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**Influence of the Supply Chain Infrastructure Context on Procurement Policy
Implementation among Insurance Companies in Kenya**

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Abstract

Purpose: This study examined the influence of the supply chain infrastructure context on procurement policy implementation among insurance companies in Kenya.

Methodology: The study was grounded theoretically in Institutional Theory and adopted a descriptive cross-sectional survey research design targeting all 52 licensed insurance companies in Kenya as per the Insurance Regulatory Authority (IRA, 2024) registry, with data collected from Chief Procurement Officers (CPOs), Supply Chain Managers (SCMs), or Operations Managers in each company. The study used a census approach and structured questionnaires with variables measured on a five-point Likert scale. Prior to main data collection, a pilot study involving 10% of the target population validated the research instrument, with Cronbach's Alpha confirming internal consistency. Of the 52 questionnaires administered, 46 were properly completed and returned, representing a response rate of 88.5%. Data were analysed using SPSS version 25.0, applying descriptive statistics and inferential statistics, including Pearson's correlation, multiple linear regression, and ANOVA. Diagnostic tests, specifically the Variance Inflation Factor for multicollinearity, the Shapiro-Wilk test for normality, the Breusch-Pagan test for heteroscedasticity, and the Durbin-Watson statistic for autocorrelation, were conducted before regression analysis and confirmed that the model assumptions were satisfied.

Findings: The regression results showed that the supply chain infrastructure context ($\beta = 0.381$, $B = 0.275$, $t = 3.490$, $p = 0.001$) made a positive and statistically significant contribution to procurement policy implementation. Supply chain infrastructure context emerged as the strongest predictor of procurement policy implementation, followed by supplier network structure context, information sharing and integration context, and market dynamics context.

Unique Contribution to Theory, Practice and Policy: Theoretically, the study validates Institutional Theory in explaining how insurance companies adapt procurement policies to regulatory and market pressures, while confirming the need to integrate the Resource-Based View, Technology Acceptance Model, and Transaction Cost Theory to fully account for the infrastructure, network, and information-sharing dimensions of procurement policy implementation. In practice, the study recommends that insurance company management prioritise investment in integrated electronic procurement infrastructure covering the complete procurement cycle, supplier network development, and information-sharing systems. At the policy level, the study recommends that industry regulators and procurement professionals strengthen market risk management guidance to support procurement policy implementation across the sector.

Keywords: Supply Chain Infrastructure, Procurement Policy Implementation, Institutional Theory, Insurance Companies, Kenya

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INTRODUCTION

The implementation of procurement policies has been identified as a vital consideration in the effectiveness and competitiveness of organizations around the world. There is now an increasing understanding among organizations around the world regarding the strategic nature of procurement policies that affect cost management, performance of suppliers, and compliance with laws and regulations (Van Weele, 2018). In recent years, there have been numerous changes within the insurance industry due to technological developments, increased regulatory pressures, and changing customer demands. In this regard, the implementation of procurement policies has proven to be a distinctive feature of successful insurance firms. As Knight et al. (2007) note, procurement policies serve as the backbone for all procurement activities.

The supply chain infrastructure context refers to the physical, technological, and systemic assets that enable an organization to execute procurement activities efficiently and compliantly. Globally, infrastructure readiness in procurement is characterized by the extent of process automation through enterprise resource planning (ERP) systems and e-procurement platforms, levels of technology budget allocation, system reliability and downtime frequency, and cross-functional integration between procurement and related departments such as Finance and Claims (Croom & Brandon-Jones, 2007). Organizations with robust procurement infrastructure consistently demonstrate superior policy compliance, faster cycle times, and reduced transaction errors compared to those relying on manual or fragmented systems (Rajapathirana & Hui, 2024).

In Africa, procurement infrastructure gaps constitute a major constraint on policy implementation across diverse sectors. Boadu and Agyei (2022) found in Ghana that limited ERP adoption and poor cross-functional integration between procurement and finance departments significantly constrained procurement compliance among public sector insurance agencies. Eze and Olamide (2023) demonstrated in Nigeria that insurance firms implementing cloud-based procurement platforms experienced a 40% reduction in procurement cycle time and a 55% improvement in regulatory compliance, confirming that infrastructure investments directly translate into implementation gains. These findings collectively indicate that the infrastructure dimension of the supply chain contextual framework requires deliberate investment in automation, system reliability, and cross-departmental integration.

In Kenya's insurance sector, procurement infrastructure challenges persist despite growing technology adoption. Ndei and Ngugi (2022) established that e-procurement transformation exerts a significant positive influence on insurance company performance, yet gaps in ERP deployment, inadequate technology budget allocations, and limited integration between procurement, finance, and claims departments constrain the sector's ability to fully benefit from infrastructure investments. Muhando et al. (2025) confirmed that supply chain integration significantly improves procurement performance in Kenyan institutions, highlighting cross-functional integration as a critical infrastructure indicator. These findings establish the supply chain infrastructure context as a critical independent variable requiring systematic investigation within Kenya's insurance sector.

Statement of the Problem

Kenya's insurance sector has recorded sustained growth, with 52 licensed companies contributing approximately 2.4% to the country's GDP and managing combined assets exceeding KES 800 billion (IRA, 2024). Despite this growth, procurement policy implementation remains a persistent operational challenge across the sector. Mutangili (2025) reported that while awareness of the PPADA, 2015 among procurement officers is high,

enforcement effectiveness remains only moderate, with weak enforcement mechanisms, bureaucratic delays, and supply chain infrastructure constraints undermining compliance. Atiende and Ndolo (2025) found that transparent procurement practices account for only 48.6% of the variance in supply chain performance in Kenya ($R^2 = 0.486$, $p < 0.05$), indicating that unexamined contextual factors substantially constrain implementation outcomes. Nkhuwa and Sikazwe (2026) similarly found in Zambia that supplier network fragmentation and communication gaps undermine procurement implementation in insurance companies, reflecting challenges comparable to those documented in Kenya, and these statistics collectively establish a measurable implementation gap that requires systematic investigation.

Contextually, Kenya's insurance industry operates within a dynamic regulatory environment that has undergone significant changes, including revised IRA governance standards and new capital adequacy requirements (IRA, 2024). These regulatory changes alter procurement compliance demands in ways that existing studies, many of which predate these reforms, do not capture. The rapid digitalization of Kenya's insurance sector (Ndei & Ngugi, 2022) creates new infrastructure and information-sharing opportunities that existing studies do not address in terms of their influence on procurement policy implementation. The absence of contextually current research leaves insurance companies without adequate evidence to adapt their procurement practices to the prevailing regulatory, infrastructure, and market environment, representing a gap that this study directly addresses.

LITERATURE REVIEW

Theoretical Framework

Institutional Theory

Institutional Theory, developed by DiMaggio and Powell (1983), proposes that organizations conform to external pressures from regulatory bodies, professional norms, and societal expectations to gain legitimacy and ensure survival in their operating environments. In the context of this study, Institutional Theory primarily underpins the market dynamics context variable, explaining how insurance companies respond to IRA regulatory updates, industry compliance norms, and market concentration pressures by adapting their procurement policies to maintain operating legitimacy. Meyer and Rowan (1977) argue that organizations adopt formally prescribed structures, including procurement policies, not merely for efficiency but to conform to institutionalized norms and regulatory expectations. The theory also explains how frequent IRA regulatory updates alter the institutional environment within which procurement policies must be implemented, creating compliance demands that require adaptive procurement systems (Scott, 2001). However, Institutional Theory overemphasizes external conformity while underplaying the role of internal infrastructure capability, supplier network configurations, and information-sharing systems in determining implementation quality, and this limitation justifies integrating the Resource-Based View, the Technology Acceptance Model, and Transaction Cost Theory to capture the full range of contextual factors shaping procurement policy implementation in the insurance sector.

Conceptual Framework

A conceptual framework may be defined as an end result of bringing together a number of related concepts to explain or predict a given event, or give a broader understanding of the phenomenon of interest, or simply, of a research problem (Imenda, 2014). The conceptual framework makes it easier for the researcher to specify and define the concepts within the problem of the study (Luse, Mennecke & Townsend, 2012). The conceptual framework for this

study, linking the supply chain infrastructure context to procurement policy implementation, is shown in Figure 1 below.

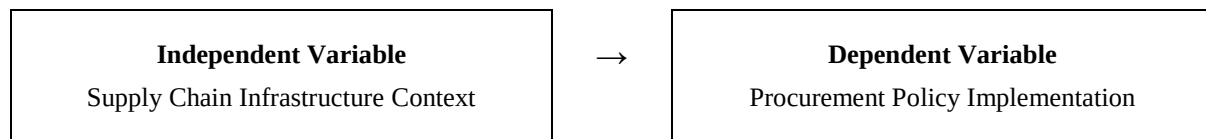


Figure 1: Conceptual Framework

Empirical Review

Supply Chain Infrastructure Context

The supply chain infrastructure context encompasses the technological assets, automation systems, and cross-functional integration mechanisms through which insurance companies operate their procurement policies. Croom and Brandon-Jones (2007) define procurement infrastructure as the combination of ERP systems, e-procurement platforms, automated approval workflows, and integrated supplier interfaces that together reduce processing costs, improve audit trails, and enhance regulatory compliance. In Kenya's insurance sector, procurement infrastructure directly determines the extent to which policy requirements can be automated, monitored, and enforced across all procurement categories. Process automation through ERP and e-procurement systems reduces human error, accelerates transaction processing, and creates the digital audit trails required for IRA compliance verification (Ndei & Ngugi, 2022). Technology budget allocation determines the depth and recency of procurement systems, with inadequate investment resulting in legacy systems that cannot support modern compliance requirements. System reliability and downtime frequency determine whether procurement staff can consistently access procurement platforms to execute policy-required activities, while cross-functional integration between Finance, Procurement, and Claims departments ensures that procurement decisions align with financial controls and insurance-specific operational requirements (Johnson & Klassen, 2005).

Research Gaps

The reviewed empirical studies, while informative, leave notable gaps relevant to this study. Boadu and Agyei (2022) and Eze and Olamide (2023) examined procurement infrastructure and compliance outcomes in Ghana and Nigeria respectively, contexts whose regulatory and market conditions differ from Kenya's insurance sector, limiting the generalizability of their findings locally. Within Kenya, Ndei and Ngugi (2022) and Muhando et al. (2025) linked e-procurement transformation and supply chain integration to overall organizational and procurement performance, but neither study examined these infrastructure factors in relation to procurement policy implementation specifically, nor did they account for the revised IRA governance standards and capital adequacy requirements introduced in 2024. This leaves a conceptual gap, the limited application of infrastructure-related variables to the governance-focused outcome of policy implementation rather than general performance, and a contextual gap, the absence of contextually current evidence from Kenya's insurance sector following its recent regulatory reforms, both of which this study addresses.

METHODOLOGY

This study employed a descriptive cross-sectional survey research design to examine supply chain contextual factors and their effect on procurement policy implementation among insurance companies in Kenya. According to Cooper and Schindler (2014), a target population refers to the complete set of elements about which the researcher wishes to make inferences.

The target population for this study comprised all 52 licensed insurance companies operating in Kenya as per the IRA (2024) database, categorized into 26 general insurance companies, 15 life insurance companies, and 11 composite insurance companies. From each company, the study targeted one senior procurement professional, specifically the Chief Procurement Officer (CPO), Supply Chain Manager (SCM), or Operations Manager, who holds direct responsibility for procurement policy implementation. This study adopted a census approach targeting all 52 licensed insurance companies to eliminate sampling error, maximize representativeness, and enhance the reliability of findings (Zikmund et al., 2013). Primary data was collected through self-administered questionnaires. The instrument was pilot tested to determine its validity and reliability, with the results showing that the instrument's reliability was good and its content usable for the study. Using the Statistical Package for the Social Sciences (SPSS), the data were analysed using simple linear and multiple moderated regression models. Both descriptive and inferential statistics were applied in analysing the data.

RESULTS

a) Descriptive Results

The respondents were asked to rate the provided statements on a scale of 1–5, where 1 = Strongly Disagree, 2 = Disagree, 3 = Neither Agree nor Disagree, 4 = Agree and 5 = Strongly Agree, on procurement infrastructure, after which the responses obtained were analysed into frequency of response, mean score, and standard deviation.

Table 1: Descriptive Statistics for Supply Chain Infrastructure Context

Statement	N	Mean	SD
Our firm normally uses a digital or electronic platform for procurement activities.	46	2.83	1.180
There is the use of e-procurement tools in all departments in our organization.	46	3.09	1.262
Our suppliers are integrated into our e-procurement system, making the process easier and timely.	46	3.11	1.303
The e-procurement system in use covers the full procurement cycle (requisition, delivery, inspection, payment and dispatch).	46	3.11	1.100
Use of manual procurement (e.g., purchase orders, approvals) has been significantly reduced through automation in our firm.	46	3.22	1.172

The findings indicate that the statement “Use of manual procurement processes has been significantly reduced through automation in our firm” recorded the highest mean score ($M = 3.22$, $SD = 1.172$). This suggests that respondents generally agreed that automation has reduced reliance on manual procurement procedures, although the relatively high standard deviation indicates variations in implementation across the sampled insurance companies. The findings agree with Boadu and Agyei (2022), who found that process automation minimised bureaucratic delays and enhanced documentation compliance in Ghana's insurance procurement agencies. Additionally, Moraa and Muturi (2023) found that technological system adequacy positively influenced implementation effectiveness among insurance agencies in Kisii Town, while outdated systems weakened execution quality.

Similarly, respondents moderately agreed that suppliers were integrated into the organizations' electronic procurement systems ($M = 3.11$, $SD = 1.303$) and that the electronic procurement systems covered the entire procurement cycle, including requisition, delivery, inspection, payment, and dispatch ($M = 3.11$, $SD = 1.100$). These findings suggest that most organizations have embraced digital procurement systems, although implementation levels differ among

firms. This finding concurs with Rajapathirana and Hui (2024), who found that automated supplier selection tools enabled by robust infrastructure reduced compliance failures among United States insurance procurement officers. The moderate agreement recorded in the current sample indicates that Kenyan insurers are moving in the same direction, integrating suppliers into digital systems.

The statement regarding the use of electronic procurement tools across all departments registered a mean score of 3.09 (SD = 1.262), indicating moderate agreement that e-procurement has been adopted across organizational departments. The lowest mean score (M = 2.83, SD = 1.180) was recorded for the statement that the organization normally uses digital or electronic platforms for procurement activities. Although respondents generally agreed with the statement, the relatively lower mean suggests that complete digitalization of procurement processes has not been fully achieved across all insurance companies. The responses indicate a moderate level of supply chain infrastructure development among insurance companies. The findings imply that although firms have invested in electronic procurement technologies, there remains room for improvement in achieving fully integrated and comprehensive digital procurement systems. This finding diverges somewhat from Boadu and Agyei (2022), who found a significant positive relationship between e-platform adoption and procurement policy adherence in Ghana's public insurance agencies, and from Rajapathirana and Hui (2024), who found that high technology readiness in United States insurance firms translated into strong procurement transparency gains. The moderate rather than high mean obtained in the current study mirrors this caution: departmental spread of e-procurement tools is occurring but is not yet complete, consistent with Mani and Melia's (2025) finding that integration gaps persist even where infrastructure investment has begun.

b) Regression Results

Table 2: Regression Coefficient for Supply Chain Infrastructure Context

Model	B	Std. Error	Beta (β)	t	Sig. (p)
Supply Chain Infrastructure Context	0.275	—	0.381	3.490	0.001

Dependent Variable: Procurement Policy Implementation

Supply chain infrastructure context returned the strongest effect of the four predictors (B = 0.275, Beta = 0.381, t = 3.490, p = 0.001), meaning that, net of the other three contextual factors, infrastructure has both the largest raw effect and the largest relative influence on procurement policy implementation. This concurs with Mani and Melia (2025), whose Indonesian study found cross-functional infrastructure integration to be the strongest predictor of compliance. It is additionally consistent with Boadu and Agyei (2022), whose Ghanaian findings linked e-platform adoption to policy adherence, and with Moraa and Muturi (2023), whose Kisii Town findings linked system adequacy to implementation effectiveness. It also extends Ndei and Ngugi (2022) and Muhando et al. (2025), both of which found positive infrastructure effects on performance rather than policy implementation specifically; the present coefficient confirms that the same infrastructure investments also drive the governance-focused outcome of policy compliance, not merely operational performance.

SUMMARY, CONCLUSION AND RECOMMENDATIONS

Summary

This study examined the influence of the supply chain infrastructure context on procurement policy implementation among insurance companies in Kenya. Descriptive findings showed

moderate agreement that insurance companies had embraced supply chain infrastructure to support procurement activities, with reduction of manual procurement processes through automation recording the highest mean score ($M = 3.22$, $SD = 1.172$) and use of digital or electronic procurement platforms recording the lowest ($M = 2.83$, $SD = 1.180$). Regression analysis further established that supply chain infrastructure context had a positive and statistically significant influence on procurement policy implementation ($B = 0.275$, $\beta = 0.381$, $t = 3.490$, $p = 0.001$), emerging as the strongest of the four predictor variables examined.

Conclusion

The first objective of the study sought to determine the effect of supply chain infrastructure context on procurement policy implementation among insurance companies in Kenya. The descriptive findings revealed that respondents moderately agreed that their organizations had embraced supply chain infrastructure to support procurement activities. In particular, the reduction of manual procurement processes through automation recorded the highest mean score ($M = 3.22$, $SD = 1.172$), while the use of digital or electronic procurement platforms recorded the lowest mean score ($M = 2.83$, $SD = 1.180$). These findings suggest that although insurance companies have made considerable progress in adopting electronic procurement systems, complete digital transformation of procurement processes has not yet been fully achieved.

The regression analysis further established that supply chain infrastructure context had a positive and statistically significant influence on procurement policy implementation ($B = 0.275$, $\beta = 0.381$, $t = 3.490$, $p = 0.001$). The standardized beta coefficient ($\beta = 0.381$) was the highest among all predictor variables, indicating that supply chain infrastructure context was the strongest determinant of procurement policy implementation in the study. This finding implies that improvements in procurement technologies, integrated information systems, and automation significantly enhance procurement policy implementation by improving efficiency, transparency, accountability, and compliance with procurement procedures. Consequently, insurance companies that continue investing in digital procurement infrastructure are likely to realize greater improvements in procurement policy implementation. The findings concur with Mani and Melia (2025), where the study established that ERP integration and automated workflows in Indonesian insurance firms significantly improved procurement cycle speed and compliance rates, with cross-functional integration emerging as the strongest predictor of compliance. The current study's finding that infrastructure context is the strongest of the four predictors mirrors this result closely. The two studies concur because both operationalise infrastructure around the same underlying mechanism, automation and system integration, reducing manual intervention and thereby reducing opportunities for non-compliance.

Recommendations

Recommendations for Management of Insurance Companies

Insurance companies should continue investing in modern supply chain infrastructure by expanding the adoption of integrated electronic procurement systems across all procurement functions. Digital procurement technologies should support the complete procurement cycle, including supplier registration, tendering, contract management, inventory control, payment processing, and performance monitoring. Such investments will improve operational efficiency while strengthening compliance with procurement policies.

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