

E-Procurement Practices and Sustainable Supply Chain Performance in Ghana's Local Governments: A Governance and Digital Transformation Perspective

Benjamin Donkoh*

Procurement Unit, University of Education, Winneba, Ghana

*Corresponding author: benjamindonkoh134@gmail.com

Abstract: Procurement Unit, University of Education, Winneba This study examines how e-procurement practices influence sustainable supply chain performance within Ghana's Metropolitan, Municipal, and District Assemblies (MMDAs). It highlights the role of digital transformation and governance in enhancing public procurement efficiency, accountability, and transparency. A quantitative research design was employed using structured questionnaires administered to 140 MMDAs across Ghana, with 128 valid responses. Data were analyzed using descriptive and inferential statistics, including regression analysis, to determine the relationship between e-procurement practices and supply chain performance. E-procurement practices significantly improve supply chain performance, explaining 52.3% of the observed variance. The results show that e-sourcing, e-tendering, e-design, and e-evaluation contribute positively to operational and sustainability outcomes. However, inadequate ICT infrastructure, limited staff capacity, and weak legal frameworks hinder full implementation. Strengthening digital procurement capacity and institutional governance can promote transparency, reduce costs, and enhance sustainable service delivery. Policymakers should prioritise ICT investment, staff training, and regulatory reforms to maximise the benefits of e-procurement systems. This study provides empirical evidence from a developing-country context on how e-procurement practices foster sustainable and transparent public supply chains. It extends Institutional Theory and the Technology Acceptance Model (TAM) by linking technological readiness with sustainable governance outcomes.

Keywords: E-Procurement, Sustainability, Supply Chain Performance, Governance, Digital Transformation, Ghana

Conflicts of interest: None

Supporting agencies: None

Received 11.11.2025

Revised 22.03.2026

Accepted 27.05.2026

Cite This Article: Donkoh, B. (2026). E-Procurement practices and sustainable supply chain performance in Ghana's local governments: A governance and digital transformation perspective. *Journal of Multidisciplinary Research Advancements*, 4(1), 79-86.

1. Introduction

In today's competitive and technology-driven environment, organisations increasingly depend on digital innovation to improve efficiency, reduce costs, and enhance service delivery (Fishenden & Thompson, 2013; Raja et al., 2013). The growth of Information and Communication Technology (ICT) has accelerated the transition from traditional, paper-based systems to electronic business processes, particularly in procurement and supply chain management (Wu & Pagell, 2011). Consequently, e-procurement has emerged as a strategic tool for improving organisational performance through process automation, cost control, and better supplier coordination (Koorn & Mueller, 2001).

E-procurement plays a critical role in strengthening supply chain performance by enhancing transparency, reducing procurement cycle times, and improving information flow across the supply chain. Studies show that digital procurement systems can reduce purchasing costs by up to 12 percent while improving accuracy and operational efficiency (Muhia & Afande, 2015). More importantly, when effectively implemented, e-procurement contributes to sustainable supply chain performance by promoting accountability, minimising waste, and supporting ethical sourcing practices.

In the public sector, the relevance of e-procurement extends beyond efficiency to sustainable governance. Governments adopt digital procurement systems to ensure transparency, reduce corruption risks, and improve the management of public

resources. However, in developing countries, the realisation of these benefits remains constrained by infrastructural deficits, limited technical capacity, and resistance to change.

In Ghana, Metropolitan, Municipal, and District Assemblies (MMDAs) are central to local governance and service delivery, with procurement activities forming a significant portion of their operations. Despite their importance, many MMDAs continue to face challenges such as manual procurement processes, delays, weak supplier coordination, and limited data visibility, all of which undermine supply chain performance and sustainability outcomes. The introduction of the Ghana Electronic Procurement System (GHANEPS) in 2019 represents a major policy intervention aimed at digitising procurement processes, improving transparency, and enhancing efficiency across public institutions (Ofori & Fuseini, 2019).

Although GHANEPS and GIFMIS have created opportunities to improve procurement practices, its impact on sustainable supply chain performance within MMDAs remains underexplored. In particular, there is limited empirical evidence on how specific e-procurement practices such as e-tendering, e-sourcing, and electronic contract management influence key dimensions of sustainability, including efficiency, transparency, accountability, and environmental responsibility.

This study therefore examines how e-procurement practices influence sustainable supply chain performance within Ghana's Metropolitan, Municipal, and District Assemblies (MMDAs). It focuses on understanding the extent to which digital procurement systems enhance operational efficiency, strengthen transparency and accountability, and contribute to broader sustainability outcomes in public sector supply chains.

Public procurement inefficiencies remain a persistent challenge in Ghana's public sector, particularly within Metropolitan, Municipal, and District Assemblies (MMDAs), where manual processes continue to dominate and undermine transparency, accountability, and value for money (Bashuna, 2013; Waithaka & Kimani, 2021). Evidence from Public Procurement Authority (PPA) Annual Reports indicates recurring issues such as delays in procurement cycles, non-compliance with the Public Procurement Act, weak documentation practices, and limited transparency in contract management (Public Procurement Authority, 2022). Similarly, the World Bank's Public Expenditure and Financial Accountability (PEFA) assessment of Ghana highlights deficiencies in procurement planning, monitoring, and institutional capacity, especially within decentralized government entities (World Bank, 2020). Although the Government of Ghana introduced the Ghana Electronic Procurement System (GHANEPS) in 2019 to digitize procurement and address these systemic challenges, implementation at the MMDA level remains inconsistent due to infrastructural constraints, limited technical skills, resistance to change, and low supplier participation. While prior studies have examined e-procurement adoption and implementation in Ghana, they largely overlook how specific e-procurement practices influence sustainable supply chain performance outcomes, including efficiency, transparency, and accountability, within decentralized institutions. This gap limits policy effectiveness and practical improvements in public procurement.

This study, therefore, investigates how e-procurement practices influence sustainable supply chain performance within Ghana's MMDAs, providing context-specific evidence to inform policy and strengthen sustainable governance.

The main objective of this study is to investigate the impact of e-procurement practices on the supply chain performance of Metropolitan, Municipal, and District Assemblies (MMDAs).

There is no universally accepted definition of e-procurement, reflecting its diverse applications across sectors and contexts. For the purposes of this study, e-procurement is defined as an online procurement system encompassing electronic planning, electronic resourcing, electronic negotiation, and electronic evaluation (Bahambari & Kelidbari, 2015). However, broader definitions, such as that of Croom and Brandon-Jones (2005), conceptualise e-procurement as the use of internet-based systems to execute multiple procurement activities, including sourcing, ordering, and payment. This variation in definitions reveals a lack of conceptual consensus in the literature, which creates challenges in comparing findings across studies and limits the development of a unified theoretical framework.

Similarly, supply chain performance is conceptualised differently across studies. While some scholars emphasise tangible outcomes such as cost reduction and quality improvement (Presutti, 2003), others focus on intangible dimensions such as flexibility, responsiveness, and resource utilisation (Eng, 2004; Pattanayak & Punyatoya, 2020). This divergence suggests that supply chain performance is multidimensional, yet many empirical studies adopt narrow measurement approaches, often prioritising cost efficiency over broader sustainability outcomes. As a result, the relationship between e-procurement and holistic supply chain performance remains insufficiently explored.

E-procurement practices, including e-sourcing, e-tendering, e-design, e-evaluation, and e-information, are widely associated with improvements in procurement efficiency and effectiveness (Presutti, 2003; Tatsis et al., 2006). For example, e-sourcing is reported to reduce procurement costs and cycle times significantly by enabling access to a wider supplier base (Ombat, 2015). However, this positive view is not universal. Some studies argue that the benefits of e-sourcing are contingent on organisational readiness, supplier capability, and the level of system integration, suggesting that technological adoption alone does not guarantee improved performance (Bialas et al., 2016). This highlights an ongoing debate between technology-driven and capability-driven perspectives in the literature.

E-tendering is commonly linked to increased transparency and accountability due to its ability to standardise procurement processes and reduce human discretion (Chen et al., 2004). Nevertheless, other scholars point out that strict system protocols may reduce flexibility and potentially exclude smaller suppliers who lack the technical capacity to participate effectively.

This creates a tension between efficiency and inclusiveness, particularly in developing country contexts where digital divides persist.

The role of e-design in procurement also presents mixed findings. While it is argued that electronic specification development enhances collaboration and reduces delays (Chang et al., 2013), critics suggest that it may introduce coordination challenges and require advanced technical expertise that many public sector organisations do not possess. This indicates that the effectiveness of e-design is highly context-dependent.

E-evaluation and e-information are generally viewed as tools for improving decision-making and coordination through enhanced data availability and real-time communication (Madzimore et al., 2020; Wu et al., 2014). However, their success depends on the quality of data, system interoperability, and user competence. In environments with weak data governance and limited technical capacity, these systems may fail to deliver expected benefits or even create new risks related to data inaccuracies and security concerns.

Overall, while the literature largely supports the positive impact of e-procurement on supply chain performance, it also reveals important contradictions and limitations. Many studies assume a direct and uniform relationship, yet evidence suggests that outcomes vary significantly depending on contextual factors such as infrastructure, institutional capacity, and user adoption. Furthermore, most existing research focuses on private sector organisations or central government institutions, with limited attention given to decentralised public entities. This creates a significant gap, particularly in the context of developing countries such as Ghana, where Metropolitan, Municipal, and District Assemblies (MMDAs) operate under unique constraints that may influence the effectiveness of e-procurement practices.

DiMaggio and Powell's three pillars of isomorphism each manifest distinctly in Ghana's decentralised governance structure. Coercive pressures are perhaps most visible: the Public Procurement Act (Act 663, as amended by Act 914) legally mandates procurement procedures, and the Ghana Public Procurement Authority (PPA) sits above MMDAs as a regulatory body with oversight powers. When the government's digitalization agenda including the Ghana Digital Transformation Policy filters down to district assemblies, compliance is not optional. MMDAs that fail to align risk audit sanctions, withheld disbursements from the District Assembly Common Fund (DACF), and reputational damage with the central government.

Normative pressures operate through the professional communities that staff MMDAs. Procurement officers trained under PPA certification programmes carry shared standards into their assemblies. When peers in neighboring districts adopt e-procurement, professional norms shift what was once innovation becomes expected practice. This is reinforced by donor conditionalities from bodies like the World Bank and USAID, which tie governance support to digitalization benchmarks.

Mimetic pressures are particularly relevant given the uncertainty MMDAs face. When districts like Kumasi Metropolitan Assembly or Accra Metropolitan Assembly are perceived to have successfully implemented e-procurement systems, smaller and less-resourced assemblies imitate them not because they have conducted cost-benefit analyses, but because imitation feels like a safe response to ambiguity about what "good governance" looks like.

A critical MMDA-specific nuance is that these pressures do not arrive with sufficient capacity support. Unlike central government ministries, most MMDAs operate with skeleton ICT infrastructure, intermittent internet connectivity, and staff who rotate frequently through postings, creating an institutional pressure without the institutional capacity to respond.

Davis's TAM works well here because individual officers, not just the organizations, are the locus of adoption behaviour. In MMDAs, perceived usefulness is shaped by whether frontline procurement staff genuinely believe the system will reduce the manual workload of processing tender documents, improve transparency in supplier selection (a persistent accountability challenge in district procurement), and generate audit trails that protect them professionally. If staff perceive e-procurement as a tool that serves the assembly's accountability goals rather than simply adding complexity to their workflow, adoption motivation rises.

Perceived ease of use is acutely constrained in the MMDA context by several local variables. Many district assemblies employ procurement assistants and storeroom officers who have limited digital literacy a legacy of recruitment patterns that prioritised procurement knowledge over ICT skills. Interface design that assumes broadband connectivity or a consistent power supply will feel difficult even to motivated users. Moreover, the multilingual environment of many MMDAs (where English-only systems face resistance in communities where Twi, Dagbani, or Ewe dominate administrative discourse) introduces a subtle but real usability barrier.

TAM also helps explain why coercive compliance (doing it because the PPA says so) diverges from genuine adoption (doing it because it works). An MMDA that installs the system to satisfy an audit may still see staff routing actual procurement decisions through parallel manual channels, a phenomenon sometimes called "shadow procurement" in public sector digitalization literature. TAM's behavioral intention construct helps locate this gap.

The integration is not merely additive. Institutional pressures determine whether e-procurement is introduced at all; TAM determines whether it is actually used. In MMDAs, you can have strong coercive pressure (the system is mandated) but low perceived ease of use (staff can't navigate it), producing surface compliance without operational change. Conversely, where normative professional standards align with high perceived usefulness, adoption can proceed even ahead of formal mandates.

2. Materials and methods

This study employed a quantitative research approach because it is well-suited to this study, as the core research objective is measuring the relationship between e-procurement practices and supply chain performance, which requires numerical comparison across a large number of geographically dispersed units, using a questionnaire developed through Google Forms. Also, MMDAs vary significantly in size, resource endowment, and digital capacity, and quantitative methods allow those variations to be captured systematically rather than through impressionistic observation. The questionnaire was divided into five sections to capture the necessary data. Section A collected background information on the respondents, while Section B consisted of Likert-scale questions designed to assess e-procurement practices. Section C focused on questions related to supply chain performance, with specific portions aimed at analyzing the study's key variables.

The study identified two main categories of variables: independent and dependent variables. Each variable was measured using appropriate instruments to capture relevant dimensions for analysis. The independent variable in this study was e-procurement, which was broken down into five components: e-sourcing, e-tendering, e-design, e-evaluation, and e-information. The dependent variable was supply chain performance.

Yamane's formula $n = N / (1 + Ne^2)$ at a 5% margin of error produced a sample size of 140 from a population of approximately 261 MMDAs in Ghana. The aforementioned formula can be expressed as follows: $n = N / [(1 + N(e)^2)]$, where n represents the sample size, N represents the population size, and e denotes the margin of error set at 5%. By substituting N with the population size of 216 and e with the value of 0.05, the computed sample size for the study was determined to be 140 MMDA's.

The sampled assemblies were selected using stratified sampling based on administrative regions to ensure geographic representation. Within each selected MMDA, one procurement professional was chosen as the key respondent. This approach was adopted because procurement officers are directly responsible for procurement planning, tendering processes, and supplier management within the assemblies. As a result, they possess the most relevant knowledge regarding e-procurement practices and supply chain performance. However, the decision to survey one respondent per MMDA is economical but introduces a key informant risk: if the single respondent is not the principal procurement officer, or if they lack full visibility of the assembly's e-procurement practices, measurement error accumulates.

Although a single respondent cannot represent all organizational perspectives, procurement officers provide informed responses due to their operational responsibility in procurement management. This key informant approach is commonly used in public procurement studies where specialized knowledge is required. A questionnaire was distributed to one respondent per MMDA. The collected data were analyzed using the Statistical Package for Social Sciences (SPSS).

Both descriptive and inferential statistics were employed to present and analyze the results. Descriptive statistics were used to summarize demographic data, while inferential statistics allowed for drawing conclusions beyond the immediate sample. Techniques such as t-tests, ANOVA, ANCOVA, correlation, regression, factor analysis, and nonparametric tests were used to analyze the relationships among the study's variables (Cooksey & Cooksey, 2020). In this study, inferential statistics were primarily used to examine the relationships between e-procurement practices and supply chain performance.

3. Results

The study focused on MMDAs in Ghana, with 128 out of 140 MMDAs responding, yielding a 91.4% response rate. This response rate is considered excellent and representative of the target population. It aligns with the guidelines provided by Mugenda and Mugenda (2003), which suggest that a response rate of 50% is adequate for analysis, 60% is acceptable, and a rate of 70% or higher is exceptional. The collected data were analyzed using SPSS version 21.

Descriptive statistics were used to summarize and describe the study variables. They provided simple, clear summaries that facilitated the analysis of respondents' views on e-procurement practices and supply chain performance in detail.

Table 1 presents the descriptive statistics that highlight the central tendency results for the e-procurement practices implemented by the organization. The identified e-procurement practices are ranked in descending order based on their mean scores, from the highest to the lowest. According to Table 1, the most commonly practiced e-procurement function among the MMDAs is Electronic Sourcing (E-Sourcing), which had the highest mean score of 3.760. This indicates that the majority of respondents from the MMDAs agreed that their organizations most frequently utilize E-Sourcing compared to other e-procurement practices cases.

Table 1: E-Procurement Practices in the Organizations

E-Procurement Practice	Min.	Max.	Mean	Std. Dev.	Rank
E-Sourcing	1.00	5.00	3.760	0.971	1
E-Tendering	1.00	5.00	3.718	1.114	2
E-Information	1.00	5.00	3.677	1.043	3
E-Design	1.00	5.00	3.544	0.884	4
E-Evaluation	1.00	5.00	3.492	0.989	5

Source: Field Study (2024)

Table 2: Model Summary

Model	R	R ²	Adjusted R ²	Std Error of Estimate	p-value
1	.723 ^a	.523	.519	.71071	.000 ^b

Source: Field Study (2024)

a. Predictor: (Constant), E-Procurement Practices

b. Dependent Variable: Supply Chain performance

The table above presents the regression model summary for the relationship between electronic procurement practices and supply chain performance. The R-squared value of 0.523 indicates that 52.3% of the variation in supply chain performance is explained by variations in e-procurement practices. This suggests that approximately 52.3% of the variance in supply chain performance can be attributed to changes in e-procurement practices ($R^2 = 0.523$). Additionally, the p-value is significant ($p < 0.001$), indicating that the observed relationship between e-procurement practices and supply chain performance is statistically meaningful and not due to chance.

The results suggest that higher levels of e-procurement implementation are associated with improved supply chain performance. This implies that organizations with lower implementation of e-procurement practices are likely to experience lower performance in their supply chains. Conversely, organizations that implement e-procurement practices more extensively are likely to see better supply chain performance.

Table 3: Coefficient of variation coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
	(Constant)	1.001	.265		3.785	.000
1	E-Procurement Practices	.830	.071	.723	11.745	.000

Source: Field Study (2024)

a. Dependent Variable: Supply Chain Performance

b. Dependent Variable:

Table 3 shows the co-efficient of variation for the effects of Electronic Procurement Practices on performance of supply chain is presented in this section. Per the table, on average, increasing e-procurement by 1-unit results in a 0.830 increase in supply chain performance. The model is also significant as $p < 0.01$.

The study achieved a response rate of 91.4 percent, with 128 valid responses from the 140 sampled MMDAs. This high response rate provides reliable representation of the study population.

Descriptive analysis revealed that e-sourcing recorded the highest mean score among the examined practices, followed by e-tendering and e-information sharing. E-design and e-evaluation recorded comparatively lower mean scores, indicating that these practices are less developed within many assemblies.

Regression analysis showed a strong positive relationship between e-procurement practices and supply chain performance. The results indicate that e-procurement practices explain 52.3 percent of the variation in supply chain performance. This suggests that improvements in digital procurement systems significantly enhance procurement efficiency, transparency, and coordination within the public sector.

4. Discussion

The objective of this study was to assess the effects of e-procurement practices on supply chain performance. The results indicate that e-procurement practices have a positive and significant impact, explaining 52.3% of the variations in supply chain performance. A one-unit increase in e-procurement practices led to a significant 0.830 increase in supply chain performance, with p-values below 1%, confirming the robustness of the findings.

These results align with prior research demonstrating that digital procurement enhances organizational efficiency, transparency, and governance outcomes (Mojaki, Tuyikeze, & Ndlovu, 2024; Salifu et al., 2023; Panya & Awuor, 2023). Similar conclusions were reached by Waithaka et al. (2021) and Madzimure et al. (2020), who reported that e-procurement improves supply chain efficiency and organizational performance. Earlier studies by Stephens and Valverde (2013), Ionescu (2013), and Barbieri & Zaroni (2005) also support these findings, highlighting that e-procurement reduces process delays and enhances productivity.

However, some differences emerged. Not all respondents fully endorsed all e-procurement practices, with certain components scoring lower on mean values. Practices such as electronic supplier evaluation or automated contract

management recorded lower adoption, reflecting challenges like limited ICT infrastructure, low staff digital competence, and resistance to change. This indicates that while e-procurement has high potential, practical outcomes depend on institutional support, training, and infrastructure development.

From a sustainability perspective, e-procurement facilitates efficient resource use, reduced paper waste, and improved data transparency. Yet, the findings underscore that technology alone is insufficient; successful adoption requires continuous capacity building, supportive regulations, and active managerial commitment. These nuances highlight areas for targeted intervention to maximize the benefits of digital procurement in MMDAs.

The differential mean scores across the five e-procurement components are among the most practically significant findings in this study, yet they risk being obscured by the aggregate regression result. Disaggregating them surfaces a more nuanced picture of where digitalization is taking hold in MMDAs and where it is stalling.

E-tendering and e-sourcing consistently attracting higher mean scores is consistent with the pattern found by Panya and Awuor (2023) in Kenyan county governments, where tendering-stage digitalization advanced earliest because it is the dimension most directly mandated by procurement law and most visible to oversight bodies. The PPA's online portal for tender publication provides a ready infrastructure for e-tendering, lowering the implementation barrier relative to more complex components. This mirrors Concha et al.'s (2012) observation that Latin American public agencies achieved greatest digital penetration at the tendering interface because it required the least internal process redesign.

E-design's low mean score reflects a structural feature of district-level procurement: many MMDA contracts involve infrastructure works (roads, school buildings, boreholes) where design specifications have traditionally been developed by the Department of Urban Roads or Ghana Education Service rather than the assembly itself. Where design authority is fragmented across central and local institutions, digital design integration is difficult to implement at the MMDA level alone. Stephens and Valverde (2013) noted similar fragmentation effects in Spanish public procurement, where inter-agency digital integration lagged significantly behind single-agency e-procurement functions.

5. Conclusion

This study examined the impact of e-procurement practices on supply chain performance in MMDAs. The introduction of e-procurement practices such as e-design, e-sourcing, e-tendering, e-evaluation, and e-information has enabled organizations to set purchasing requirements online, identify potential suppliers via the internet, request tenders and quotations globally, collect and distribute procurement information internally and externally, procure products online, and assess suppliers and transactions digitally. These practices have had a positive and significant impact on supply chain performance.

This study also concludes that e-procurement practices significantly enhance both operational and sustainability dimensions of supply chain performance in Ghana's MMDAs. Institutional and user-level factors jointly determine adoption success. Policymakers should therefore view e-procurement not only as a technological upgrade but as a strategic governance reform aimed at sustainable service delivery and accountability.

However, the study also identified challenges associated with implementing e-procurement, including lack of employee competency, inadequate legal frameworks, insufficient technological infrastructure, and concerns over the security of procurement transaction data.

The study concluded that e-procurement adoption has significantly improved supply chain performance by reducing costs, improving time efficiency in the procurement process, lowering administrative costs, eliminating order transfer errors, and reducing lead times across the supply chain.

Based on the findings, the study recommends that management should take a proactive role in the implementation of e-procurement practices to improve supply chain performance. The relationship between e-procurement practices and supply chain performance is significant, and the adoption of these practices can reduce supply chain risks, enhance responsiveness, improve order fulfillment ratios, and ultimately lead to better supply chain performance.

Managers should prioritize understanding and implementing e-procurement systems, as they are essential in reducing uncertainty in supply chain functions and improving overall efficiency. Furthermore, the adoption of e-procurement systems can reduce procurement costs by eliminating postal procedures, minimizing time spent on tender processing, cutting printing and storage costs, and enabling convenient access to tenders, quotations, and requests anytime and anywhere.

The study also highlighted that e-procurement ensures greater integrity, authentication, and non-repudiation, which are crucial in securing procurement processes. Therefore, it is recommended that organizations incorporate electronic procurement systems to reduce human errors, minimize paperwork, lower costs, and improve the timeliness of order processing.

This study focused on the effects of e-procurement on supply chain performance in MMDAs. Future research could examine similar practices in other organizations across Ghana to determine whether similar results are observed, providing a broader comparison and enhancing the generalizability of the findings.

Moreover, similar studies should be conducted across various economic sectors in Ghana to compare findings and offer a more comprehensive understanding of e-procurement's impact. As the results of this study may not be easily transferable

to other industries, future research could explore the impact of e-procurement on supply chain performance in different industries or countries to provide more comparative insights.

References

- Bahambari, R. T., & Kelidbari, H. R. (2015). The effect of electronic procurement on the performance of car parts supply chain companies. *Biosciences Biotechnology Research Asia*, 12(3), 2757–2762. <https://doi.org/10.13005/bbra/1958>
- Barbieri, P., & Zanoni, A. (2005). The e-procurement experience in Italian universities. *Journal of Public Procurement*, 5(3), 323–343.
- Bashuna, A. (2013). Factors affecting effective management of the procurement function at Nakuru North Sub-County. *International journal of business & management*, 1(7), 262–291.
- Bialas, C., Manthou, V., & Stefanou, C. (2016). Benefits and Barriers of E-Sourcing and E-Purchasing in the Healthcare Sector: A Case Study (Automated). IGI Global.
- Cao, Z., Huo, B., Li, Y., & Zhao, X. (2015). The impact of organizational culture on supply chain integration: a contingency and configuration approach. *Supply Chain Management: An International Journal*, 20(1), 24–41.
- Chang, Y. T., Chen, H., Cheng, R. K. J., & Chi, W. (2013). The impact of leadership and change management strategy on organizational culture and individual readiness for change during a merger. *British Journal of Management*, 24(S1), S109–S128.
- Chen, I. J., Paulraj, A., & Lado, A. A. (2004). Strategic purchasing, supply management, and firm performance. *Journal of operations management*, 22(5), 505–523.
- Concha, G., Astudillo, H., Porrua, M., & Pimenta, C. (2012). E-Government procurement observatory, maturity model and early measurements. *Government Information Quarterly*, 29, S43–S50.
- Cooksey, R., & Cooksey, R. (2020). Descriptive and inferential statistics. *Illustrating Statistical Procedures: Finding Meaning in Quantitative Data*, 61–139. https://doi.org/10.1007/978-981-15-2537-7_4
- Croom, S., & Brandon-Jones, A. (2005). Key issues in e-procurement implementation and operation in the UK Public Sector. *Journal of Public Procurement*, 5(3), 367–387.
- Eng, T. Y. (2004). The role of e-marketplaces in supply chain management. *Industrial Marketing Management*, 33(2), 97–105.
- Fishenden, J., & Thompson, M. (2013). Digital government, open architecture, and innovation: why public sector IT will never be the same again. *Journal of public administration research and theory*, 23(4), 977–1004.
- Ionescu, L. (2013). The impact that e-government can have on reducing corruption and enhancing transparency. *Economics, Management, and Financial Markets*, 8(2), 210–215.
- Koorn, M., & Mueller, C. (2001). e-Procurement and Online Marketplaces, In Compact Amsterdam, The Netherlands.
- Madzimore, J., Munyaka, J. B., & Mhizha, A. (2020). E-procurement practices and supply chain performance of state enterprises in Zimbabwe. *International Journal of Supply Chain Management*, 9(1), 639–645.
- Mojaki, L. M., Tuyikeze, T., & Ndlovu, N. K. (2024). A digital procurement framework for South African public sector: A content analysis approach. *South African Journal of Information Management*, 26(1), a1871. <https://doi.org/10.4102/sajim.v26i1.1871>
- Mugenda, O., & Mugenda, A. (2003). *Research Methods; “Qualitative and quantitative Approaches.”* Acts Press.
- Muhia, D. W., & Afande, F. O. (2015). Adoption of e-procurement strategy and procurement performance in state corporations in Kenya (A case of Kenya Revenue Authority). *Industrial Engineering Letters*, 5(6), 1–24.
- Ofori, D., & Fuseini, O. I. (2019). Electronic government procurement adoption in Ghana: Critical success factors. *Methodology*, 2020.
- Ombat, K. O. (2015). The effect of e-procurement on supply chain performance in private sector organisations in Kenya. Panya, K. O., & Awuor, E. (2023). Public procurement reforms in Africa: Challenges, constraints and improvement opportunities. *The Strategic Journal of Business & Change Management*, 10(2), 1435–1456. <https://www.strategicjournals.com/index.php/journal/article/view/2676>
- Panya, K. O., & Awuor, E. (2023). Public procurement reforms in Africa: Challenges, constraints and improvement opportunities. *The Strategic Journal of Business & Change Management*, 10(2), 1435–1456. <https://www.strategicjournals.com/index.php/journal/article/view/2676>
- Pattanayak, D., & Punyatoya, P. (2020). Effect of supply chain technology internalization and e-procurement on supply chain performance. *Business Process Management Journal*, 26(6), 1425–1442. <https://doi.org/10.1108/BPMJ-04-2019-0150>
- Presutti Jr, W. D. (2003). Supply management and e-procurement: creating value added in the supply chain. *Industrial marketing management*, 32(3), 219–226.
- Public Procurement Authority. (2022). Annual report 2021/2022. Public Procurement Authority, Ghana.
- Raja, J. Z., Bourne, D., Goffin, K., Çakkol, M., & Martinez, V. (2013). Achieving customer satisfaction through integrated products and services: An exploratory study. *Journal of Product Innovation Management*, 30(6), 1128–1144.

- Salifu, Z. N., Nangpiire, C., Dawdi, A.-A., & Yussif, F. (2023). Assessing the extent of electronic procurement adoption challenges in the public sector of Ghana. *International Journal of Economics and Financial Issues*, 13(2), 72-78. <https://doi.org/10.32479/ijefi.14131>
- Stephens, J., & Valverde, R. (2013). Security of e-procurement transactions in supply chain reengineering. *Computer and Information Science*, 6(3).
- Tatsis, V., Mena, C., Van Wassenhove, L. N., & Whicker, L. (2006). E-procurement in the European food and drink industry: Practices, technology and analysis. *International Journal of Operations & Production Management*, 26(9), 968-989. <https://doi.org/10.1108/01443570610682836>
- Waithaka, R. K., & Kimani, J. G. (2021). Effect of e-procurement practices on supply chain performance. *Global Journal of Purchasing and Procurement Management*, 1(1), 32-42.
- Waithaka, S. T., Kimani, P. W., & Kariuki, J. K. (2021). Effect of e-procurement practices on supply chain performance of selected county governments in Kenya. *International Journal of Supply Chain Management*, 6(1), 65-76.
- World Bank. (2020). Ghana: Public expenditure and financial accountability (PEFA) assessment 2020. World Bank Group. <https://openknowledge.worldbank.org>
- Wu, L., Chuang, C. H., & Hsu, C. H. (2014). Information sharing and collaborative behaviors in enabling supply chain performance: A social exchange perspective. *International Journal of Production Economics*, 148, 122-132.
- Wu, Z., & Pagell, M. (2011). Balancing priorities: Decision-making in sustainable supply chain management. *Journal of operations management*, 29(6), 577-590.



Copyright retained by the author(s). JOMRA is licensed under a Creative Commons Attribution-NonCommercial 4.0 International License.