/cancellation and court trials has an effect on performance of Public Technical and Vocational Education Training institutions in North Rift Region, Kenya. This implies that an improvement in procurement law enforcement would lead to an improvement in performance of Public Technical and Vocational Education Training institutions in North Rift Region, Kenya.

The study found that automation of procurement processes had a positive and significant effect on performance of Public Technical and Vocational Education Training institutions in North Rift Region, Kenya. The study revealed that automation of procurement processes in terms of use of technology to initiate procurement, use of technology in procurement processes and use of technology in managing contracts has an effect on performance of Public Technical and Vocational Education Training institutions in North Rift Region, Kenya. This implies that an improvement in automation of procurement processes would lead to an improvement in performance of Public Technical and Vocational Education Training institutions in North Rift Region, Kenya.

Recommendations

The study found that procurement law enforcement had a positive and significant effect on the performance of Public Technical and Vocational Education Training institutions in North Rift Region, Kenya. The study recommends that institutions should strengthen the implementation of procurement law enforcement mechanisms by ensuring consistent application of legal sanctions and penalties to deter non-compliance. In addition, contract termination and cancellation procedures should be strictly enforced in cases of procurement irregularities to promote accountability and value for money. The study also recommends that institutions should enhance the use of judicial processes in addressing procurement violations to reinforce compliance and institutional discipline. Furthermore, procurement oversight units should be strengthened to ensure continuous monitoring and enforcement of procurement regulations. Similarly, institutions should promote strict adherence to procurement laws through regular audits and compliance checks to improve transparency and institutional performance.

The study found that automation of procurement processes had a positive and significant effect on the performance of Public Technical and Vocational Education Training institutions in North Rift Region, Kenya. The study recommends that institutions should fully adopt and integrate technology platforms in procurement initiation processes to enhance efficiency and accountability. In addition, the use of digital systems in procurement processes should be strengthened to improve transparency and reduce operational delays. The study also recommends that institutions should enhance automation in contract management to improve monitoring, compliance, and performance tracking. Furthermore, investment in modern procurement technologies should be prioritized to reduce errors and improve accuracy in procurement

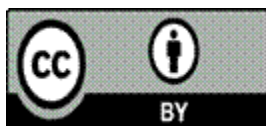
operations. Similarly, institutions should continuously upgrade and maintain procurement systems to ensure reliability, efficiency, and improved institutional performance.

REFERENCES

- Achieng, P. (2024). E-procurement adoption and operational performance in public training institutions in Uganda. *East African Journal of Management and Policy Studies*, 9(1), 72–88.
- Adeniyi, O., Kamau, P., & Musau, A. (2020). The impact of noncompliance on procurement performance in Africa. *International Journal of Procurement Studies*, 4(1), 22–38.
- Ali, M., & Mukhongo, A. (2021). Adoption of e-procurement systems in public institutions: Drivers and challenges in developing countries. *International Journal of Supply Chain Management*, 10(2), 45–53.
- Bosio, E., Djankov, S., Glaeser, E., & Shleifer, A. (2022). Public procurement in law and practice. *American Economic Review*, 112(4), 1091-1117.
- Bryman, A. (2022). *Social research methods (5th ed.)*. Oxford: Oxford University Press.
- Chebet, E., & Chogo, C. K. (2022). Structuring Supply Chain Sustainability in the Selected Tertiary Institutions in Kenya amidst COVID 19 Disruptions. *Africa Journal of Technical and Vocational Education and Training*, 7(1), 95-110.
- Chia, Y., & Ong, K. (2024). Employee experience, training, and performance of TVET institutions in Malaysia. *International Journal of Technical Education*, 39(1), 22–40.
- Graycar, A. (2022). Corrupt procurement: rethinking the roles of principals and agents. *Policy Design and Practice*, 5(3), 276-293.
- Greene, J. C. & Dreyer, L. A. (2021). *Designing & conducting mixed methods research* (3rd ed.). Thousand Oaks: Sage Publications.
- Hair, J.O., Page, M. & Brunsveld, N. (2020). *Essentials of business research methods*. London: Routledge
- Hall, R. (2020). *Qualitative, quantitative and combined methods: Mixing methods in social research*. New York: SAGE Publications Ltd.
- Harrison, J. (2022). Top management support and firm performance in manufacturing: Evidence from the United Kingdom. *Journal of Management and Business Research*, 18(3), 45–60.

- Kamuri, P. (2024). Top management support and strategy implementation in Kenyan state corporations. *Journal of African Public Administration and Management*, 20(4), 77–95.
- Kamya, D., & Atwine, J. (2022). *Staff competencies and performance of vocational education institutions in Uganda*. *East African Journal of Education and Human Development*, 14(4), 210–229.
- Karanja, D. (2022). E-procurement practices and procurement performance in county government training centres in Kenya. *Kenyan Journal of Procurement and Institutional Performance*, 6(2), 134–150.
- Kipchilat, G. (2006). *An evaluation of the implementation of the public procurement and disposal act* [Master's thesis, Moi University].
- Mélon, L., & Spruk, R. (2020). The impact of e-procurement on institutional quality. *Journal of Public Procurement*, 20(4), 333-375.
- Nakhwanga, J. (2020). Procurement best practices and performance of county governments in Kenya: A case of Busia County. *International Journal of Supply Chain and Logistics*, 4(2), 77–90. <https://doi.org/10.2139/ssrn.3748512>
- Nandankar, S., & Sachan, A. (2020). Electronic procurement adoption, usage and performance: a literature review. *Journal of Science and Technology Policy Management*, 11(4), 515-535.
- Otieno, P., & Mwangi, L. (2025). Procurement law enforcement mechanisms and performance of public TVET institutions in Kenya. *Kenya Journal of Educational Research and Policy*, 11(1), 1–18.
- Panya, D., & Awuor, F. (2023). Public procurement reforms and enforcement challenges in Africa: A systematic review. *Journal of African Governance and Development*, 12(4), 213–229. <https://doi.org/10.1080/23323256.2023.1946723>
- Römgens, I., Scoupe, R., & Beusaert, S. (2020). Unraveling the concept of employability, bringing together research on employability in higher education and the workplace. *Studies in Higher Education*, 45(12), 2588-2603.
- Rosyafah, S., & Pudjowati, J. (2024). What are the key determinants of human resource management effectiveness in enhancing organizational financial performance?. *Atestasi: Jurnal Ilmiah Akuntansi*, 7(1), 525-560.
- Sahin, I., & Thompson, R. (2020). The diffusion of innovations: A review and future directions. *Educational Technology Research and Development*, 68(2), 675–692. <https://doi.org/10.1007/s11423-019-09720-3>

- Thai, K. V. (2001). Public procurement re-examined. *Journal of Public Procurement*, 1(1), 9–50.
- Thiankolu, M. (2019). *Public procurement, corruption and blockchain technology in Kenya: A functional approach*. Law Africa.
- Wanjiru, M., & Kiplagat, J. (2021). Public procurement law compliance and performance of TVET institutions in Kenya. *East African Journal of Education and Human Development*, 7(2), 56–72. <https://doi.org/10.1234/eajehd.2021.00702>
- Williams-Elegbe, S. (2018). *Public procurement and corruption in Africa: A comparative analysis*. Routledge.
- World Bank. (2016). *Benchmarking public procurement 2016: Assessing public procurement regulatory systems in 77 economies*.
- Wuni, I. Y., & Shen, G. Q. (2023). Exploring the critical success determinants for supply chain management in modular integrated construction projects. *Smart and Sustainable Built Environment*, 12(2), 258-276.
- Yevu, S. K., & Yu, A. T. W. (2020). The ecosystem of drivers for electronic procurement adoption for construction project procurement: a systematic review and future research directions. *Engineering, Construction and Architectural Management*, 27(2), 411-440.



2026 by the Authors. This Article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<http://creativecommons.org/licenses/by/4.0/>)