

# **LEVERAGING ELECTRONIC PROCUREMENT FROM IMPROVED SUPPLY CHAIN COLLABORATION: THE CASE OF TANZANIA REVENUE AUTHORITY, TANZANIA**

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## ABSTRACT

In recent years, the adoption of digital technologies has transformed public sector procurement systems across the globe, with e-procurement emerging as a critical tool for enhancing transparency, efficiency, and collaboration within supply chains. In Tanzania, public institutions have increasingly embraced e-procurement systems to address longstanding procurement challenges and improve service delivery. Understanding how these systems influence supply chain collaboration is essential for optimizing their effectiveness and ensuring sustainable institutional performance. This study investigates the impact of electronic procurement (e-procurement) on supply chain collaboration within Tanzania's public sector, with a specific focus on the Tanzania Revenue Authority (TRA), Morogoro branch. Employing a cross-sectional research design, data were collected using questionnaires, interviews, and documentary reviews, involving 60 respondents for the survey and 10 for interviews. Analytical methods included

descriptive and inferential statistics. Key findings reveal that e-procurement enhances supply chain collaboration by improving transparency, communication, and efficiency. Specific benefits include time savings, streamlined procurement processes, and quality service delivery. A significant positive relationship was established between e-procurement and supply chain collaboration, with factors such as training and capacity building playing pivotal roles. The study concludes that effective e-procurement implementation fosters improved collaboration and operational efficiency. Recommendations include targeted in-service training, recruitment of skilled personnel, and robust system integration to maximize the benefits of e-procurement in public institutions.

**Key words:** Supply Chain, Electronic Procurement, Supply Chain Collaboration, Government Institution.

## INTRODUCTION

The growing integration of digital technologies into procurement processes has significantly transformed supply chain collaboration in both public and private sectors globally. Electronic procurement (e-procurement) is widely recognized as a vital tool for streamlining procurement activities, enhancing transparency, and fostering better coordination among supply chain partners (UNACTAD, 2018). Unlike traditional, manual systems, e-procurement leverages digital platforms to automate and optimize purchasing processes, enabling organizations to achieve greater efficiency, cost savings, and improved decision-making (Siddiqui *et al.*, 2022; Albinkalil, 2021). Studies highlight its role in addressing inefficiencies commonly found in paper-based systems such as manipulations, delays, and poor record-keeping by providing real-

time visibility, improving communication, and reducing lead times (Asian Development Bank, 2020; Chebet & Kihara, 2022).

Beyond automation, e-procurement supports the integration of advanced technologies such as blockchain, artificial intelligence, and electronic data interchange (EDI), which further enhance accountability, trust, and sustainability in procurement operations (Ghadge *et al.*, 2020; Panahifar *et al.*, 2018). Globally, organizations using these systems report improvements in supplier relationships, coordination, and decision-making. However, despite its transformative potential, the implementation of e-procurement within public sector organizations, especially in developing countries, remains constrained by technical, financial, and operational challenges.

In Tanzania, legislative reforms including the Public Procurement Act of 2011 and its amendments in 2023 facilitated the adoption of e-procurement systems such as TANePS and NeST (Mushi & Nsimbila, 2022). These reforms were designed to modernize procurement processes and align them with international best practices. Yet, despite such initiatives, utilization of e-procurement within government institutions remains limited. Barriers include weak technological infrastructure, cybersecurity concerns, inadequate training, financial constraints, and low digital literacy among suppliers (Silversther, 2020; Malekia, 2018). Consequently, government agencies often fail to realize the full potential of e-procurement in fostering effective supply chain collaboration.

Scholars conceptualize e-procurement as involving processes such as e-sourcing, e-negotiation, and e-evaluation, which, when effectively applied, strengthen collaboration between buyers and suppliers by improving transparency, reducing transaction costs, and shortening procurement cycles (Pattanayak *et al.*, 2019; Patrucco *et al.*, 2019). Nevertheless, adoption outcomes vary, influenced by organizational size, top management commitment, perceived system advantages, and user involvement (Afolabi *et al.*, 2022; Ernest, 2022; Shatta *et al.*, 2020). At the same time, barriers such as employee incompetence, limited infrastructure, and data security issues persist (Rowell *et al.*, 2023; Hamma-Adama & Ahmad, 2021).

Despite growing scholarly attention, much of the existing literature emphasizes e-procurement's effect on performance, adoption dynamics, and technology evolution, while giving limited attention to its role in enhancing collaboration within the public sector. For instance, studies that highlight trust and information sharing as enablers of collaboration (Panahifar *et al.*, 2018) are often situated in private-sector contexts, overlooking the unique regulatory and bureaucratic environments of government institutions. In Tanzania, this knowledge gap is further compounded by challenges such as supplier misalignment with system requirements, low stakeholder engagement, and the absence of longitudinal insights into how e-procurement influences collaboration over time (Chebet & Kihara, 2022). Against this backdrop, there is a pressing need to examine how e-procurement systems shape supply chain collaboration within public sector organizations, particularly under the context of the Tanzania Revenue Authority (TRA) in Morogoro.

## **Theoretical and Conceptual Underpinnings**

This study adopted the Resource-Based View (RBV) Theory, Transaction Cost Economics (TCE) Theory, and Value Chain Theory to provide a comprehensive understanding of how electronic procurement (e-procurement) influences supply chain collaboration at the Tanzania Revenue Authority (TRA). The integration of these theories was necessary because e-procurement affects organizational performance from multiple dimensions, including internal resource utilization, transaction efficiency, and value creation across supply chain activities.

### **Resource-Based View (RBV) Theory**

The study adopted the Resource-Based View Theory by Barney *et al.*, (2007) to explain the influence of internal organizational resources on supply chain collaboration. This theory emphasizes that an organization's ability to enhance efficiency and performance largely depends on its access to and utilization of valuable resources, which include physical, human, financial, and technological assets. In the context of electronic procurement, the theory provides a relevant framework for understanding how technological resources can create productive opportunities and strengthen collaborative efforts within the supply chain. According to Dubey *et al.*, (2018), e-procurement enhances relational resources such as trust, communication, and shared expertise, which are critical for fostering supply chain collaboration. The study by Hitt *et al.*, (2016) argue that organizations with strong internal capabilities can optimize these resources to create value across their supply chains. E-procurement systems facilitate this optimization by enabling seamless information sharing and process integration, reducing inefficiencies and enhancing the agility of supply chain operations. For example, a robust e-procurement platform can centralize procurement data, allowing stakeholders to make informed decisions in real-time, thereby improving transparency and trust. The RBV also emphasizes that the successful implementation of e-procurement depends on an organization's ability to align its technological investments with strategic goals, ensuring that scarce resources are effectively utilized. Despite its relevance in explaining how internal organizational resources contribute to supply chain collaboration, the RBV mainly focuses on internal organizational resources and capabilities while paying limited attention to external transactional relationships and coordination costs between organizations. Therefore, the study adopted the Transaction Cost Theory which provides a better explanation of how formal systems such as e-procurement help reduce opportunism and improve accountability through standardized procedures and monitoring mechanisms.

### **Transaction Cost Economics (TCE) Theory**

The study employed Transaction Cost Economics (TCE) Theory, as developed by Williamson (1975, 1985), to examine how electronic procurement (e-procurement) influences supply chain collaboration. TCE focuses on minimizing the costs associated with transactions between buyers and suppliers such as those incurred during supplier search, contract negotiation, monitoring, and dispute resolution. In the context of e-procurement, this theory provides a framework for understanding how digital platforms reduce transaction costs by automating routine tasks, standardizing procurement procedures, and enhancing information flow. These efficiencies contribute to more transparent, timely, and collaborative relationships across the supply chain. By reducing information asymmetry and enabling real-time communication, e-

procurement systems lower coordination costs and minimize risks of opportunistic behavior. This is further supported by features such as electronic auditing, compliance tracking, and automated reporting, which strengthen governance and accountability mechanisms. The study by Ghadge *et al.*, (2020) affirm that digital procurement platforms improve coordination by reducing delays and enhancing communication, thereby supporting the TCE proposition that organizations adopt technologies that help minimize transactional inefficiencies and promote long-term, collaborative supply chain partnerships. Despite its relevance in explaining how e-procurement reduces transactional inefficiencies, Transaction Cost Economics (TCE) primarily focuses on cost minimization and efficiency in buyer–supplier transactions while giving limited attention to value creation across the supply chain. Therefore, the study adopted the Value Chain Theory to provide a more comprehensive understanding of how e-procurement enhances value creation, strengthens collaboration, improves operational integration, and contributes to overall organizational performance within public sector supply chains.

### **Value Chain Theory**

The study also drew on the Value Chain Theory developed by Porter (1985), which analyzes how organizations create value through a series of interconnected activities. According to the theory, value is added at each stage of the production and supply chain process, from inbound logistics to operations, marketing, and after-sales services. In the context of electronic procurement, the Value Chain Theory provides a framework for understanding how digital tools can enhance efficiency, reduce costs, and improve collaboration across various stages of the supply chain by optimizing the flow of information and resources. Porter’s Value Chain Theory underscores the importance of optimizing value-adding activities to achieve competitive advantage. E-procurement aligns with this theory by streamlining procurement processes, enhancing supplier relationships, and reducing operational inefficiencies (Pearcy *et al.*, 2008). By automating functions such as tendering, sourcing, and invoicing, e-procurement systems improve supply chain visibility and enable more strategic decision-making. For instance, integrated e-procurement platforms allow organizations to monitor supplier performance, track delivery schedules, and manage inventory levels in real-time. These capabilities not only enhance operational efficiency but also foster collaboration by ensuring that all supply chain partners are aligned toward common objectives. Furthermore, the theory emphasizes that e-procurement can drive innovation by encouraging suppliers to adopt best practices and technologies, thereby creating value for end customers.

## **RESEARCH MATERIALS AND METHODS**

This study employed a cross-sectional research design to assess the impact of electronic procurement (e-procurement) on supply chain collaboration within the Tanzania Revenue Authority (TRA) in Morogoro. This design was chosen for its ability to capture data from a diverse group of respondents at a single point in time, enabling an efficient exploration of the relationships between e-procurement adoption and supply chain collaboration. The study’s approach allowed for both quantitative and qualitative data collection to provide a holistic understanding of the research problem.

The study targeted TRA employees, suppliers, and stakeholders directly involved in procurement processes. Using systematic random sampling, 60 respondents were selected to complete structured questionnaires, which collected quantitative data on e-procurement usage, factors influencing the successful implementation of e-procurement, impact of e-procurement system implementation in supply chain collaborations, and integration between e-procurement system and supply chain collaboration. Additionally, purposive sampling was employed to identify 10 key informants, including procurement officers and IT specialists, for semi-structured interviews. This dual sampling strategy ensured the inclusion of both general trends and expert perspectives to enrich the study's findings.

Primary data were collected through questionnaires and interviews, while secondary data were obtained from TRA documents, procurement policies, and legislative reports. The questionnaires captured standardized data for statistical analysis, while interviews provided qualitative insights into e-procurement's integration and impact on collaboration. The quantitative data were analyzed by employing descriptive statistics with the help of SPSS software version 20 to examine relationships among the variables, while, thematic analysis was used to analyze the qualitative data.

Ethical considerations were central to this study. Participants were informed about the study's objectives and their rights, with informed consent obtained prior to data collection. Confidentiality was maintained by anonymizing responses, and participation was entirely voluntary. Ethical approval was obtained from relevant authorities, ensuring the study adhered to established ethical standards. These measures ensured that the research process was conducted with integrity, promoting trust and transparency among respondents.

## **RESEARCH RESULTS**

The study investigated the impact of electronic procurement on supply chain collaboration at the Tanzania Revenue Authority in Morogoro. The findings presented in Figure 1 indicate that the majority of respondents consistently used the e-procurement system in procurement activities, while others reported frequent and very frequent use of the system. The results are presented in figure 1.

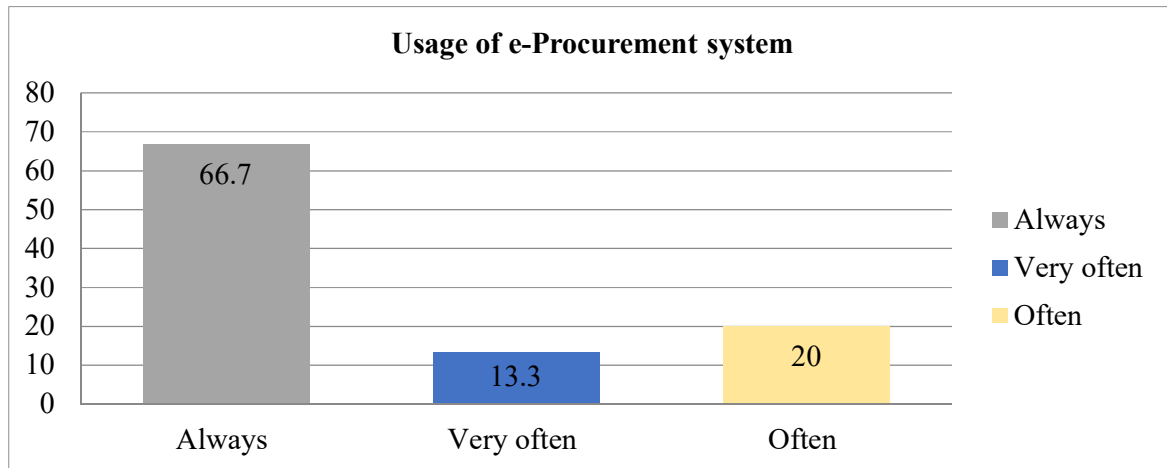


Figure 1. Usage of e-Procurement system

Source: Field data, 2026

Furthermore, the study assessed the factors influencing the successful implementation of e-procurement systems. The findings presented in Table 1 indicate that successful implementation is largely influenced by factors such as top management support, availability of adequate ICT infrastructures, user training and capacity building, supplier readiness and engagement, as well as compliance with legal and regulatory frameworks. These factors are essential in enhancing system adoption, operational efficiency, and effective utilization of e-procurement systems within organizations. The detailed results are presented in Table 1.

Table 1: Factors Influencing Successful Implementation of E-Procurement in Public Entities

Factor	Frequency	Percent
Top management support	55	92
Adequate ICT infrastructures	58	97
User training and capacity building	50	83
Supplier redness and engagement	53	88
Legal and regulatory framework	58	97

Source (Field 2026) \*Multiple response

Furthermore, the study examined the effect of e-procurement implementation on supply chain collaboration. The findings presented in Table 2 indicate that the implementation of e-procurement significantly influences supply chain collaboration through improved information sharing, enhanced communication among supply chain partners, strengthened supplier relationships, reduced procurement and operational costs, joint decision-making, and improved compliance and risk management. These outcomes demonstrate that e-procurement systems play a vital role in promoting coordination, transparency, and efficiency within supply chain operations. The detailed results are presented in Table 2.

**Table 2: Impact of E-Procurement Implementation in Supply Chain Collaboration**

<b>Indicator</b>	<b>Frequency</b>	<b>Percent</b>
Improved information sharing	57	95
Enhanced communication	58	97
Strengthened supplier relationship	54	90
Cost reduction	55	92
Jointly decision making	58	97
Improved compliance and risk management	50	83

*Source (Field 2026) \*Multiple response*

The study further examined the integration factors linking e-procurement systems with supply chain collaboration practices. The findings presented in Table 3 reveal that several critical factors influence the successful integration of e-procurement and collaborative supply chain activities. These factors include clear communication channels, leadership support and commitment, training and capacity building, availability of reliable technological infrastructure, data security and confidentiality, supplier relationship management, and compliance with legal and regulatory frameworks. These factors facilitate effective coordination, information sharing, trust, and operational efficiency among supply chain partners. The detailed results are presented in Table 3.

**Table 3: Integration Between E-Procurement System and Supply Chain Collaboration Practices**

<b>Statement</b>	<b>Agree (F)</b>	<b>Disagree (F)</b>
Clear communication channel	51	9
Leadership support and commitment	38	22
Training and capacity building	58	2
Technology infrastructure	30	30
Data security and confidentiality	34	26
Supplier relationship management	40	20
Legal and regulatory framework compliance	39	21

*Source (field, 2026)*

## **RESEARCH DISCUSSION**

The findings presented in Figure 1 indicate that the majority of respondents consistently used the e-procurement system in procurement activities, with 66.7% reporting that they always used the system, 20% indicating that they often used it, and 13.3% reporting very frequent use. These findings suggest a high level of adoption and acceptance of e-procurement practices within the Tanzania Revenue Authority. The regular use of the system implies that employees

are increasingly relying on digital procurement platforms to perform procurement functions, which may contribute to improved efficiency, transparency, and coordination in procurement operations. The findings further indicate that the organization has made significant progress toward digital transformation in procurement management, although continuous technical support and capacity building remain important to sustain effective utilization of the system. The study findings revealed that successful implementation of e-procurement systems is influenced by a combination of technological, organizational, and institutional factors. Specifically, factors such as top management support, adequate ICT infrastructure, user training and capacity building, supplier readiness and engagement, as well as supportive legal and regulatory frameworks were identified as critical determinants of effective e-procurement implementation within organizations.

The findings revealed that 92% of respondents identified top management support as a key factor influencing successful implementation of e-procurement systems. This implies that organizational leadership plays a significant role in providing strategic direction, financial resources, policy support, and institutional commitment necessary for successful implementation of digital procurement initiatives. Management support also enhances employee motivation and facilitates acceptance of technological change within organizations. These findings are consistent with the Resource-Based View (RBV) Theory by Jay Barney and Clark (2007), which emphasizes that organizational resources and managerial capabilities contribute significantly to operational efficiency and performance improvement. Similar findings were reported by Omwono and Mayanja (2020), who observed that leadership commitment positively influences procurement system adoption and implementation effectiveness.

One key informant further noted that;

*“Active involvement of senior leadership strengthens organizational commitment and enhances successful implementation of e-procurement initiatives. The implication of this finding is that organizations should strengthen leadership involvement and strategic oversight to ensure sustainability of e-procurement systems”.*

The study further established that 97% of respondents considered adequate ICT infrastructure as a critical factor influencing successful implementation of e-procurement systems. This indicates that reliable internet connectivity, computer systems, software applications, and technical support services are essential for ensuring uninterrupted electronic procurement operations. Strong ICT infrastructure improves system accessibility, procurement efficiency, communication, and reliability of procurement processes. These findings are consistent with Afolabi *et al.*, (2022), who found that technological readiness is fundamental for effective implementation of e-procurement systems in public institutions.

One informant emphasized that;

*“Regular system maintenance and continuous investment in ICT infrastructure are necessary to minimize operational interruptions and improve system performance. The implication of this finding is that organizations should invest adequately in ICT*

*infrastructure and technical support to strengthen effectiveness and sustainability of e-procurement systems”.*

The findings also showed that 83% of respondents identified user training and capacity building as important factors influencing e-procurement implementation. This suggests that employees and procurement stakeholders require adequate technical knowledge and practical skills to effectively operate electronic procurement systems. Training improves user competency, enhances confidence in system utilization, and reduces resistance to technological change. These findings support Omwono and Mayanja (2020), who observed that training and capacity building improve procurement efficiency and overall procurement performance. This implies that organizations should continuously provide training programs, technical support, and awareness initiatives to strengthen users' ability to effectively utilize e-procurement systems. Similarly, the study findings revealed that 88% of respondents viewed supplier readiness and engagement as significant factors influencing successful implementation of e-procurement systems. This implies that suppliers must possess adequate technological capability, digital literacy, and willingness to participate in electronic procurement processes. Supplier engagement enhances information sharing, procurement responsiveness, and collaboration between buyers and suppliers. These findings are supported by Rutatola *et al.*, (2024), who found that supplier participation positively influences utilization of the National e-Procurement System of Tanzania (NeST).

The study also established that 97% of respondents considered legal and regulatory frameworks as essential for successful implementation of e-procurement systems. Effective procurement laws, regulations, and compliance mechanisms provide operational guidelines that enhance transparency, accountability, fairness, and standardization of procurement processes. These findings imply that supportive legal frameworks increase stakeholder confidence in electronic procurement systems and minimize procurement irregularities. The findings are consistent with Mushi and Nsimbila (2022), who argued that procurement reforms and supportive regulations facilitate successful digital transformation in public procurement systems.

Furthermore, the results presented in Table 2 indicate that e-procurement systems positively contribute to supply chain collaboration through improved information sharing, enhanced communication, strengthened supplier relationships, cost reduction, joint decision-making, and improved compliance and risk management.

The findings revealed that 95% of respondents agreed that e-procurement systems improve information sharing among supply chain partners. This implies that electronic procurement platforms facilitate timely exchange of procurement information, tender details, supplier data, and transaction records between buyers and suppliers. Improved information sharing enhances transparency, reduces information asymmetry, and supports informed decision-making within supply chain operations. These findings support the Transaction Cost Economics (TCE) Theory developed by Oliver Williamson (1975, 1985), which explains that digital systems reduce transaction inefficiencies and coordination costs among trading partners. Similar

findings were reported by Masudin *et al.*, (2021), who observed that e-procurement systems enhance visibility and information flow within supply chains.

The study further established that 97% of respondents considered enhanced communication as a major contribution of e-procurement systems toward supply chain collaboration. This indicates that electronic procurement platforms facilitate faster, more reliable, and real-time communication between procurement entities and suppliers. Improved communication enables timely responses to procurement requirements, minimizes misunderstandings, and strengthens coordination among supply chain participants. These findings are consistent with Punyatoya (2019), who argued that e-procurement systems improve communication efficiency and operational coordination within procurement networks.

The findings also showed that 90% of respondents agreed that e-procurement systems strengthen supplier relationships. This suggests that digital procurement systems create a more transparent, fair, and accessible procurement environment that promotes trust and long-term partnerships between buyers and suppliers. E-procurement systems also facilitate supplier engagement through online supplier registration, electronic tender participation, and performance monitoring. These findings support Panahifar *et al.*, (2018), who found that collaborative digital procurement practices improve trust and relationship management among supply chain partners.

The study further revealed that 92% of respondents identified cost reduction as a significant outcome of e-procurement implementation. This implies that automation of procurement activities reduces administrative expenses, paperwork costs, procurement delays, and operational inefficiencies. Electronic procurement systems also minimize physical meetings and manual processing costs, thereby improving overall procurement efficiency. These findings are consistent with Transaction Cost Economics Theory, which argues that organizations adopt digital systems to minimize operational and transaction costs (Williamson, 1985). Similar findings were reported by Masudin *et al.*, (2021), who observed that e-procurement systems significantly reduce procurement and transaction costs within supply chains.

The findings further established that 97% of respondents believed that e-procurement systems promote joint decision-making among supply chain partners. This suggests that electronic procurement platforms support collaborative planning, coordinated procurement decisions, and shared access to procurement information between buyers and suppliers. Joint decision-making enhances supply chain integration, improves procurement planning accuracy, and strengthens problem-solving capabilities among stakeholders. These findings align with Patrucco *et al.*, (2019), who argued that digital procurement systems improve collaborative governance and coordination among procurement stakeholders.

The study also found that 83% of respondents agreed that e-procurement systems improve compliance and risk management within supply chains. This indicates that electronic procurement systems enhance adherence to procurement regulations, improve audit trails, and strengthen monitoring of procurement activities. Digital procurement platforms also reduce

opportunities for procurement irregularities, fraud, and corruption by increasing transparency and accountability in procurement transactions. These findings are consistent with Hamma-Adama and Ahmad (2021), who found that e-procurement systems strengthen procurement governance and risk control mechanisms.

The results presented in Table 3 indicate that training and capacity building (58%) together with clear communication channels (51%) are among the most important factors influencing integration between e-procurement systems and supply chain collaboration practices. These findings imply that employees, procurement officers, and suppliers require adequate technical skills and effective communication mechanisms to facilitate information sharing, coordination, and efficient utilization of e-procurement systems. Training enhances user competency and system acceptance, while effective communication strengthens transparency and collaboration among supply chain stakeholders. These findings are consistent with the World Bank (2020), which emphasized that training and capacity building are essential for sustainable implementation of e-procurement systems.

The findings further revealed that supplier relationship management together with leadership support and commitment are important organizational factors influencing integration between e-procurement systems and supply chain collaboration practices. Supplier relationship management enhances trust, cooperation, and long-term partnerships between procurement entities and suppliers, while leadership support provides strategic direction, policy support, and organizational commitment necessary for successful implementation of e-procurement initiatives. These findings suggest that effective collaboration within supply chains depends on both stakeholder engagement and management commitment toward digital transformation. The implication of these findings is that organizations should strengthen supplier engagement strategies and enhance managerial support to improve coordination and successful implementation of collaborative procurement practices.

Furthermore, the study established that data security and confidentiality (40%), legal and regulatory framework compliance (39%), and technology infrastructure (30%) are important institutional and technological factors affecting integration between e-procurement systems and supply chain collaboration practices. Concerns regarding cybersecurity, system reliability, internet connectivity, and compliance with procurement regulations indicate that operational and technological challenges still affect effective implementation of e-procurement systems within public institutions. These findings are consistent with Assey (2021), who noted that investment in ICT infrastructure is necessary for improving procurement performance and supply chain management. The findings implies that organizations should strengthen cybersecurity measures, improve ICT infrastructure, and ensure compliance with procurement regulations to enhance system reliability, stakeholder confidence, and effective supply chain collaboration

## **Conclusion**

The findings of this study conclude that the Tanzania Revenue Authority has achieved a considerable level of e-procurement adoption, as evidenced by the regular use of e-procurement

systems among the majority of respondents. This demonstrates that the institution is increasingly embracing digital procurement practices and is strategically positioned to enhance supply chain integration, operational automation, and data-driven decision-making. The study further concludes that e-procurement systems significantly contribute to improved supply chain collaboration through enhanced communication, effective information sharing, strengthened supplier relationships, reduced procurement costs, collaborative decision-making, and improved compliance and risk management. Therefore, e-procurement serves as a strategic mechanism for improving coordination, transparency, efficiency, and service delivery within procurement and supply chain operations.

The study also concludes that successful implementation and integration of e-procurement systems depend on a combination of organizational, technological, and institutional factors. Specifically, top management support, adequate ICT infrastructure, user training and capacity building, supplier readiness and engagement, and supportive legal and regulatory frameworks were identified as critical enablers of effective e-procurement implementation. Training and capacity building emerged as particularly important in enhancing user competency, reducing operational errors, and increasing confidence in system utilization among both employees and suppliers. Similarly, supplier engagement and relationship management were found to strengthen collaboration and promote effective participation in electronic procurement processes. These findings imply that sustainable implementation of e-procurement systems requires continuous stakeholder involvement, management commitment, and investment in human resource development.

Despite the positive contribution of e-procurement systems, the study further concludes that several operational and technological challenges continue to affect effective implementation and integration of e-procurement practices at TRA. Concerns regarding inadequate ICT infrastructure, unreliable internet connectivity, system performance, and data security indicate the existence of technological gaps that may hinder realization of the full benefits of e-procurement systems. In addition, inconsistent leadership support and limited stakeholder engagement may affect organizational commitment toward successful implementation of digital procurement initiatives. The findings therefore suggest that TRA should strengthen investment in ICT infrastructure, cybersecurity systems, technical support services, and continuous system upgrades to improve reliability, security, and operational efficiency of e-procurement systems.

The study concludes that effective implementation of e-procurement systems requires a holistic and integrated approach that simultaneously addresses technological readiness, organizational capability, supplier participation, leadership commitment, and regulatory compliance. Maintaining clear, supportive, and up-to-date procurement laws and regulations remains essential for ensuring accountability, transparency, fairness, and alignment with emerging technological developments. Therefore, TRA and other public institutions should adopt comprehensive strategies that promote continuous training, stakeholder collaboration, technological improvement, and institutional support to maximize the contribution of e-

procurement systems toward effective supply chain collaboration and public procurement performance.

### **Theoretical Implications**

This study contributes to theoretical understanding by integrating the Resource-Based View (RBV), Transaction Cost Economics (TCE), and Value Chain Theory to explain how e-procurement enhances supply chain collaboration. The findings extend RBV by demonstrating that e-procurement systems function not only as technological innovations but also as strategic organizational resources that strengthen capabilities such as communication, coordination, information sharing, and trust among supply chain partners. In addition, the study supports TCE by showing that e-procurement systems reduce transaction costs, enhance transparency, and minimize opportunistic behavior, thereby promoting stronger and more sustainable collaborative relationships within supply chains. The study further contributes to Value Chain Theory by illustrating that e-procurement improves value creation through process integration, efficient decision-making, cost reduction, and enhanced coordination across procurement and supply chain activities. The findings also reveal that contextual factors such as ICT infrastructure, leadership support, legal and regulatory frameworks, and user competency significantly influence the effectiveness of e-procurement systems. This suggests that classical theories should be contextualized to reflect the practical realities and institutional conditions of developing countries.

Moreover, the study addresses an important gap in the existing literature by providing empirical evidence from the public sector, where bureaucratic procedures, regulatory compliance, and institutional structures influence supply chain collaboration differently compared to the private sector. The findings further demonstrate that successful implementation of e-procurement depends on the alignment between technological systems and organizational capabilities, indicating that technology adoption alone cannot guarantee success without adequate training, stakeholder support, and institutional commitment. Therefore, by combining RBV, TCE, and Value Chain Theory, the study provides a comprehensive theoretical framework that explains how organizational resources, transaction cost reduction, and value-adding procurement activities collectively contribute to improved supply chain collaboration. The study also provides a foundation for future research on digital transformation and e-procurement implementation within public procurement systems, particularly in developing economies

### **Practical Implications**

This study provides practical insights for improving e-procurement implementation and enhancing supply chain collaboration in public institutions such as TRA. The findings emphasize the importance of continuous training and capacity building for staff and suppliers to ensure effective system use and minimize errors. They also highlight the need for strong ICT infrastructure, including reliable internet, updated systems, and secure data management, to support smooth e-procurement operations.

In addition, leadership commitment is crucial in driving successful adoption through resource allocation, strategic direction, and promoting a digital culture within the organization. Supplier

engagement is equally important, requiring institutions to support and motivate suppliers to actively participate in e-procurement systems to improve coordination and collaboration.

The study further underscores the role of a supportive legal and regulatory framework in ensuring transparency, accountability, and compliance, as well as the need to strengthen cybersecurity measures to build trust in the system. Overall, the findings suggest that a holistic approach integrating technology, people, and organizational processes is essential for maximizing the benefits of e-procurement in improving efficiency, reducing costs, and strengthening supply chain collaboration.

### **Ethical Considerations**

This study strictly adhered to ethical research principles to ensure integrity, transparency, and respect for participants throughout the research process. Informed consent was obtained from all respondents after clearly explaining the purpose, procedures, and significance of the study, and participation was entirely voluntary with the right to withdraw at any stage without consequences. The study ensured confidentiality and anonymity by not recording personal identifiers and by securely handling all collected data, which were used strictly for academic purposes. Furthermore, the research avoided any form of harm, coercion, or bias by conducting data collection in a professional and respectful manner, allowing participants to express their views freely. Ethical approval and necessary permissions were obtained from relevant authorities prior to data collection, ensuring compliance with institutional guidelines. Overall, these measures enhanced the credibility, reliability, and ethical integrity of the study while maintaining trust between the researcher and participants.

### **Ethical Statement**

This study was conducted in full compliance with institutional and academic ethical standards governing research involving human participants. Ethical clearance and necessary permissions were obtained from relevant authorities prior to data collection, and the research process adhered to principles of integrity, transparency, and respect for participants. All respondents provided informed consent after being briefed on the purpose and procedures of the study, and their participation was voluntary. The researcher ensured confidentiality, anonymity, and secure handling of data, and takes full responsibility for the accuracy and ethical conduct of the study.

### **Declaration of AI Use**

During the preparation of this work, the author used AI-based tools to assist in preliminary editing, structuring, and improving language clarity. After using these tools, the author carefully reviewed, revised, and validated all content. The author takes full responsibility for the accuracy, originality, and integrity of the final manuscript.

### **Credit Authorship Contribution Statement**

William Mwalimu: Writing original draft, review & editing, Conceptualization, Methodology, Investigation, Data curation, Formal analysis, Visualization, Project administration.

### **Declaration of Competing Interest**

The author declares that there are no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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### **REFERENCES**

- Albinkalil, A. M. (2021). *Impact of E-procurement on Supply Chain Performance*. In European, Asian, Middle Eastern, North African Conference on Management & Information Systems. Springer, Cham.
- Asian Development Bank (2020). *E-government procurement handbook*. Mandaluyong City, Philippines: Asian Development Bank, 2013.
- Basheer, M., Siam, M., Awn, A., & Hassan, S. (2019). *Exploring the role of TQM and supply chain practices for firm supply performance in the presence of information technology capabilities and supply chain technology adoption: A case of textile firms in Pakistan*. *Uncertain Supply Chain Management*, 7(2)
- Barney, J., & Clark, D. (2007). *Resource-Based Theory: Creating and Sustaining Competitive Advantage*. Oxford University Press. <http://ebookcentral.proquest.com/lib/helsinki/books/detail.action?docID=415721>.
- Barngetuny, D. C., & Kimutai, G. (2015). Effects of e-procurement on supply chain management performance in Elgeyo-Marakwet County. *International Academic Journal of Procurement and Supply Chain Management*, 1(5), 99-120.
- Callist, J (2019). *Challenges Associated with the implementation of e-procurement system: A case of Berkeley Electrical Ltd*. Mzumbe University. Unpublished dissertation.
- Chang, Hsin-Hsin & Tsai, Yao-Chuan & Hsu, Che-Hao. (2013). *E-procurement and supply chain performance*. *Supply Chain Management: An International Journal*. 18. 10.1108/13598541311293168.
- Chebet, J. and Kihara, A. (2022). *Influence of E-Procurement on Procurement Performance in Manufacturing Firms in Nairobi County*. *International Journal of Social Sciences Management and Entrepreneurship (IJSSME)*, 6(1), 104-114.
- Chen, L., Zhao, X., Tang, O., Price, L., Zhang, S., & Zhu, W. (2017). *Supply chain collaboration for sustainability: A literature review and future research agenda*. *Journal of Cleaner Production*, 142
- Chegugu, N. R., & Yusuf, K. G. (2017). *Effect of electronic procurement practices on*

- organizational performance in public hospitals in the county government of Uasin Gishu, Kenya.* International Academic Journal of Procurement and Supply Chain Management, 2(3), 16–32.
- Chirchir, E. K., Ngeno, V., & Chepkwony, J. (2015). *Relationship between e-procurement adoption and supply chain management practices in tea firms.* International Journal of Managerial Studies and Research, 3(11), 25-36.
- Desmond B.P (2022). *The Effects of E-Procurement Practices on Supply Chain Performance: The Moderating Role of Supplier Integration.*
- Dubey, R., Bryde, D. J., & Fynes, B. (2018). *Supply chain collaboration: A review of the literature and a research agenda.* International Journal of Operations & Production Management, 38 (2).
- Ghadge, A., Kara, M., Moradlou, H., & Goswami, M. (2020). *The Impact of Industry 4.0 Implementation on Supply Chain.* Journal of Manufacturing Technology Management, 669-686.
- Giner, A. H., Alberto, A. A., Guillermo, C.R., & Cuauhtemoc, S. R. (2011). *Improving E-Procurement in Supply Chain Through Web Technologies: The HYDRA Approach,* Supply Chain Management - New Perspectives, Prof. Sanda Renko (Ed.), ISBN: 978-953-307- 633
- Harelimana, J.B. (2018). *The impact of E-Procurement on the performance of public institutions in Rwanda.* Glob. J. Manage. Bus. Res. 18(2).
- Hitt, M. A., Ireland, R. D., & Hoskisson, R. E. (2016). *Strategic Management: Concepts and Cases.* Cengage Learning.
- Idrees, Muhammad & Abbas, Mehdi & Ali, Sehrish & Khan, Ayesha. (2022). *Impact of e-procurement on procurement practices and performance efficiency.* A structural equation modeling approach
- Kibona, J (2022). *Challenges Affecting Tanzania National Electronic Procurement System Effective Implementation in Tanzania: A case of Mbeya University of Science and Technology.*
- Kingori, M. (2019). *The Effect of E-Procurement on Supply Chain Management at Teachers' Service Commission.* International Journal of Social Sciences and Entrepreneurship.
- Kumar, N., & Ganguly, K. K. (2021). *External diffusion of B2B e-procurement and firm financial performance: Role of information transparency and supply chain coordination.* Journal of Enterprise Information Management, 34(4), 1037-1060.
- Maagi, B., & Mwakalobo, A. (2023). *Practitioners' Perception of the Effect of E-Procurement Practices on Time Saving in Public Procurement in Tanzania.* Open Access Library Journal, 10(5), 1-18.
- Madzimure, J, Mafini, C., & Dhurup, M. (2020). *E-procurement, supplier integration and supply chain performance in small and medium enterprises in South Africa.* South African Journal of Business Management, 51(1)
- Malekia, D. (2018). *E-Procurement as anti-corruption tool in public procurement in Tanzania:* European Journal of Business and Management, 7(14), 28-56.
- Masudin, I., Aprilia, G. D., Nugraha, A., & Restuputri, D. P. (2021). *Impact of E-Procurement adoption on company performance: Evidence from Indonesian manufacturing industry.* Logistics, 5(1)

- Megawati, I. A. P., & Nawang, A. A. S. M. A. (2023, August). Implementation of E-Procurement and Its Impact on Supply Chain Management Performance. In International Conference Faculty of Economics and Business, Vol. 2(1), 18-23.
- Miemczyk, J., Howard, M., & Johnsen, T. E. (2016). *Dynamic development and execution of closed-loop supply chains: a natural resource-based view*. Supply Chain Management, 21(4)
- Monczka, R. M., & Handfield, R. B. (2018). Purchasing and Supply Chain Management. Cengage Learning.
- Mushi, G. O., & Nsimbila, P. M. (2022). Determinants of Electronic Procurement System Adoption in Tanzania. African Journal of Applied Research, 8(1), 309-323.
- Nandankar, S., & Sachan, A. (2020). *Electronic Procurement Adoption, Usage and Performance: A Literature Review*. Journal of Science and Technology Policy Management, 11(4).
- Obunde, S. (2016). *Effect of E-Procurement on Supply Chain Performance of County Governments in Kenya*. Maseno University.
- Odero, M. A., & Ndolo, J. (2019). *Influence of managerial commitment on e-procurement adoption in Kakamega County*. The Strategic Journal of Business & Change Management, 6(2), 2161-2175.
- Panahifar, F., Byrne, P. J., Salam, M. A., & Heavey, C. (2018). *Supply chain collaboration and firm's performance: The critical role of information sharing and trust*. Journal of Enterprise Information Management.
- Porter, M. E. (1985). *Competitive Advantage: Creating and Sustaining Superior Performance*. Free Press
- Powell, G. M. (2013). *Continuum of collaboration: Little steps for little feet*. SCHOLE: A Journal of Leisure Studies and Recreation Education, 28(1)
- Siddiqui A., Abbas M., Idrees M., Khan A., Minhas A., (2022). *The Effects of E-Procurement on Supply Chain Management in the Modern Era*. International Journal of Social Sciences and Entrepreneurship (IJSSE) Vol 2(2), 2790-7724
- Wagner, S. M., & Bode, C. (2018). An empirical investigation into supply chain vulnerability. Journal of Purchasing and Supply Management, 14(4), 200-207.
- Watuleke, J. (2017). E-procurement: Evolution and adoption. A review of Literature. IJRDO- Journal of Educational Research, 2(5), 50-62.
- World Bank. (2020). *10 Success Factors for Implementing E-Procurement System*. Retrieved from <https://blogs.worldbank.org/en/governance/10-success-factors-for-implementing-e-procurement-system>.