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PROCUREMENT MANAGEMENT

Sustainable Procurement Practices and Performance of State Corporations in Nairobi City County, Kenya

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Abstract

State corporations play a critical role in Kenya's economic development, yet their performance continues to be undermined by inefficiencies in procurement management, corruption, lack of transparency, and weak supplier governance frameworks. Despite the existence of the Public Procurement and Asset Disposal Act and related regulatory frameworks, sustainable procurement practices remain inconsistently implemented across state corporations in Nairobi City County, creating significant performance gaps in service delivery, cost management, and organizational accountability. This study examined the effect of sustainable procurement practices on the performance of state corporations in Nairobi City County, Kenya, focusing on four key dimensions: procurement planning, information technology, supplier selection, and procurement ethical issues. The study was grounded in Principal-Agency Theory, Institutional Theory, and Legitimacy Theory. A descriptive research design was adopted, targeting 187 employees across 243 state corporations drawn from procurement, top management, marketing, accounts and finance, and human resource departments. Using Yamane's formula, a sample of 151 respondents was selected through proportionate stratified random sampling. Primary data were collected using structured questionnaires and analyzed using IBM SPSS version 29 through descriptive statistics, Pearson correlation, and multiple regression analysis. The study established that all four sustainable procurement practice dimensions positively and significantly influence state corporation performance, collectively explaining 87.7% of the variance in organizational performance. Procurement planning emerged as the strongest individual predictor, followed by procurement ethical issues, supplier selection, and information technology. While procurement planning and supplier management contributed positively to efficiency and cost savings, gaps remained in stakeholder engagement and policy clarity. Information technology enhanced data management and strategic decision-making, though its full potential in resource allocation remained inconsistently realized. Ethical procurement practices were recognized as critical for transparency and organizational integrity, but oversight mechanisms and ethics training effectiveness appeared inconsistent. The study recommends strengthening stakeholder engagement frameworks, institutionalizing advanced IT systems, establishing robust ethical oversight mechanisms, and refining supplier collaboration strategies to drive sustainable procurement success in Nairobi City County state corporations.

Keywords: *Sustainable procurement practices, performance, state corporations, Nairobi City County, Kenya*

1.1 Background of the Study

Public procurement has significant economic and political implications requiring the entire procurement process to be as economical and efficient as possible (Kamau & Odhiambo, 2003). According to OECD (2007) benchmarks, public procurement accounts for approximately 16% of most countries' GDP, underscoring its enormous economic significance. Public projects, defined as government-funded investments intended to achieve specific objectives for the benefit of the greater public majority, rely heavily on effective procurement systems to deliver intended outcomes within approved budgets and timelines (Chandra, 2010). Walker and Rowlinson (2008) emphasize that procurement method selection should be guided by project typology and supply chain collaboration levels. Inappropriate procurement strategies lead to cost and time overruns, claims, and project disputes, while appropriate strategies contribute to optimal solutions in cost, time, and quality (Huimin et al., 2014). Public procurement has therefore increasingly been integrated into the strategic management of government resources globally.

Public procurement has evolved significantly both conceptually and organizationally, particularly since the late 1990s when governments faced increasing pressure to do more with fewer resources. Governments across developed and developing economies confronted unrelenting budget restrictions, public demands for increased transparency, and growing concerns about efficiency, equity, and accountability (Khi, 2009). A well-functioning procurement system is anchored on four pillars: a legislative and regulatory framework, institutional management capacity, procurement operations and market practices, and integrity of procurement processes (Agaba & Shipman, 2006). Throughout the 1980s and early 1990s, many countries performed poorly in meeting public service objectives due to dysfunctional procurement systems, leading to widespread recognition that effective procurement systems could only be established through systematic institutional reforms. E-procurement has since emerged as a key strategy for lowering transaction costs and improving efficiency in supplier engagement (Tonkin, 2007).

Good procurement is fundamentally one devoid of problems and grounded in well-established practices that promote efficiency and performance for better service delivery (Basheka & Kabatereine, 2013). Public sector procurement practices typically require departments to engage multiple suppliers to encourage competition, which shapes how procuring entities develop supplier relationships and electronic integration capabilities (MacManus, 2002). Public procurement may also be influenced by secondary objectives including promotion of national industries, environmental conservation, and cultural cohesion that extend beyond simple value-for-money considerations (Bianchi & Guidi, 2010). These competing objectives make procurement management a complex and multifaceted governance challenge that demands sophisticated systems and highly skilled procurement professionals across all levels of government.

In developing countries across Africa, public procurement accounts for a disproportionately large share of public expenditure compared to global averages. In Kenya, procurement accounts for approximately 60% of public spending, while Uganda's proportion reaches 70%, and Angola and Malawi record 58% and 40% respectively, compared to a global average of 12–20% (Basheka & Bisangabasaija, 2010). Poor planning has consistently been identified as a major constraint in successful implementation of public projects across the African region. Oladipo (2008) identified poor project planning, inadequate qualified manpower, financial constraints, and inadequate monitoring as key challenges in Nigerian local government projects. Frimponga et al. (2003) further noted that procurement processes inherited from developed Western countries are poorly suited to developing country contexts with different cultures, governance histories, and institutional endowments, contributing to persistent project performance challenges.

In Kenya, the public procurement legal framework is anchored in the Public Procurement Asset and Disposal Act (PPADA) 2015, Public Procurement and Disposal Act Regulations 2006, Public Private Partnerships Act 2013, and related regulations. The PPADA (2015) was established to maximize economy and efficiency, promote fair competition, promote procurement integrity, increase openness and accountability, and assist in promoting local industry and economic development (PPRA, 2015). The Act covers all procurement of goods, works, and services by public entities ranging from the national government, independent commissions, judiciary, public universities, state corporations, county governments, public schools, and the Central Bank of Kenya. It establishes the Public Procurement Regulatory Authority to ensure compliance, monitor the procurement system, initiate procurement policy, and support professional development of procurement personnel across all public entities.

Despite Kenya's significant procurement reform efforts, the public procurement system remains challenged by corruption, secrecy, inefficiency, and lack of accountability, resulting in substantial waste of public resources (Kamau & Odhiambo, 2003). Wanjiru (2008) documented that poverty levels increased from 56% in 2002 to 60% in 2008, partly attributable to failures in public service delivery and mismanagement of community development funds through corrupt procurement processes. World Bank (2009) indicated that the average project funds absorption rate was less than 10% per annum, attributed significantly to constrained and dysfunctional procurement processes. Malala (2011) found that 88% of public projects were behind schedule, with respondents identifying procurement process failures as the primary cause. These systemic weaknesses in Kenya's procurement landscape created the need to examine how sustainable procurement practices specifically influence the performance of state corporations in Nairobi City County.

Sustainable procurement practices represent an evolution in procurement thinking that integrates environmental, social, and economic considerations into procurement decision-making. Stephen and Walker (2007) established that substantial differences exist across public sector agencies in the nature of their sustainable procurement practices, with cost and top management support identified as the leading barriers to adoption. Sustainable procurement encompasses approaches including product lifecycle analysis, green design, environmental conscious manufacturing, reuse and recycling, and responsible supplier selection. Srivastava (2007) documented that green design practices include environmentally conscious product development, lifecycle assessment, and substitution of toxic materials with environmentally friendly alternatives. Duber Smith (2005) proposed key green practices including reducing energy consumption, recycling and reusing materials, using biodegradable and non-toxic materials, minimizing harmful emissions, and eliminating waste throughout the procurement and supply chain process.

The adoption of sustainable procurement is illustrated by prominent corporate examples demonstrating both feasibility and commercial benefits. In 2005, Walmart committed to three transformational sustainability goals: achieving 100% renewable energy supply, creating zero waste, and selling only products that sustain resources and the environment (Plambeck, 2007). Chinese manufacturer Guitang Group demonstrated that using waste from upstream production as raw materials for downstream activities reduced waste and improved financial performance simultaneously (Qinghua & Raymond, 2004). In the purchasing function specifically, procurement departments serve as critical agents of change for environmental initiatives across entire supply chains (Preuss, 2001). These global experiences underscore the strategic importance of sustainable procurement not merely as a compliance exercise but as a driver of organizational performance, efficiency, and long-term value creation for state corporations in Kenya.

1.2 Statement of the Problem

The Kenyan public procurement system has evolved from a largely crude unregulated system to a highly regulated system (PPOA, 2009). Despite the progress made, the Kenyan procurement system still faces a myriad of challenges. World Bank Report (2009) indicated that, the average project funds absorption rate was less than 10% per annum which was attributed to a constrained procurement process. According to KNBS status report (2009), tendering and procurement procedures have become conduits through which some suppliers, contractors, Members of Parliament and their political allies fleece hundreds of millions of shillings from the constituency kitties through procurement processes. Common abuses range from establishing personal fronts or ghost companies which are awarded project tenders un-procedurally and use the opportunity to inflate prices of goods and services (TISA, 2011).

Malala (2011) found out that, 88 % of projects were behind schedule for which there was expression by the respondents that, the procurement process derailed public organisation projects performance and the community needed to be involved in-order to realize ownership and acceptability. Omanga (2010) study on factors affecting the implementation of public organisation funded projects (cited in Malala, 2011) found out that, the public organisation projects fail because the procurement is not transparently done. As procurement oversees the management of finance resource in form of inventory (projects inputs) this has a direct impact on the performance of public organisation funded projects. Shiundu (2010) in his study in Kasarani Constituency (cited in Malala, 2011) reported that, 60 % of projects were behind schedule and this delay was attributed to the procurement process. Considering some of these studies and taking into considering that procurement is a process, studies and reports have generally not addressed the specifics of procurement that affect the performance of projects funded by public organisation. This gap created the need to undertake a study to examine the effect of sustainable procurement practices on performance of state corporations in Nairobi County Kenya.

1.3 Research Objectives

i. To establish the effect of procurement planning on the performance of state corporations in Nairobi County, Kenya, Kenya.
ii. To determine the effect of Information Technology on performance of state corporations in Nairobi County, Kenya, Kenya.
iii. To assess the effect of Supplier Section on performance of state corporations in Nairobi County, Kenya, Kenya.
iv. To establish the effect of Procurement Ethical Issues on performance of state corporations in Nairobi County, Kenya, Kenya.

2.0 Literature Review

This chapter addresses an overview of the present associated to the study. It highlights the gaps in the existing literature, which the researcher seeks to fill in. This chapter is additionally aligned to the objectives of the study.

2.1 Theoretical Review

The study was anchored by the following hypotheses.

2.1.1 Principal-Agency Theory

Principal-Agency Theory was developed by economists and deals with situations where a principal induces an agent to perform tasks in the principal's interest (Lawal, 2013). The theory addresses the relationship where one party, the agent, acts on behalf of another, the principal, through contractual arrangements requiring the agent to exert effort and make decisions. In state corporations, management serve as agents making procurement decisions on behalf of government as principal, including maximization of value and minimization of costs (Edgar & Shipman, 2015). Agency theory focuses on aligning incentives to discourage self-interested behavior by agents and reduce agency costs (Lionjanga, 2014). Since procurement contributes 60–70% of organizational expenditures, procurement decisions made by agents on behalf of principals carry enormous financial consequence. This theory informed the study's examination of how procurement planning and ethical procurement practices align agent behavior with organizational performance objectives.

2.1.2 Institutional Theory

Institutional Theory describes how external institutional pressures shape organizational behavior and decision-making (Ejite, 2015). The guidelines, norms, and regulations established by institutional environments influence how organizations operate and conform to accepted standards without necessarily questioning them. A key strength of Institutional Theory is its capacity to explain how organizations conform to norms and regulations, including procurement rules and compliance requirements, even when such conformity may not always reflect genuine organizational commitment. The Public Procurement and Disposal Act (PPDA, 2005) requires that appropriate maintenance and preservation of procurement documents be carried out in all public procuring entities, creating the institutional norms and policy frameworks within which state corporations operate. This theory informed the study's understanding of how procurement regulatory frameworks and institutional compliance requirements shape sustainable procurement practice adoption and consequently influence state corporation performance in Nairobi City County.

2.1.3 Legitimacy Theory

Legitimacy Theory posits that organizations have a mandate to justify their activities to stakeholders, particularly the public, by demonstrating the societal benefits derived from their operations (Wilmshurst & Frost, 2000). Legitimacy is understood as the perception that an organization's actions are acceptable within the established system of norms, values, and beliefs prevailing in the society in which it operates (Suchman, 1995). In the government procurement context, issues such as cronyism, corruption, and opaque supplier selection can fundamentally endanger organizational legitimacy and erode public trust. The theory argues that organizations engage in disclosure and transparency practices as mechanisms for building and maintaining strong reputations among stakeholders and the broader public (Magness, 2006). This theory directly informed the study's examination of procurement ethical issues and supplier selection as dimensions of sustainable procurement that influence the perceived legitimacy and performance of state corporations.

2.2 Conceptual Framework

A conceptual framework is a structure of concepts and or theories which are put together as a map for the study and it shows the relationship of research variables (Mugenda and Mugenda, 2014). The conceptual framework hereunder illustrates the perceived link between the independent (procurement practices) variables and dependent variable (organizational performance). The conceptual framework is founded from the literature review, which depicts a linkage between procurement practices and performance. The above relationship is diagrammatically presented in figure 1, which shows how the independent and dependent variables relate as conceptualized by the researcher. The directions of the arrows show the interrelationships between the key variables of the study. The study views procurement practices as a key factor influencing performance, since the above existing theories directly associate procurement practices with performance.

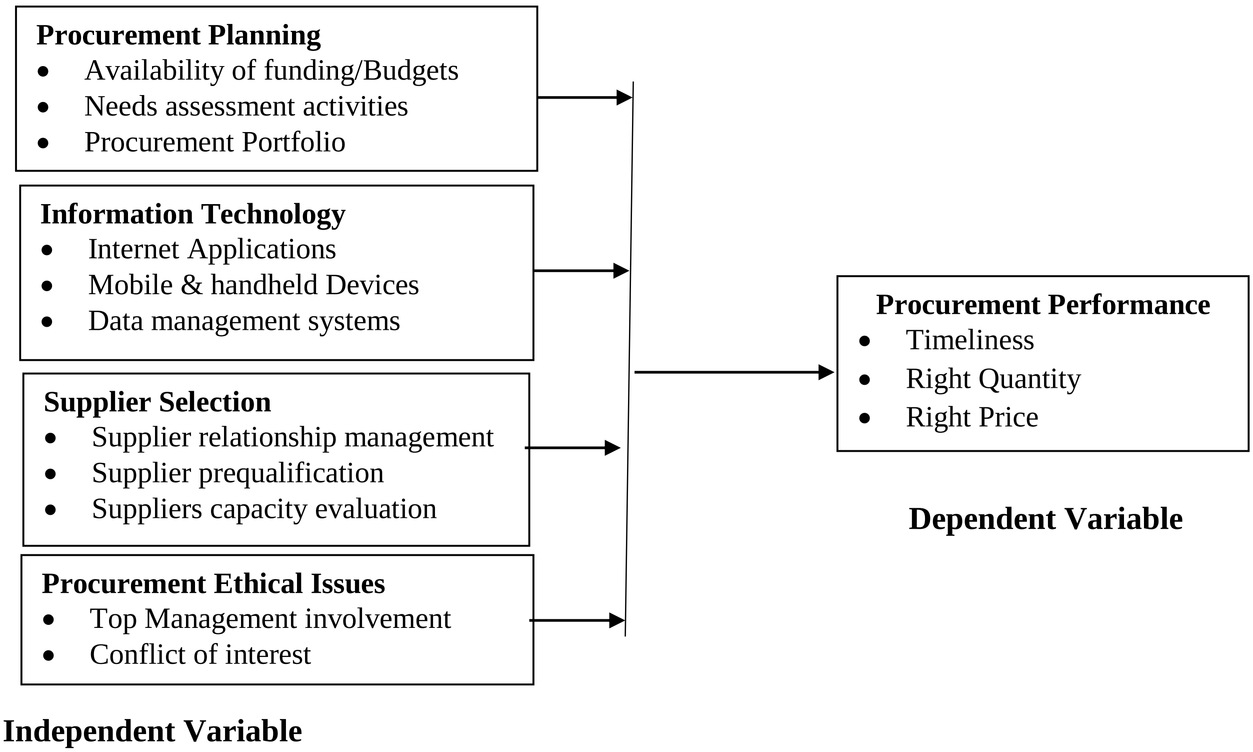

Figure 1: Conceptual Framework

2.3 Empirical Review

Several studies have examined the relationship between procurement practices and organizational performance across global, regional, and local contexts. Internationally, Ricarda (2016) established in Geneva that enhancing procurement practices creates smooth and efficient supply chains at global, regional, and local levels in the electronics sector. Aleman and Guererro (2016) found in Switzerland that most SME procurement practices center on delivering fair prices, but identified significant gaps in systematic monitoring and evaluation of procurement practice impacts on economic and social upgrading. Caritas, Julius, and Zenon (2016) established in Rwanda that procurement planning and practices positively influenced construction firm performance in government projects. In Kenya, Makabira and Waiganjo (2014) found that Kenya National Police benefited from procurement control practices through prevention of unnecessary stock accumulation, proper fund utilization, enhanced service provision, and improved resource allocation, confirming procurement practices as significant organizational performance drivers.

Locally focused studies further confirm the positive relationship between procurement practices and organizational performance in Kenya. Karanja and Kiarie (2015) established at Guaranty Trust Bank that procurement practices significantly influenced private sector organizational performance and generated meaningful cost savings, with procurement planning identified as a major contributor. Mokogi, Mairura, and Ombui (2015) found among state-owned enterprises in Nairobi that procurement practices were highly significant in enhancing organizational performance, confirming a substantial relationship between procurement practices and overall enterprise performance outcomes. These studies collectively demonstrate that procurement planning, ethical procurement, supplier relationship management, information technology adoption, and green supply chain management all contribute positively to organizational performance by improving efficiency, cost effectiveness, quality, and customer satisfaction (Turban et al., 2000). Organizational performance is measured through quality service, customer satisfaction, market performance, and employee satisfaction dimensions (Delaney et al., 2006).

Procurement planning encompasses identifying what needs to be procured through systematic needs assessment, determining how organizational needs can best be met, defining procurement strategies and methods, setting timelines, and establishing accountability across the full procurement lifecycle (Ezeh, 2012). Needs assessment is a systematic process for determining gaps between current conditions and desired outcomes, ensuring that finite budget resources are directed toward feasible and applicable solutions for identified organizational requirements. Chong and Ooi (2008) demonstrated that well-organized and executed procurement planning leads to inventory reduction, better customer service, and diminishing operational costs. Supply chain management, as a strategic procurement tool, emerged from the necessity to respond to growing demands for innovative goods and services and the complex interrelated nature of global markets (Basheka, 2004). Carr and Smeltzer (1999) further established that organizations with strategic procurement planning sustain more durable supplier relationships that enhance long-term organizational performance.

Ethical procurement is fundamentally anchored in delivering value for money, which is the core principle of any viable procurement system, requiring consideration of client satisfaction, public interest, fair play, honesty, justice, and equity (Robert, 2011). Being honest and complying with existing procurement laws raises organizational net income and reduces operating costs, directly translating into improved organizational performance (Robert, 2014). Procurement ethics constitute a set of moral principles guiding procurement managers' day-to-day behavior with the aim of ensuring effectiveness in supply chain management (IDASA, 2010). Adequate savings in procurement operations are facilitated by good supply management that maintains open communication between organizations and vendors (Johan et al., 2013). Adoption of modern procurement platforms supports ethical conduct across the entire value chain. Ethical procurement enhances accountability, consistency, and competitive supply, all of which positively influence procurement performance indicators and ultimately contribute to improved state corporation organizational performance outcomes.

3.1 Research Methodology

The study adopted a descriptive research design to examine the relationship between sustainable procurement practices and the performance of state corporations in Nairobi City County, Kenya. Descriptive research design was selected as it provides an accurate snapshot of the current situation prevailing in the study population without influencing subjects' behavior (Kothari, 2012). The target population comprised 187 employees across 243 state corporations in Kenya, drawn from procurement departments, top management, marketing, accounts and finance, and human resource departments, as these represent personnel most informed about and involved in procurement management practices. Using Yamane's (1967) formula with a 5% margin of error, a sample size of 151 respondents was determined. Proportionate stratified random sampling was adopted to ensure adequate representation of all departmental categories, with strata comprising the five identified functional departments within state corporations.

Primary data were collected using structured questionnaires comprising both closed-ended Likert scale items and open-ended questions covering procurement planning, information technology, supplier selection, and procurement ethical issues. A pilot study was conducted on 27 respondents representing 10% of the sample size to test instrument reliability and validity, with pilot respondents excluded from the main study. Reliability was assessed using Cronbach's Alpha, with a coefficient of 0.7 and above considered acceptable. Content validity was ensured through expert review of the questionnaire items for relevance and adequacy. Quantitative data were analyzed using IBM SPSS version 29 through descriptive statistics including means and standard deviations, and inferential statistics including Pearson correlation and multiple regression analysis.

4.0 Research Findings and Discussions

This chapter looks at the findings of the research together with their discussions. Inferential and descriptive statistics have been employed in the analysis of data. The study's main objective is to examine the relationship between sustainable procurement practices on performance of state corporations in Nairobi County, Kenya.

4.1 Response Rate

One hundred and fifty one questionnaires were handed out to employees at the 243 state corporations in Kenya, comprising of Procurement department, Top management, marketing department, Accounts & finance department and the HR department because they are specialists in the area of procurement management.

Table 1: Response Rate

Questionnaire	Frequency	Percent
Returned	132	87.7
Un-returned	19	12.3
Total	**151**	**100.0**

From the 151 questionnaires distributed the study received `132 of them having been filled to satisfactory levels. As shown in Table 1, the questionnaires returned added up to 87.7% response rate that was taken to be excellent. This is because according Mugenda and Mugenda (2013), a research achieves a response good enough to proceed with when it attains a 50% response rate, it is sufficient when it is at 60% any response above 70% is considered excellent. Posting an 87.7% response rate the study's response can be employed in the realization of other goals such as reporting.

4.2 Demographic Information

The study showed specific interest in their length of service in the organization and position in the organization.

Respondents Number of years worked in the Organization

Determining how long research participants had been employees in the company helps the study to understand whether they are able to give useful information. Table 2 presents what was obtained by the findings.

Table 1: Respondents Number of years worked in the Organization

Years of Service	Frequency	Percent
Less than 5 Years	23	17.7
6-10 Years	51	38.3
11-15 Years	42	32.0
Above 15 Years	18	12.0
Total	**132**	**100.0**

Most (38.3%) of the study's respondents had served in the companies for 6-10 years as indicated in table 2, 32% had been in employment for between 11-15 years and 12% had worked for above 15 years of experience. This showed the chosen respondents had been employed by their respective companies for varied periods of time. Many had however served for 4-6 Years, meaning respondents used had been employees of the organizations for long enough to be able to give critical information on the subject. Employees with 6+ years of service are well-equipped to assess the impact of Procurement Planning , particularly in how the organization's vision has been communicated and implemented. Their tenure also allows them to evaluate the efficiency of Information Technology , both human and material, in supporting organizational viability. Moreover, Supplier Section , which become ingrained over time, can be effectively assessed by those with extended experience, offering valuable perspectives on their consistency and impact. Lastly, Procurement Ethical Issues , which evolves with the organization, can be better understood by long-serving employees in terms of its influence on stakeholder engagement and Performance of State Corporations .

Respondents Level of Education

Knowing respondents' level of education in research helps researchers understand the background and characteristics of the study population, ensuring a representative sample and aiding in data segmentation. It allows for more accurate interpretation of responses, as education may influence how questions are understood and answered. Additionally, it helps explore how education impacts behaviours or outcomes, and can reveal potential biases in the sample, ensuring that findings are more generalizable and meaningful. Table 3 presents the results of the research.

Table 2: Respondents Level of Education

Education Level	Frequency	Percent
College	61	45.9
University	43	32.4
Post-University	29	21.6
Total	**132**	**100.0**

Most (45.9%) of the research participants selected for the study as shown in table 3 were had College level of education, 32.4% were had university level of education and 21.6% had Post-university level of education

4.3 Descriptive Analysis

A five-point Likert scale was used where 1 = Strongly Disagree, 2 = Disagree, 3 = Neither Agree nor Disagree, 4 = Agree, and 5 = Strongly Agree. Mean values between 3.5 and 4.4 indicated agreement, while standard deviations below 2 reflected respondent consensus.

Procurement Planning

Table 4 below presents respondents' level of agreement on how procurement planning influences state corporation performance in Nairobi City County.

Table 4: Procurement Planning Frequencies

Statement	SD	D	N	A	SA	Mean	SD
Procurement planning enhances operational efficiency	—	5.6%	23.5%	37.8%	13.1%	3.78	0.739
Effective procurement planning leads to cost savings	—	—	19.1%	41.0%	38.9%	4.21	0.741
Procurement planning improves service delivery	—	2.8%	38.6%	32.3%	26.3%	3.82	0.885
Stakeholder involvement positively impacts performance	13.1%	10.4%	23.9%	35.5%	17.1%	3.33	1.132
Clear procurement policies contribute to better decision-making	8.4%	23.9%	23.5%	31.1%	13.1%	3.17	1.178
Sustainable procurement practices improve long-term performance	8.0%	23.9%	26.3%	33.5%	8.4%	3.10	1.105

Table 4 reveals generally positive perceptions of procurement planning's contribution to state corporation performance. Cost savings recorded the highest mean of 4.21, indicating widespread recognition that effective procurement planning drives financial efficiency. Operational efficiency and service delivery recorded means of 3.78 and 3.82 respectively, reflecting broad agreement. However, stakeholder involvement, policy clarity, and sustainable procurement recorded lower means of 3.33, 3.17, and 3.10 respectively, with higher standard deviations and notable neutral or disagreement proportions, indicating inconsistencies in stakeholder engagement practices and insufficient understanding of how sustainable procurement translates into long-term organizational performance improvements across state corporations in Nairobi City County.

Information Technology

Table 5 below presents respondents' level of agreement on how information technology influences state corporation performance in Nairobi City County.

Table 5: Information Technology Frequencies

Statement	SD	D	N	A	SA	Mean	SD
Advanced IT systems enhance operational efficiency	15.1%	13.9%	35.5%	24.7%	10.8%	3.02	1.195
IT solutions in procurement improve cost management	13.5%	8.8%	10.8%	43.8%	24.1%	3.54	1.306
IT in data management increases transparency and accountability	5.2%	23.9%	19.1%	20.7%	31.1%	3.49	1.291
IT-enabled procurement systems improve strategic decision-making	4.8%	15.9%	7.6%	47.0%	24.7%	3.71	1.145
IT fosters sustainable procurement and effective resource allocation	4.8%	29.9%	5.2%	41.8%	18.3%	3.39	1.223

Table 5 reveals a mixed but generally positive perception of information technology's influence on state corporation performance. IT-enabled procurement systems for strategic decision-making recorded the highest mean of 3.71, with 71.7% agreeing or strongly agreeing, reflecting robust confidence in IT's decision-making role. IT integration into procurement for cost management recorded 3.54, while data management and transparency recorded 3.49. The lowest mean of 3.02 was recorded for advanced IT systems enhancing operational efficiency, with 35.5% remaining neutral, reflecting uncertainty about direct operational impacts. IT's role in sustainable procurement recorded 3.39, with 29.9% disagreeing, indicating skepticism about IT's long-term resource allocation benefits and suggesting that contextual barriers continue to limit IT's full procurement performance potential in state corporations.

Supplier Selection

Table 6 below presents respondents' level of agreement on how supplier selection influences state corporation performance in Nairobi City County.

Table 6: Supplier Selection Frequencies

Statement	SD	D	N	A	SA	Mean	SD
Supplier section effectively evaluates and selects suppliers	2.0%	2.8%	11.6%	30.7%	53.0%	4.30	0.922
Well-structured supplier section minimizes procurement delays	5.6%	7.2%	5.6%	53.8%	27.9%	3.91	1.058
Supplier section contributes to cost savings through competitive negotiations	5.6%	27.1%	19.1%	27.5%	20.7%	3.31	1.229
Performance metrics from supplier section inform strategic decision-making	10.4%	2.8%	19.1%	41.8%	25.9%	3.70	1.188
Supplier section promotes sustainable procurement through ethical suppliers	21.9%	—	29.1%	39.0%	10.0%	3.15	1.284
Communication within supplier section enhances service delivery	7.6%	5.6%	17.9%	52.6%	16.3%	3.65	1.061

Table 6 reveals strong confidence in supplier selection's contribution to state corporation performance, though opinions varied across dimensions. Supplier evaluation and selection recorded the highest mean of 4.30, with 83.7% of respondents agreeing or strongly agreeing, demonstrating robust confidence in supplier section effectiveness. Minimizing procurement delays recorded 3.91 and communication enhancement recorded 3.65, both reflecting positive agreement. Performance metrics utilization recorded 3.70, while cost savings through competitive negotiations recorded a lower mean of 3.31, with 27.1% disagreeing, indicating inconsistent financial benefits realization. Promotion of sustainable procurement through ethical supplier engagement recorded the lowest mean of 3.15, with 21.9% strongly disagreeing, revealing significant ambivalence about supplier selection's role in driving environmental and ethical procurement standards within state corporations.

Procurement Ethical Issues

Table 7 below presents respondents' level of agreement on how procurement ethical issues influence state corporation performance in Nairobi City County.

Table 7: Procurement Ethical Issues Frequencies

Statement	SD	D	N	A	SA	Mean	SD
Ethical guidelines in procurement improve overall performance	2.8%	2.0%	13.5%	51.8%	29.9%	4.04	0.875
Transparent and accountable procurement contributes to trust and efficiency	8.0%	18.7%	16.3%	51.8%	5.2%	3.27	1.177
Unethical practices such as favouritism and bribery hinder effectiveness	2.8%	—	12.4%	56.6%	28.3%	4.08	0.809
Ethics training enhances adherence and improves organizational performance	2.8%	—	25.5%	37.8%	13.9%	3.80	0.780
Robust oversight mechanisms reduce ethical breaches and foster performance	10.4%	14.3%	26.7%	37.5%	11.2%	3.25	1.150

Table 7 reveals that ethical issues in procurement are strongly linked to state corporation performance. Recognition that favouritism and bribery hinder organizational effectiveness recorded the highest mean of 4.08, with 84.9% of respondents agreeing or strongly agreeing. Enforcement of clear ethical guidelines recorded 4.04, confirming strong consensus that ethical frameworks drive performance improvements. Ethics training programs recorded 3.80, reflecting general support though 25.5% remained neutral, suggesting variability in perceived training effectiveness. Transparent and accountable procurement practices recorded 3.27, with 26.7% disagreeing, indicating implementation challenges. Robust oversight mechanisms recorded the lowest mean of 3.25, with 24.7% disagreeing, revealing concerns about the current effectiveness of compliance monitoring systems in preventing ethical breaches within state corporations.

Performance of State Corporations in Nairobi City County

Table 8 below presents respondents' level of agreement on the overall performance of state corporations in Nairobi City County, Kenya, assessed across key performance dimensions.

Table 8: Performance of State Corporations in Nairobi City County

Statement	SD	D	N	A	SA	Mean	SD
Effective procurement systems enhance operational efficiency	—	—	10.4%	64.9%	24.7%	4.14	0.338
Disciplined cost management yields robust financial performance	5.6%	—	16.7%	33.7%	20.7%	3.87	0.929
Innovative procurement strategies impact service delivery	2.0%	13.1%	21.5%	49.4%	13.9%	3.60	0.951
Sustainable procurement contributes to long-term performance improvement	2.8%	—	12.4%	40.6%	44.2%	4.24	0.874
Transparency and accountability are key determinants of performance	2.8%	—	22.7%	47.0%	27.5%	3.96	0.869

Table 8 reveals that respondents perceive effective procurement practices as pivotal drivers of state corporation performance. Sustainable procurement practices recorded the highest mean of 4.24, with 84.8% agreeing or strongly agreeing, confirming strong belief in long-term performance benefits. Operational efficiency recorded 4.14 with no respondents disagreeing and a very low standard deviation, reflecting near-unanimous consensus. Transparency and accountability recorded 3.96, while financial performance from disciplined cost management recorded 3.87. Innovative procurement strategies recorded the lowest mean of 3.60, with more varied responses, suggesting moderate but less consistent confidence in procurement innovation as a service delivery performance driver across different state corporations in Nairobi City County.

4.4 Pilot Study Results

The questionnaire was pilot tested on 15 respondents representing 32% of the total sample, who were not included in the final study sample. The pilot phase served to identify potential pitfalls, assess instrument validity and reliability, and make necessary modifications before the main data collection exercise (Mugenda & Mugenda, 2014). Face and content validity were established through expert review by the research supervisor, leading to refinement of questionnaire items through rewording, addition, and removal of questions. Content validity ensured that all questionnaire items comprehensively represented the domains of procurement planning, information technology, supplier selection, and procurement ethical issues. The questionnaire content was derived from the conceptual framework and reviewed systematically to confirm adequate coverage of all study constructs, while reviewing instruments from similar prior studies further enhanced content validity representation (Mohajan, 2018; Shekharan & Bougie, 2015).

Construct validity was assessed using Principal Component Analysis factor loadings, with a minimum threshold of 0.4 accepted as the criterion for item retention. All six procurement planning items recorded factor loadings ranging from 0.785 to 0.855, confirming strong construct representation. All five information technology items recorded loadings ranging from 0.781 to 0.891, while all six supplier selection items recorded exceptionally high loadings ranging from 0.825 to 0.979, indicating that each item significantly contributed to measuring its respective construct. All five procurement ethical issues items recorded loadings ranging from 0.718 to 0.880. Since all items across all four independent variables exceeded the minimum threshold of 0.4, all items were retained for the main study. These results confirm that the measurement instruments accurately and validly represented all study constructs with sufficient discriminatory power for subsequent inferential analysis. Reliability was assessed using Cronbach's Alpha, with values of 0.7 and above considered acceptable, 0.8 very good, and 0.9 excellent (George & Mallery, as cited in Kimaku, Omwenga & Nzulwa, 2019). The overall instrument Cronbach's Alpha of 0.858 confirmed very good reliability across the entire questionnaire. The table 9 below presents the reliability coefficients for all study variables.

Table 9: Overall Reliability Coefficients.

S/No.	Variable	No. of Items	Cronbach's Alpha
1	Information Technology	6	0.825
2	Procurement Planning	6	0.915
3	Procurement Ethical Issues	6	0.854
4	Supplier Selection	6	0.904
5	Performance of State Corporations	6	0.869

As shown in Table 9, Procurement Planning recorded the highest reliability coefficient of 0.915, indicating excellent internal consistency. Supplier Selection followed at 0.904, also classified as excellent. Performance of State Corporations recorded 0.869, Procurement Ethical Issues recorded 0.854, and Information Technology recorded 0.825, all classified as very good reliability. All variables exceeded the acceptable threshold of 0.7, confirming that the research instrument consistently measured the intended constructs across all respondents and was therefore suitable for generating credible data for the main study's inferential statistical analysis.

4.5 Correlation Analysis

Pearson Product Moment Correlation coefficient was used to establish whether linear relationships existed between sustainable procurement practices and state corporation performance in Nairobi City County. The coefficient ranges from -1 to +1, where r = 0 implies no correlation and r = 1 indicates perfect positive correlation. The correlation matrix for all study variables is presented in Table 10 below.

Table 10: Correlation Matrix for All Variables

	Performance of State Corporations	Procurement Planning	Information Technology	Procurement Ethical Issues	Supplier Selection
Performance of State Corporations	1.000				
Procurement Planning	.653**	1.000			
Information Technology	.763**	.598**	1.000		
Procurement Ethical Issues	.800**	.780**	.804**	1.000	
Supplier Selection	.700**	.617**	.872**	.760**	1.000

*** Correlation is significant at the 0.01 level (2-tailed). N = 132*

Table 10 reveals that all four independent variables are positively and significantly correlated with state corporation performance at the 0.01 significance level. Procurement ethical issues recorded the strongest correlation with performance at r = 0.800, confirming that ethical procurement frameworks are the most critical individual driver of organizational performance. Information technology followed at r = 0.763, reflecting the substantial role of digital procurement systems in enhancing efficiency and decision-making. Supplier selection recorded r = 0.700, while procurement planning recorded the lowest but still significant correlation of r = 0.653. Among independent variables, information technology and supplier selection recorded the strongest inter-variable correlation of r = 0.872, suggesting close operational interdependence. Procurement ethical issues correlated strongly with all other independent variables, indicating that ethical frameworks underpin all dimensions of sustainable procurement practice in Nairobi City County state corporations.

4.6 Diagnostic Tests

Before conducting regression analysis, the study tested whether key regression assumptions were satisfied. The Kaiser-Meyer-Olkin measure of sampling adequacy recorded a value of 0.882, falling within the excellent range and confirming that the data was highly suitable for factor analysis and further inferential analysis (Hutcheson & Sofronniou, as cited in Kimaku et al., 2019). Bartlett's test of Sphericity was statistically significant with a p-value below 0.001, rejecting the null hypothesis that variables are unrelated and confirming the existence of meaningful inter-variable relationships. Normality was assessed using the Shapiro-Wilk test at the 5% significance level, with all four variables recording significance values substantially above 0.05, confirming that data were normally or approximately normally distributed. These combined results confirmed that the dataset met the fundamental statistical requirements for valid regression analysis within the context of sustainable procurement practices and state corporation performance.

Multicollinearity was assessed using Tolerance and Variance Inflation Factor statistics, with acceptable thresholds set at Tolerance above 0.2 and VIF below 5. All independent variables satisfied these thresholds, with Tolerance values ranging from 0.295 for Supplier Selection to 0.497 for Procurement Ethical Issues, and VIF values ranging from 2.014 for Procurement Ethical Issues to 3.387 for Supplier Selection. These results confirm that each independent variable contributes distinct and non-redundant information to the regression model, with no problematic collinearity detected among the predictors. Mean centering of variables was additionally applied to further eliminate any remaining multicollinearity possibilities, ensuring that regression coefficient estimates remained stable, reliable, and valid for inferential analysis (Kimaku et al., 2021). Collectively, all diagnostic tests confirmed that the assumptions of regression analysis were satisfactorily met, supporting the robustness and credibility of the study's inferential findings.

4.7 Regression Analysis

Multiple regression analysis was computed to determine the collective and individual effects of procurement planning, information technology, procurement ethical issues, and supplier selection on the performance of state corporations in Nairobi City County, Kenya.

Model Summary

The table 11 below presents the model summary showing the proportion of variance in state corporation performance explained by the four independent variables collectively.

Table 11: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.936	.877	.868	.033767

Predictors: Procurement Planning, Information Technology, Procurement Ethical Issues, Supplier Selection

Table 11 reveals a multiple correlation coefficient of 0.936, indicating a very strong positive relationship between the combined independent variables and state corporation performance. The R-square value of 0.877 confirms that procurement planning, information technology, procurement ethical issues, and supplier selection collectively explain 87.7% of the variance in state corporation performance. The adjusted R-square of 0.868 further confirms the model's high predictive power after accounting for the number of predictors and sample size. The remaining 12.3% of variance is attributable to other factors not captured within this study's model, suggesting that additional determinants of state corporation performance merit future research investigation.

Analysis of Variance

Table 12 below presents the ANOVA results testing the overall statistical significance of the regression model at a 5% significance level.

Table 12: ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	1.233	4	.308	92.716	.000
Residual	0.173	128	.003		
Total	1.406	132			

Dependent Variable: Performance of State Corporations in Nairobi City County

Table 12 confirms that the overall regression model is statistically significant. The F-statistic of 92.716 substantially exceeded the F-critical value, with a significance value of 0.000, well below the 0.05 threshold. This confirms that the four independent variables collectively, namely procurement planning, information technology, procurement ethical issues, and supplier selection, are statistically significant joint predictors of state corporation performance in Nairobi City County. The model therefore provides a reliable and valid framework for predicting and explaining variations in state corporation performance based on sustainable procurement practice dimensions.

Regression Coefficients

The table 13 below presents the regression coefficients showing the individual effect, direction, and statistical significance of each independent variable on state corporation performance.

Table 13: Regression Coefficients

Variable	B	Std. Error	Beta	t	Sig.
(Constant)	1.347	0.258		5.221	.000
Procurement Planning	0.347	0.103	0.439	3.369	.001
Information Technology	0.196	0.077	0.226	2.545	.041
Procurement Ethical Issues	0.338	0.138	0.402	2.449	.018
Supplier Selection	0.279	0.108	0.327	2.583	.013

Dependent Variable: Performance of State Corporations in Nairobi City County

Table 13 reveals that all four independent variables positively and significantly influence state corporation performance, generating the regression equation:

$$\mathbf{Y = 1.347 + 0.347X_1 + 0.196X_2 + 0.338X_3 + 0.279X_4.}$$

Procurement planning recorded the strongest individual effect with the highest unstandardized coefficient of 0.347, confirming that strategic procurement planning is the most influential driver of organizational performance. Procurement ethical issues followed at 0.338, underscoring that ethical compliance enhances transparency, trust, and operational effectiveness. Supplier selection recorded 0.279, confirming that effective supplier management improves resource quality and reduces procurement delays. Information technology recorded the smallest but still statistically significant coefficient of 0.196, confirming that IT investments improve data management and decision-making, collectively driving sustainable and enhanced performance across state corporations in Nairobi City County.

5.1 Conclusion

The study concludes that sustainable procurement practices significantly shape the performance of state corporations in Nairobi City County, Kenya across all four dimensions examined. Procurement planning positively influences operational efficiency and cost savings, emerging as the strongest individual predictor of performance. However, stakeholder engagement and policy clarity within procurement planning remain inconsistent, limiting the full realization of planning benefits. Information technology significantly enhances data management, cost control, and strategic decision-making, yet its potential in resource allocation and long-term procurement sustainability is unevenly perceived across organizations. Supplier selection effectively minimizes procurement delays and ensures high-quality resource acquisition, but cost-saving realization through competitive negotiations and active promotion of sustainable supplier engagement remain areas of mixed performance requiring targeted improvement and clearer institutional frameworks.

Moreover, the study concludes that procurement ethical issues are a critical determinant of state corporation performance, with enforcement of ethical guidelines and recognition of the damaging effects of favoritism and bribery recording the strongest respondent consensus. Despite widespread acknowledgment of the importance of transparency and accountability, implementation remains inconsistent, and oversight mechanisms are not uniformly effective in preventing ethical breaches. Ethics training programs, while generally supported, show variable perceived effectiveness across organizations. These findings collectively confirm that procurement planning, information technology, supplier selection, and ethical procurement practices are interdependent performance drivers whose combined and individually significant effects underscore the need for an integrated sustainable procurement management framework in Kenya's state corporations.

6.1 Recommendations

The study recommends that state corporations should strengthen procurement planning by developing structured stakeholder engagement frameworks that ensure procurement policies are clearly communicated and accessible to all relevant parties across organizational levels. Training programs equipping employees with practical procurement planning skills should be institutionalized to bridge existing implementation gaps. Sustainable procurement practices should be embedded into comprehensive planning processes aligned with long-term corporate objectives, fostering organizational resilience. State corporations should additionally prioritize integration of advanced and user-friendly IT systems tailored to organizational needs that enhance efficiency, transparency, and strategic decision-making. Structured approaches to IT-enabled resource allocation should be developed to reduce existing skepticism and reinforce confidence in technology's long-term contribution to sustainable procurement performance outcomes.

Besides, the study recommends that state corporations should establish robust and consistently enforced oversight mechanisms that promote transparency, accountability, and ethical conduct across all procurement processes. Ethics training programs should be standardized, mandatory, and regularly evaluated for effectiveness to reduce favoritism, bribery, and other unethical procurement behaviors. Supplier management frameworks should be refined to actively integrate cost-saving measures and sustainability requirements into supplier selection and evaluation criteria, ensuring that environmental and ethical standards are consistently applied. By fostering a culture of ethical procurement and structured supplier collaboration, state corporations can sustain long-term operational integrity. Future research should examine the long-term financial impact of sustainable procurement strategies, the role of emerging technologies including artificial intelligence and blockchain in procurement, and the socioeconomic effects of ethical procurement practices on local supplier development and community welfare.

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