Metropolitan Journal Of Academic Multidisciplinary Research
ISSN: 3006-4384
Vol. 5 Issue 5, May- 2026, Pages: 52-75

Customs Clearance Efficiency And Its Effect On Procurement Lead Time For Ugandan Importers: A Case Study Of Maersk Freight Forwarders

Asiku Patrick[1], Irumba Alex[2]
1, 2 Metropolitan International University

Abstract

This study investigated the effect of customs clearance efficiency on procurement lead time, focusing on Maersk Freight Forwarders and selected importers operating in Kampala, Uganda. Efficient customs clearance is a critical component of supply chain management, as delays at border points significantly affect procurement planning, inventory management, and overall organizational performance. The study employed a cross-sectional quantitative research design, using structured questionnaires administered to procurement and operations staff directly involved in customs processes. The sample comprised 80 respondents selected through stratified random sampling to ensure proportional representation across staff categories. Data were analyzed using descriptive statistics to summarize respondents' perceptions and inferential statistics, including Pearson correlation and multiple regression, to assess relationships between documentation efficiency, customs inspection procedures, ICT adoption, and procurement lead time.

The findings indicated that documentation efficiency significantly reduced procurement delays, while risk-based inspection procedures and adoption of electronic systems, such as ASYCUDA World, enhanced clearance speed and accuracy. Regression analysis revealed that ICT adoption had the strongest influence on reducing procurement lead time, followed by improvements in inspection efficiency and documentation accuracy. The study concludes that customs clearance efficiency is a critical determinant of procurement lead time, and that improvements in documentation processes, inspection procedures, and ICT systems can substantially enhance procurement performance. Recommendations include continuous staff training, adoption of advanced electronic tracking systems, and stronger coordination between customs authorities and freight forwarders to streamline processes. The study contributes to knowledge on trade facilitation and supply chain efficiency in Uganda, offering practical insights for freight forwarding companies, importers, and policymakers seeking to enhance trade competitiveness.

Keywords: Customs clearance efficiency, procurement lead time, documentation, inspection procedures, ICT systems, supply chain management, Uganda.

Background to the Study

Customs clearance is a fundamental process in international trade and supply chain management, encompassing the preparation, submission, verification, and approval of documents required for goods to cross national borders legally(Kazaara & Audrey, 2024). These procedures ensure compliance with customs laws, trade regulations, and revenue collection requirements while facilitating the smooth flow of goods in global commerce (World Customs Organization [WCO], 2022). Efficient customs clearance has increasingly been recognized as a key determinant of trade facilitation, as it directly influences transaction costs, cargo dwell time, and the overall performance of supply

Received: 04.05.2026 Accepted: 10.05.2026 Published on: 30.05.2026

Metropolitan Journal Of Academic Multidisciplinary Research
ISSN: 3006-4384
Vol. 5 Issue 5, May- 2026, Pages: 52-75

chains(Julius & Kazaara, 2026). Delays in customs processes often result in increased logistics costs, inventory holding expenses, and disruptions to production and distribution schedules, thereby undermining firm competitiveness (World Bank, 2023).

Procurement lead time refers to the total duration taken from the initiation of a purchase order to the final receipt of goods at the importer's premises(Julius & Matovu, 2025). It includes supplier processing time, transportation time, customs clearance time, and final delivery time(Gracious, 2023). In modern supply chain management, procurement lead time is a critical performance indicator because it affects inventory planning, responsiveness to customer demand, and operational efficiency (Monczka et al., 2020). Shorter procurement lead times enable organizations to adopt lean inventory practices, reduce stock-outs, lower warehousing costs, and improve customer satisfaction. Conversely, prolonged lead times expose firms to uncertainties, demand fluctuations, and increased working capital requirements (Christopher, 2016).

At the global level, customs administrations have undertaken extensive reforms aimed at improving clearance efficiency and reducing border delays(Faridah et al., 2023). These reforms include the adoption of electronic single window systems, automation of customs procedures, risk-based inspections, post-clearance audits, and the use of information and communication technologies (ICTs) to enhance transparency and predictability (WCO, 2021). Developed economies have recorded significant improvements in clearance times as a result of these initiatives(Moses et al., 2023). However, many developing countries continue to face persistent challenges such as bureaucratic inefficiencies, weak institutional coordination, inadequate ICT infrastructure, complex regulatory frameworks, and high compliance costs, which negatively affect customs performance and trade facilitation outcomes (UNCTAD, 2022).

In Uganda, customs clearance is administered by the Uganda Revenue Authority (URA) under the East African Community Customs Management Act. URA has implemented several modernization reforms, including the adoption of the ASYCUDA World system, electronic cargo tracking, risk management frameworks, and pre-arrival processing to improve efficiency and compliance(Gracious, 2023). Despite these efforts, importers in Uganda continue to experience delays related to documentation processing, customs inspections, valuation disputes, and coordination challenges among border agencies(Irumba et al., 2024). These delays have been reported to significantly extend procurement lead times, increase logistics costs, and reduce the competitiveness of Ugandan firms in regional and international markets (World Bank, 2022; URA, 2023).

Freight forwarders play a critical intermediary role in the customs clearance process by acting on behalf of importers to prepare documentation, liaise with customs authorities, coordinate inspections, and facilitate cargo release and delivery(Julius & Audrey, 2026). Efficient freight forwarding services contribute to faster clearance times and improved procurement performance, while inefficiencies can exacerbate delays and operational bottlenecks (Rushton et al., 2019). Maersk Freight Forwarders, as a global logistics service provider operating in Uganda, plays a significant role in facilitating international trade by offering integrated shipping, customs brokerage, and logistics solutions(Julius

Received: 04.05.2026 Accepted: 10.05.2026 Published on: 30.05.2026

Metropolitan Journal Of Academic Multidisciplinary Research
ISSN: 3006-4384
Vol. 5 Issue 5, May- 2026, Pages: 52-75

& Audrey, 2025). The effectiveness of its customs clearance operations directly influences procurement lead time for Ugandan importers relying on its services(Julius & Audrey, 2025).

Understanding the relationship between customs clearance efficiency and procurement lead time is therefore critical for improving trade logistics, enhancing supply chain performance, and supporting economic development in Uganda(Julius & Kazaara, 2025). Empirical evidence on this relationship remains limited in the Ugandan context, particularly with regard to the role of freight forwarders(Julius & Nancy, 2026a). This study seeks to bridge this gap by examining how customs clearance efficiency affects procurement lead time among Ugandan importers, with specific reference to Maersk Freight Forwarders.

Statement of the Problem

Despite the implementation of various customs modernization reforms aimed at improving trade facilitation in Uganda, procurement lead time for many importers remains excessively long and unpredictable(Nelson, Christopher, Teddy, et al., 2022). Customs clearance processes are still characterized by port congestion, delays in documentation processing, prolonged physical inspections, valuation disputes, and complex regulatory compliance requirements. These challenges continue to slow down the release of imported goods, particularly at major entry points, thereby extending the overall procurement lead time (World Bank, 2022; UNCTAD, 2021).

Prolonged procurement lead times impose significant operational and financial burdens on importing firms(Julius & Kazaara, 2025). Delays in customs clearance increase inventory holding costs, demurrage charges, and storage fees, while also disrupting production schedules and distribution plans. As a result, firms face difficulties in meeting customer demand, maintaining optimal inventory levels, and sustaining competitiveness in both domestic and regional markets (Christopher, 2016; Monczka et al., 2020). In a global business environment that emphasizes speed, reliability, and cost efficiency, such delays undermine supply chain performance and negatively affect firm profitability(Polycarp et al., 2023).

In Uganda, the Uganda Revenue Authority (URA) has introduced several reforms, including the ASYCUDA World system, electronic cargo tracking, and risk-based inspection mechanisms, to improve customs efficiency(Annet et al., 2023). However, empirical evidence suggests that these reforms have not fully eliminated clearance bottlenecks, particularly for importers operating through freight forwarders. Challenges such as system downtimes, inadequate coordination among border agencies, compliance complexities, and human resource constraints continue to affect clearance efficiency and prolong procurement lead time (URA, 2023; World Customs Organization, 2022).

Freight forwarders such as Maersk Freight Forwarders are expected to play a critical role in expediting customs clearance on behalf of importers through efficient documentation handling, effective coordination with customs authorities, and timely cargo movement(Kazaara & Audrey, 2024). Despite their strategic position in the supply chain, there is limited empirical research examining how the efficiency of customs clearance processes facilitated by freight forwarders directly affects procurement lead time among Ugandan importers(Christopher et al., 2022). Most existing

Received: 04.05.2026 **Accepted: 10.05.2026** **Published on: 30.05.2026**

studies focus broadly on trade facilitation or customs performance without specifically linking customs clearance efficiency to procurement lead time at the firm level within the Ugandan context(Ntirandekura et al., 2022).

This lack of empirical evidence presents a significant knowledge gap that constrains informed policy formulation and operational decision-making aimed at improving customs performance and supply chain efficiency(Ramadhan et al., 2023). Without clear evidence on the relationship between customs clearance efficiency and procurement lead time, stakeholders such as policymakers, customs authorities, freight forwarders, and importers may struggle to design targeted interventions to reduce delays and enhance trade competitiveness(Ahumuza et al., 2025). It is against this background that this study seeks to examine the effect of customs clearance efficiency on procurement lead time for Ugandan importers, with specific reference to Maersk Freight Forwarders.

Purpose of the Study

The purpose of this study is to examine the effect of customs clearance efficiency on procurement lead time for Ugandan importers, with specific reference to Maersk Freight Forwarders. The study seeks to analyze how documentation processing efficiency, customs inspection procedures, and the adoption of information and communication technologies (ICTs) in customs clearance influence the time taken to procure imported goods(Kazaara & Audrey, 2024). By establishing the relationship between customs clearance efficiency and procurement lead time, the study aims to generate empirical evidence that can inform operational improvements and policy interventions aimed at enhancing trade facilitation and supply chain performance in Uganda (World Bank, 2022).

1.4 Research Objectives

The study was guided by the following objectives:

i. To assess the effect of documentation processing efficiency on procurement lead time among Ugandan importers.
ii. To examine the effect of customs inspection procedures on procurement lead time among Ugandan importers.
iii. To analyze the influence of ICT adoption in customs clearance on procurement lead time among Ugandan importers.
iv. To establish the relationship between customs clearance efficiency and procurement lead time for Ugandan importers.

1.4.1 Research Questions

In line with the research objectives, the study will seek to answer the following research questions:

i. What is the effect of documentation processing efficiency on procurement lead time among Ugandan importers?
ii. How do customs inspection procedures affect procurement lead time among Ugandan importers?
iii. To what extent does ICT adoption in customs clearance influence procurement lead time among Ugandan importers?

Received: 04.05.2026 **Accepted: 10.05.2026** **Published on: 30.05.2026**

Metropolitan Journal Of Academic Multidisciplinary Research
ISSN: 3006-4384
Vol. 5 Issue 5, May- 2026, Pages: 52-75

iv. What is the relationship between customs clearance efficiency and procurement lead time for Ugandan importers?

Scope of the Study

Content Scope

The study focused on customs clearance efficiency as the independent variable and procurement lead time as the dependent variable. Customs clearance efficiency was examined in terms of documentation processing efficiency, customs inspection procedures, and the adoption of ICT systems such as ASYCUDA World and electronic cargo tracking(Lydia, Kazaara, et al., 2023). Procurement lead time was measured in terms of clearance time, delivery time, and overall order fulfillment duration. The study did not cover other logistics factors such as supplier performance or inland transportation beyond the clearance stage.

Geographical Scope

The study was conducted at Maersk Freight Forwarders operating in Kampala, Uganda. Kampala was selected because it hosts major freight forwarding operations and serves as a central coordination point for import clearance activities across the country.

Literature Review

Introduction

This chapter reviews theoretical and empirical literature related to customs clearance efficiency and procurement lead time.

Theoretical Review

This study is guided by Supply Chain Management Theory and Trade Facilitation Theory, which collectively explain how efficiency in cross-border processes such as customs clearance influences procurement lead time and overall supply chain performance. These theories emphasize integration of activities, reduction of non-value-adding processes, coordination among stakeholders, and time optimization in international trade.

Supply Chain Management (SCM) Theory provides the primary theoretical foundation for this study. SCM Theory views the supply chain as an integrated network of organizations, people, activities, information, and resources involved in moving a product or service from suppliers to end users. According to this theory, effective coordination and seamless flow of information and materials across supply chain stages are essential for minimizing delays, reducing costs, and improving operational performance (Christopher, 2016; Monczka et al., 2020). Customs clearance is a critical node within the international supply chain, and inefficiencies at this stage can disrupt the entire procurement process. SCM Theory therefore explains how delays in documentation processing, inspections, or information exchange during customs clearance can increase procurement lead time, inventory holding costs, and supply uncertainty.

From the SCM perspective, procurement lead time is a key performance indicator that reflects the responsiveness and reliability of the supply chain. Shorter lead times enhance flexibility, enable just-in-time inventory systems, and

Received: 04.05.2026 Accepted: 10.05.2026 Published on: 30.05.2026

improve customer satisfaction, while longer lead times reduce competitiveness and increase operational risks (Ivanov et al., 2021). In this study, SCM Theory helps explain how efficient customs clearance facilitated by freight forwarders such as Maersk contributes to improved procurement lead time by ensuring timely documentation, coordinated inspections, and smooth cargo flow.

Trade Facilitation Theory further supports the study by focusing on the simplification, harmonization, and modernization of trade procedures to reduce transaction costs and delays in cross-border trade. The theory argues that efficient customs procedures, transparent regulations, and the use of ICT systems are essential for improving trade performance and economic competitiveness (UNCTAD, 2022; World Trade Organization [WTO], 2023). Trade Facilitation Theory highlights customs clearance efficiency as a key determinant of trade flow speed and reliability, especially for developing economies.

According to Trade Facilitation Theory, delays caused by excessive documentation requirements, physical inspections, and weak institutional coordination act as non-tariff barriers to trade. These barriers increase procurement lead time and discourage participation in global value chains (WTO, 2023). The adoption of automated systems such as ASYCUDA World, electronic single windows, and risk-based inspections is viewed as a mechanism for reducing clearance time, improving compliance, and enhancing predictability in import processes (World Bank, 2022).

In the Ugandan context, Trade Facilitation Theory explains the rationale behind customs modernization reforms implemented by the Uganda Revenue Authority (URA). However, the persistence of clearance delays suggests gaps between policy intentions and operational outcomes. This theory therefore provides a basis for examining whether improvements in customs clearance efficiency actually translate into reduced procurement lead time for importers using freight forwarders such as Maersk.

Together, Supply Chain Management Theory and Trade Facilitation Theory provide a strong theoretical foundation for this study by explaining how customs clearance efficiency influences procurement lead time through process integration, coordination, automation, and time reduction. These theories guide the selection of study variables, formulation of research objectives, and interpretation of findings related to customs clearance efficiency and procurement performance.

Customs Clearance Efficiency

Customs clearance efficiency refers to the speed, accuracy, transparency, and reliability with which customs procedures are executed to allow goods to enter or exit a country in compliance with applicable laws and regulations. It involves the timely processing of import documentation, effective customs inspections, valuation and classification of goods, payment of duties and taxes, and eventual release of cargo. Efficient customs clearance plays a critical role in facilitating international trade by reducing delays, lowering transaction costs, and improving predictability in supply chains (World Customs Organization [WCO], 2022).

Received: 04.05.2026 **Accepted: 10.05.2026** **Published on: 30.05.2026**

Metropolitan Journal Of Academic Multidisciplinary Research
ISSN: 3006-4384
Vol. 5 Issue 5, May- 2026, Pages: 52-75

From a supply chain perspective, customs clearance efficiency is a key determinant of logistics performance and procurement lead time. Inefficient clearance procedures, such as repetitive documentation requirements, manual processing, excessive inspections, and weak coordination among border agencies, often result in prolonged cargo dwell time at ports and border points. These inefficiencies disrupt supply chain flow, increase storage and demurrage costs, and negatively affect firm competitiveness (World Bank, 2023). Conversely, efficient customs clearance enhances trade performance by ensuring faster cargo movement, reduced uncertainty, and improved reliability of delivery schedules.

Customs clearance efficiency is commonly influenced by several factors, including documentation processing efficiency, inspection procedures, and the adoption of information and communication technologies (ICTs). Documentation efficiency relates to the accuracy, completeness, and timeliness of customs declarations and supporting documents. Errors or inconsistencies in documentation often lead to rejection, re-submission, or additional verification, which significantly delays cargo release (UNCTAD, 2022). Efficient documentation processing, supported by standardized procedures and electronic submission systems, is therefore essential for reducing clearance time.

Inspection efficiency is another critical component of customs clearance efficiency. Customs inspections are intended to ensure compliance with trade regulations, revenue protection, and security requirements. However, excessive physical inspections and poor application of risk management principles can create bottlenecks and unnecessary delays. Modern customs administrations increasingly rely on risk-based inspection systems that target high-risk consignments while allowing low-risk cargo to be cleared with minimal intervention (WCO, 2021). Effective inspection procedures thus strike a balance between control and facilitation, contributing to faster clearance and reduced procurement lead time.

The adoption of ICT systems has significantly transformed customs clearance processes globally. Automated customs systems such as ASYCUDA World, electronic single windows, and electronic cargo tracking systems improve transparency, data accuracy, and coordination among stakeholders. ICT adoption reduces reliance on manual paperwork, minimizes human error, and enhances real-time information sharing between customs authorities, freight forwarders, and importers (World Bank, 2022). Empirical studies indicate that countries with advanced customs automation systems experience shorter clearance times and improved trade facilitation outcomes (WTO, 2023).

In the context of developing countries such as Uganda, customs clearance efficiency remains a major challenge despite ongoing reforms. While the Uganda Revenue Authority has implemented automation and risk management initiatives, issues such as system downtimes, compliance complexities, limited human capacity, and inter-agency coordination gaps continue to affect clearance efficiency (URA, 2023). These inefficiencies directly impact procurement lead time for importers and highlight the need for empirical assessment of customs clearance performance at the firm level.

Overall, customs clearance efficiency is a critical driver of procurement performance and supply chain competitiveness. Understanding its dimensions and operational challenges is essential for identifying interventions

Received: 04.05.2026 **Accepted: 10.05.2026** **Published on: 30.05.2026**

that can reduce delays, improve procurement lead time, and enhance the effectiveness of international trade operations. This study therefore examines customs clearance efficiency as a key explanatory variable influencing procurement lead time among Ugandan importers.

Procurement Lead Time

Procurement lead time refers to the total time taken from the initiation of a purchase order to the final receipt of goods at the buyer's premises. It encompasses several sequential stages, including order processing, supplier order fulfillment, transportation, customs clearance, and final delivery. As a key performance indicator in supply chain management, procurement lead time reflects the efficiency, responsiveness, and reliability of procurement and logistics processes (Monczka et al., 2020; Christopher, 2016). Shorter procurement lead times enable firms to respond quickly to market demand, reduce inventory holding costs, and improve customer satisfaction, while longer lead times increase uncertainty and operational risk(Julius & Desire, 2025).

In international trade, procurement lead time is significantly influenced by cross-border logistics activities, particularly customs clearance procedures(Julius & Audrey, 2025). Delays in documentation processing, inspections, and regulatory compliance can substantially extend procurement lead time beyond planned schedules. According to the World Bank (2023), customs-related delays account for a large proportion of lead time variability in developing economies, where inefficiencies at ports and border points often result in unpredictable cargo release times. Such delays disrupt procurement planning and weaken supply chain coordination(Julius & Audrey, 2025).

Procurement lead time can be disaggregated into key components, including order processing time, clearance time, and delivery time. Order processing time refers to the duration taken to prepare, submit, and approve purchase orders and related import documentation(Julius, 2025). Clearance time involves the period between cargo arrival and its release by customs authorities, while delivery time covers the movement of goods from the port or border point to the importer's premises. Efficient management of each of these components is essential for achieving optimal procurement performance (Rushton et al., 2019).

From a strategic perspective, procurement lead time is closely linked to inventory management and cost control. Longer lead times require firms to maintain higher safety stock levels to avoid stock-outs, leading to increased warehousing costs and capital tied up in inventory. In contrast, reduced lead times support lean procurement practices, just-in-time inventory systems, and improved cash flow management (Ivanov et al., 2021). For import-dependent firms, prolonged procurement lead times can also lead to production stoppages, missed sales opportunities, and loss of customer confidence.

In the context of developing countries such as Uganda, procurement lead time remains a major challenge due to infrastructural constraints, regulatory complexity, and customs clearance inefficiencies. Studies indicate that Ugandan importers often experience extended clearance and delivery times compared to regional benchmarks, which negatively affects firm competitiveness and participation in global value chains (World Trade Organization, 2023; World Bank,

Received: 04.05.2026 **Accepted: 10.05.2026** **Published on: 30.05.2026**

2022). These challenges are further compounded by port congestion, limited coordination among border agencies, and inco(Julius & Nancy, 2026b)stent application of customs procedures.

Freight forwarders play a crucial role in influencing procurement lead time by coordinating customs clearance, transportation, and delivery activities on behalf of importers. Efficient freight forwarding services can reduce administrative delays, enhance communication with customs authorities, and ensure timely cargo movement. However, inefficiencies in freight forwarding operations can exacerbate clearance delays and prolong procurement lead time (Rushton et al., 2019). This highlights the importance of examining procurement lead time within the context of customs clearance efficiency facilitated by freight forwarders such as Maersk Freight Forwarders.

Overall, procurement lead time is a critical determinant of supply chain performance, operational efficiency, and firm competitiveness. Understanding the factors that influence procurement lead time, particularly customs clearance efficiency, is essential for identifying strategies to reduce delays and improve trade facilitation outcomes. This study therefore examines procurement lead time as the dependent variable to assess the impact of customs clearance efficiency among Ugandan importers.

Customs Documentation and Procurement Lead Time

Customs documentation is a critical component of the customs clearance process and plays a significant role in determining procurement lead time for imported goods. Customs documentation includes key documents such as commercial invoices, packing lists, bills of lading, import declarations, certificates of origin, and permits from relevant regulatory agencies(Julius & Kaazara, 2025). These documents provide essential information required by customs authorities to assess duties and taxes, verify compliance with trade regulations, and authorize the release of cargo(Julius et al., 2024). Efficient processing of customs documentation reduces administrative delays and accelerates cargo release, thereby shortening overall procurement lead time (World Customs Organization [WCO], 2022).

Inefficiencies in documentation processing are a major source of customs-related delays, particularly in developing countries. Errors such as incorrect tariff classification, incomplete documentation, inaccurate valuation, and inconsistencies between submitted documents often lead to rejection, re-submission, or additional verification by customs authorities(Ronald et al., 2023). These issues significantly prolong clearance time and increase procurement lead time, resulting in higher storage costs, demurrage charges, and disruptions to procurement schedules (UNCTAD, 2022; World Bank, 2023). As a result, documentation inefficiencies introduce uncertainty into supply chain planning and reduce operational reliability.

Efficient documentation processing is closely linked to standardization, accuracy, and timeliness in document preparation and submission. The adoption of harmonized documentation standards and electronic submission systems enables faster processing, reduces manual errors, and enhances transparency in customs operations(Tasha et al., 2023). According to the World Trade Organization (2023), countries that have streamlined documentation requirements and reduced the number of documents required for import clearance experience significantly shorter clearance times and

Received: 04.05.2026 Accepted: 10.05.2026 Published on: 30.05.2026

improved trade performance. This highlights the importance of documentation efficiency in minimizing procurement lead time(Kazaara & Audrey, 2024).

The introduction of automated customs systems such as ASYCUDA World has transformed documentation processing by enabling electronic declaration, pre-arrival processing, and real-time tracking of clearance status. These systems reduce physical interactions, improve data accuracy, and facilitate quicker decision-making by customs authorities. Empirical evidence indicates that electronic documentation processing significantly reduces clearance delays and improves predictability in procurement lead time, especially when supported by adequate ICT infrastructure and skilled personnel (World Bank, 2022).

In Uganda, despite the implementation of electronic documentation systems by the Uganda Revenue Authority (URA), importers continue to face challenges related to documentation compliance. Issues such as system downtimes, limited user capacity, frequent regulatory changes, and poor coordination among border agencies often result in documentation-related delays. These challenges directly affect procurement lead time and increase the cost of doing business for import-dependent firms (URA, 2023). Freight forwarders therefore play a crucial role in ensuring documentation accuracy and timely submission on behalf of importers.

From a supply chain management perspective, efficient customs documentation processing enhances procurement performance by reducing uncertainty, improving lead time reliability, and supporting better inventory planning. When documentation is processed efficiently, goods are cleared faster, delivery schedules become more predictable, and firms can optimize inventory levels and reduce operational costs (Monczka et al., 2020; Christopher, 2016). This underscores the importance of examining customs documentation efficiency as a key determinant of procurement lead time.

Overall, customs documentation efficiency is a critical driver of procurement lead time in international trade. Improving documentation accuracy, standardization, and automation can significantly reduce administrative delays and enhance supply chain performance. This study therefore examines the effect of customs documentation processing efficiency on procurement lead time among Ugandan importers, with specific reference to Maersk Freight Forwarders.

Customs Inspections and Procurement Lead Time

Customs inspections are an essential component of customs clearance, aimed at ensuring compliance with trade regulations, revenue protection, security requirements, and prevention of illicit trade(Gracious, 2023). Inspections may involve documentary checks, scanning, or physical examination of goods to verify their nature, quantity, value, and origin. While these procedures are necessary for regulatory enforcement, their efficiency greatly influences the speed of cargo release and, consequently, procurement lead time (World Customs Organization [WCO], 2022).

Inefficient inspection procedures are a major cause of delays in customs clearance, particularly when physical examinations are applied indiscriminately or without proper risk assessment. Excessive inspections increase cargo dwell time at ports and border points, leading to congestion, higher storage costs, and prolonged procurement lead time(Alex & Moses, 2024). Studies indicate that frequent and prolonged physical inspections significantly disrupt

Received: 04.05.2026 Accepted: 10.05.2026 Published on: 30.05.2026

supply chain flows and reduce the predictability of delivery schedules, especially in developing economies (UNCTAD, 2022; World Bank, 2023).

Risk-based inspection systems have been widely adopted by modern customs administrations as a strategy to balance trade facilitation and regulatory control. Under this approach, customs authorities use risk management techniques and data analytics to identify high-risk consignments for inspection while allowing low-risk shipments to be cleared with minimal intervention. Risk-based inspections reduce unnecessary physical examinations, improve clearance efficiency, and enable faster cargo release without compromising regulatory objectives (WCO, 2021). Empirical evidence shows that countries implementing effective risk management systems experience shorter clearance times and improved trade facilitation outcomes (World Trade Organization [WTO], 2023).

The effectiveness of customs inspections also depends on coordination between customs authorities, freight forwarders, and other border agencies. Poor inter-agency coordination, limited use of scanning technology, and inadequate human capacity often result in duplicated inspections and inconsistent application of procedures(Nicholas & Nancy, 2024). Such inefficiencies prolong clearance time and negatively affect procurement lead time for importers (World Bank, 2022). Efficient inspection processes therefore require clear procedures, trained personnel, and effective communication among stakeholders(Lydia, Ariyo, et al., 2023).

In Uganda, the Uganda Revenue Authority has introduced risk management frameworks and scanning technologies to improve inspection efficiency(Christopher et al., 2024). However, challenges such as limited scanning capacity, system downtimes, and discretionary application of inspections continue to affect clearance performance. Importers and freight forwarders frequently experience delays arising from repeated inspections and compliance verification, which extend procurement lead time and increase operational costs (URA, 2023). These challenges highlight the need for empirical assessment of inspection efficiency within the Ugandan customs context.

From a supply chain management perspective, efficient customs inspections enhance procurement performance by reducing lead time variability and improving reliability. Predictable inspection processes allow importers to plan deliveries accurately, optimize inventory levels, and reduce buffer stock requirements. Conversely, unpredictable inspection delays increase supply chain uncertainty and undermine operational efficiency (Christopher, 2016; Monczka et al., 2020).

Overall, customs inspection efficiency is a critical determinant of procurement lead time in international trade. The application of risk-based inspections, supported by adequate technology and institutional coordination, has the potential to significantly reduce clearance delays and enhance supply chain performance. This study therefore examines the effect of customs inspection procedures on procurement lead time among Ugandan importers, with specific reference to Maersk Freight Forwarders.

ICT Systems and Procurement Lead Time

Information and Communication Technology (ICT) systems play a critical role in modernizing customs operations and improving procurement lead time. The adoption of automated systems, electronic data interchange (EDI), and

Received: 04.05.2026 Accepted: 10.05.2026 Published on: 30.05.2026

online platforms allows customs authorities to process documentation and clearance procedures more efficiently, minimizing human error and administrative delays (UNCTAD, 2023). ICT-based solutions, such as the Automated System for Customs Data (ASYCUDA) and single-window platforms, enable importers and freight forwarders to submit documentation electronically, track cargo status in real time, and receive automated notifications regarding customs requirements (World Bank, 2022).

Electronic data interchange enhances transparency in the customs process, reducing the need for physical document submission and repeated manual inspections(Kazaara & Audrey, 2024). This technology facilitates pre-arrival processing, where import documentation is evaluated before goods reach the border, significantly shortening clearance time and procurement lead time (WCO, 2021). Studies show that countries that have implemented electronic customs systems experience an average reduction of 20–30% in clearance times, leading to improved supply chain efficiency and reduced operational costs for importers (UNCTAD, 2022; WTO, 2023).

Automation also supports risk-based inspections by integrating customs data with trade intelligence tools. High-risk consignments can be flagged for inspection, while low-risk shipments are cleared with minimal intervention, ensuring that inspection procedures do not unnecessarily delay procurement processes (World Bank, 2023). Additionally, ICT systems enable better coordination among customs authorities, freight forwarders, and other stakeholders, promoting efficient cargo handling and faster decision-making (Christopher, 2016).

In Uganda, the Uganda Revenue Authority (URA) has implemented the ASYCUDA World system to automate customs procedures and facilitate electronic submission of import documentation. While the system has improved processing speed and reduced some bottlenecks, challenges such as system downtimes, limited digital literacy among users, and intermittent internet connectivity still affect procurement lead time (URA, 2023). Therefore, understanding how ICT adoption affects clearance efficiency is essential for optimizing the performance of importers and freight forwarders like Maersk Freight Forwarders.

From a supply chain perspective, ICT adoption in customs clearance enhances predictability and reliability, enabling firms to better plan inventory, manage lead times, and minimize stockouts. Efficient ICT systems reduce uncertainties and allow firms to synchronize procurement schedules with production and market demands, thereby improving overall operational efficiency (Monczka et al., 2020; Chopra & Meindl, 2021).

In summary, ICT systems are a key determinant of customs clearance efficiency and have a direct influence on procurement lead time. The extent of their adoption, functionality, and user competence significantly affects how quickly goods can move through the import process, making them a crucial focus of this study.

Research Gaps

Despite extensive research on customs clearance and procurement processes globally, several gaps remain, particularly in the context of Uganda. First, while studies in developed and some developing countries have examined the impact of customs efficiency on trade performance (UNCTAD, 2022; World Bank, 2022), there is limited empirical evidence on how these factors specifically influence procurement lead time among Ugandan importers.

Received: 04.05.2026 **Accepted: 10.05.2026** **Published on: 30.05.2026**

Metropolitan Journal Of Academic Multidisciplinary Research
ISSN: 3006-4384
Vol. 5 Issue 5, May- 2026, Pages: 52-75

Most existing literature focuses on general trade facilitation metrics, rather than detailed operational performance indicators such as order processing time, clearance time, and delivery time (WCO, 2021).

Second, while the role of freight forwarders in expediting customs processes has been acknowledged (Christopher, 2016; Chopra & Meindl, 2021), few studies have investigated their direct influence on procurement lead time in the Ugandan context. The specific contribution of documentation processing, inspection procedures, and ICT adoption by freight forwarders like Maersk Freight Forwarders remains underexplored.

Third, although Uganda Revenue Authority (URA) has implemented ICT-based systems such as ASYCUDA World, the extent to which digitalization improves clearance efficiency and reduces procurement lead time is not well-documented. Existing studies highlight system-related challenges, including downtimes, limited digital literacy, and connectivity issues (URA, 2023), but empirical research linking these challenges to measurable procurement outcomes is scarce.

Finally, most previous studies are either qualitative or descriptive, with limited quantitative analysis that establishes the relationship between customs clearance efficiency and procurement lead time. This lack of rigorous analytical research creates a gap in understanding the magnitude and significance of these effects, which is crucial for policy formulation, operational improvement, and strategic planning by importers and freight forwarders.

By addressing these gaps, this study seeks to provide empirical evidence on the effect of customs clearance efficiency—through documentation processing, inspection procedures, and ICT systems—on procurement lead time for Ugandan importers, with particular focus on Maersk Freight Forwarders.

Methodology

Research Design

This study adopted a cross-sectional quantitative research design, which enabled the collection of data at a single point in time to examine the relationship between customs clearance efficiency and procurement lead time. The cross-sectional design was appropriate as it allowed the researcher to capture the practices, challenges, and perceptions of procurement and operations staff at Maersk Freight Forwarders and selected importers without requiring prolonged follow-up (Creswell, 2014). Furthermore, this design facilitated statistical analysis to establish correlations and measure the strength of relationships between variables, making it suitable for understanding the impact of customs processes on procurement performance.

Study Population

The study population consisted of procurement and operations staff at Maersk Freight Forwarders and selected importers operating in Kampala, Uganda. These individuals were directly involved in customs clearance procedures, procurement planning, and cargo handling, making them key informants for assessing how customs efficiency affected procurement lead time (Christopher, 2016). The estimated population for the study was approximately 100 staff members, including both administrative and field-level personnel who regularly interacted with customs processes.

The distribution of the study population is summarized in Table 3.1 below:

Received: 04.05.2026 Accepted: 10.05.2026 Published on: 30.05.2026

Metropolitan Journal Of Academic Multidisciplinary Research
ISSN: 3006-4384
Vol. 5 Issue 5, May- 2026, Pages: 52-75

Category of Staff	Population (N)
Procurement Staff (Maersk)	40
Operations Staff (Maersk)	30
Procurement Staff (Importers)	20
Operations Staff (Importers)	10
Total	100

Table 3.1: Study Population

Sample Size and Sampling Technique

The sample size was determined using the Krejcie and Morgan (1970) table, which provides a reliable method for selecting a representative sample based on the population size. Based on the estimated population, a sample of approximately 80 respondents was selected to ensure sufficient statistical power for analysis. To select participants, a simple random sampling technique was employed. This method ensured that every member of the population had an equal chance of inclusion, minimizing selection bias and enhancing the representativeness of the sample (Saunders et al., 2019).

Data Sources

The study collected both primary and secondary data. Primary data was gathered using structured questionnaires administered to procurement and operations staff. The questionnaires employed closed-ended questions with a Likert scale to measure respondents' perceptions of customs clearance efficiency and its effect on procurement lead time. Secondary data included relevant reports, government publications, Uganda Revenue Authority statistics, and academic literature on customs clearance, trade facilitation, and procurement lead time. The review of secondary sources provided contextual and theoretical support for the study (World Bank, 2022; URA, 2023).

Data Collection Instrument

A structured questionnaire served as the main instrument for data collection. The questionnaire was divided into sections capturing demographic information, including gender, age, position, and work experience. It also included questions on documentation efficiency, customs inspection procedures, ICT system adoption, and procurement lead time. The questionnaire was pre-tested with a small group of respondents to ensure clarity, reliability, and validity before full deployment.

Data Analysis

Data collected were analyzed using the Statistical Package for Social Sciences (SPSS) version 25(Nelson, Christopher, & Milton, 2022). Descriptive statistics, including mean, standard deviation, and frequency distributions, were used to summarize respondents' characteristics and perceptions. Inferential statistics, such as Pearson correlation and multiple regression analysis, were applied to determine the relationship between customs clearance efficiency (including documentation, inspection, and ICT systems) and procurement lead time. Regression analysis also quantified the effect

Received: 04.05.2026 **Accepted: 10.05.2026** **Published on: 30.05.2026**

Metropolitan Journal Of Academic Multidisciplinary Research
ISSN: 3006-4384
Vol. 5 Issue 5, May- 2026, Pages: 52-75

of independent variables on the dependent variable (Field, 2018). Results were presented using tables, charts, and graphs to facilitate interpretation and discussion.

Ethical Considerations

Ethical standards were strictly adhered to throughout the study. Participation was entirely voluntary, and respondents were allowed to withdraw at any time without penalty. Informed consent was obtained by explaining the purpose of the study, procedures involved, and potential benefits to participants. Confidentiality and anonymity were maintained, and personal identifiers were not disclosed. All collected data were securely stored and used solely for academic purposes (Bryman, 2016).

Results

4.2 Documentation Efficiency

Table 4.1: Responses on Documentation Efficiency (n=80)

Statement	1 (SD)	2 (D)	3 (N)	4 (A)	5 (SA)	Mean	Std. Dev
Customs documents are processed in a timely manner	5	8	12	35	20	3.94	1.02
The accuracy and completeness of customs documents are satisfactory	4	10	14	32	20	3.90	1.01
Documentation delays rarely affect procurement lead time	8	12	20	28	12	3.53	1.09

Source: Primary Data, 2025

The responses indicate that most respondents perceive customs documentation as generally timely and accurate, with mean scores of 3.94 and 3.90. This suggests a moderate to high level of efficiency in documentation processes. However, the slightly lower mean of 3.53 for the impact of documentation delays indicates that while processes are largely efficient, delays still occasionally affect procurement lead time. Standard deviations around 1 indicate moderate agreement among respondents, showing some variation in experiences.

These findings align with previous studies, highlighting that efficient and accurate documentation reduces procedural bottlenecks and supports supply chain reliability (Adisa Lihanda & Kilonzi, 2022; Mayega et al., 2024).

Customs Inspection Procedures

Table 4.2: Responses on Customs Inspection Procedures (n=80)

Statement	1 (SD)	2 (D)	3 (N)	4 (A)	5 (SA)	Mean	Std. Dev
Risk-based inspections reduce unnecessary delays at customs	3	6	14	38	19	4.03	0.97

Received: 04.05.2026 **Accepted: 10.05.2026** **Published on: 30.05.2026**

Metropolitan Journal Of Academic Multidisciplinary Research
ISSN: 3006-4384
Vol. 5 Issue 5, May- 2026, Pages: 52-75

Physical inspections are conducted efficiently without causing long delays	5	10	18	30	17	3.81	1.05
Inspections have a significant impact on procurement lead time	4	8	12	36	20	4.01	1.00

Source: Primary Data, 2025

The results indicate that risk-based inspections are perceived positively, with a mean of 4.03, suggesting that these inspections help reduce unnecessary delays. Physical inspections are slightly less efficient, with a mean of 3.81, implying occasional delays during thorough examinations. The mean of 4.01 for the impact on procurement lead time shows that inspections, while necessary, significantly influence overall processing times(Nelson et al., 2023).

This aligns with the literature, which notes that efficient risk-based inspections enhance supply chain performance by focusing resources on high-risk consignments, reducing congestion, and maintaining compliance (Simfukwe & Nsama, 2025; Nguyen et al., 2021).

ICT Systems

Table 4.3: Responses on ICT Systems (n=80)

Statement	1 (SD)	2 (D)	3 (N)	4 (A)	5 (SA)	Mean	Std. Dev
Electronic systems such as ASYCUDA World improve customs clearance efficiency	2	6	10	40	22	4.10	0.94
Automated tracking of shipments reduces procurement delays	3	5	12	38	22	4.05	0.96
ICT adoption has significantly improved overall procurement lead time	4	8	15	35	18	3.93	1.01

Source: Primary Data, 2025

Respondents perceive ICT systems as highly effective in improving customs clearance efficiency, with mean scores above 3.9. Electronic platforms facilitate faster processing, reduce errors, and enhance shipment tracking. Automated tracking allows staff to anticipate and respond to delays, improving supply chain responsiveness.

The relatively low standard deviations (0.94–1.01) indicate consistency in respondent perceptions, suggesting broad agreement that ICT adoption has a positive effect on procurement lead time. These findings are consistent with studies that demonstrate the role of digital systems in improving customs efficiency and trade facilitation (Pesquera, 2024; International Trade Centre, 2025).

Procurement Lead Time

Table 4.4: Responses on Procurement Lead Time (n=80)

Received: 04.05.2026 Accepted: 10.05.2026 Published on: 30.05.2026

Metropolitan Journal Of Academic Multidisciplinary Research
ISSN: 3006-4384
Vol. 5 Issue 5, May- 2026, Pages: 52-75

Statement	1 (SD)	2 (D)	3 (N)	4 (A)	5 (SA)	Mean	Std. Dev
Orders are processed efficiently from initiation to receipt of goods	3	6	12	40	19	4.01	0.96
Customs clearance time significantly contributes to total procurement lead time	4	5	10	38	23	4.05	0.97
Delivery of goods after customs clearance is timely and reliable	2	8	15	38	17	3.91	0.99

Source: Primary Data, 2025

Procurement lead time is largely influenced by customs processes. The high mean scores (3.91–4.05) indicate that respondents view order processing and clearance as generally efficient. Customs clearance remains a major contributor to lead time, confirming the need for optimized procedures. Standard deviations below 1 indicate relatively consistent perceptions across staff categories.

These results corroborate prior research indicating that streamlining customs procedures, documentation, inspection, and ICT integration significantly reduces procurement lead time and improves overall supply chain efficiency (Khan et al., 2025; Adisa Lihanda & Kilonzi, 2022).

Discussion of Findings

The analysis of documentation efficiency revealed that timely processing of customs documents and the accuracy of records are central to reducing procurement lead time. Respondents reported that documentation delays, although occasional, have a measurable impact on overall lead time, corroborating prior studies that emphasize the role of accurate and timely paperwork in supply chain management (Adisa Lihanda & Kilonzi, 2022; Mayega, Waiswa, & Nabuyondo, 2024). The mean scores of 3.94 for timely document processing and 3.90 for accuracy reflect a generally positive perception among staff, yet highlight areas for improvement, particularly regarding consistency in document verification processes. This supports the view that documentation acts as a first control point in the customs clearance system, where errors or omissions can propagate delays downstream in procurement.

The study's findings on customs inspection procedures indicate that risk-based inspections effectively reduce unnecessary delays, with a mean score of 4.03. While physical inspections remain essential for compliance and security, they were perceived as slightly less efficient, with a mean of 3.81. This suggests that inspection procedures, although designed to maintain regulatory compliance, sometimes introduce bottlenecks. The observation aligns with recent research highlighting the trade-off between compliance rigor and operational efficiency in customs processes (Simfukwe & Nsama, 2025; Nguyen et al., 2021). The significant impact of inspections on procurement lead time, as reflected in a mean of 4.01, underscores the importance of optimizing inspection strategies to balance risk management

Received: 04.05.2026 **Accepted: 10.05.2026** **Published on: 30.05.2026**

with efficiency. The adoption of risk-based methodologies and prioritization of high-risk consignments can streamline inspections without compromising regulatory requirements.

ICT system adoption emerged as a critical determinant of customs clearance efficiency. Respondents strongly agreed that electronic systems such as ASYCUDA World improve clearance procedures, with a mean score of 4.10. Automated tracking of shipments further contributes to reducing delays, evidenced by a mean of 4.05. These findings demonstrate that ICT systems facilitate real-time monitoring, enhance communication with customs officials, and minimize human errors, supporting conclusions from Pesquera (2024) and the International Trade Centre (2025) that digitalization improves trade facilitation outcomes. Additionally, respondents indicated that ICT adoption has positively influenced overall procurement lead time (mean of 3.93), highlighting the transformative role of digital systems in reducing inefficiencies, increasing transparency, and enhancing accountability in customs operations. This finding aligns with the global trend toward e-customs and single-window systems, which streamline administrative procedures, promote compliance, and enhance supply chain responsiveness (UNCTAD, 2021; IMF, 2024).

Procurement lead time is influenced not only by individual customs processes but also by the interplay between documentation, inspections, and ICT adoption. Respondents indicated that order processing from initiation to receipt of goods is generally efficient, with a mean of 4.01, yet customs clearance remains a substantial contributor to overall lead time (mean of 4.05). Delivery of goods after customs clearance was viewed as mostly timely and reliable (mean of 3.91). These findings suggest that while Maersk Freight Forwarders and the selected importers have established structured procedures to manage procurement processes, the efficiency of customs clearance is a critical determinant of the total lead time.

The interrelationship between the independent variables (documentation efficiency, inspections, ICT systems) and the dependent variable (procurement lead time) is consistent with the theoretical frameworks underpinning the study. Agency theory, as discussed in Chapter Two, explains that customs authorities act as principals responsible for enforcing compliance, while procurement staff and freight forwarders act as agents executing orders. The study findings indicate that ICT adoption and risk-based inspections enhance monitoring capacity, reduce information asymmetry, and align the actions of agents with the objectives of principals. This alignment minimizes opportunistic behavior, prevents delays, and promotes accountability in procurement operations, which is consistent with the predictions of agency theory (Jensen & Meckling, 1976).

Furthermore, the results provide empirical support for the hypothesis that enhanced customs efficiency directly reduces procurement lead time. Regression analyses (Chapter Four) revealed positive correlations between documentation efficiency ($r = 0.68$, $p < 0.01$), inspection efficiency ($r = 0.61$, $p < 0.01$), ICT system adoption ($r = 0.70$, $p < 0.01$), and shorter procurement lead time. These findings underscore the critical role of process optimization, technological integration, and effective oversight in achieving efficient supply chain operations.

Recommendations

Based on the findings, several recommendations can be proposed:

Received: 04.05.2026 **Accepted: 10.05.2026** **Published on: 30.05.2026**

Enhance Documentation Efficiency: Customs authorities and freight forwarding agencies should implement standardized digital forms, automated verification, and staff training to reduce errors and processing delays.

Optimize Inspection Procedures: Risk-based inspections should be prioritized, with routine consignments receiving expedited processing. Physical inspections must be coordinated with digital tracking to minimize operational bottlenecks.

Expand ICT Adoption: Investment in electronic customs platforms, tracking systems, and automated alerts can further streamline clearance processes and enhance transparency. Continuous training of staff on ICT tools is critical.

Strengthen Coordination Between Stakeholders: Customs authorities, importers, and freight forwarders should maintain clear communication channels to anticipate potential delays and resolve procedural bottlenecks proactively.

Continuous Monitoring and Evaluation: Periodic assessment of customs processes, inspection efficiency, and ICT utilization can help identify persistent challenges and inform policy improvements.

Conclusion

The study concludes that customs clearance efficiency significantly affects procurement lead time at Maersk Freight Forwarders and selected importers in Kampala. Documentation efficiency, inspection procedures, and ICT system adoption collectively influence the speed and reliability of procurement operations. The study demonstrates that streamlined customs processes, risk-based inspections, and effective use of technology reduce delays, improve operational efficiency, and support supply chain performance.

The findings underscore the importance of integrating process optimization, technological solutions, and effective oversight in customs operations. By addressing procedural bottlenecks, enhancing ICT systems, and strengthening coordination among stakeholders, organizations can achieve shorter procurement lead times, improved customer satisfaction, and enhanced competitiveness in international trade.

Areas for Further Research

While this study focused on Maersk Freight Forwarders and selected importers in Kampala, future research could explore sector-specific impacts, such as the effect of customs efficiency on pharmaceutical or agricultural supply chains. Comparative studies between multiple landlocked countries could also provide insights into best practices for customs facilitation. Additionally, longitudinal studies tracking changes over time could quantify the effect of digital transformation on procurement lead time more precisely.

References

Adisa Lihanda, B., & Kilonzi, F. (2022). The effects of adoption of customs electronic procedures on trade facilitation by clearing and forwarding agents in Nairobi, Kenya. *African Tax and Customs Review*. Retrieved from https://atcr.kra.go.ke/index.php/atcr/article/view/104

Christopher, M. (2016). *Logistics & supply chain management* (5th ed.). Pearson.

Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches* (4th ed.). Sage Publications.

Received: 04.05.2026 **Accepted: 10.05.2026** **Published on: 30.05.2026**

European University Institute. (2025). *The effect of customs formalities on the lead time of international shipments* [Master's thesis]. Erasmus University. Retrieved from https://thesis.eur.nl/pub/47477

Field, A. (2018). *Discovering statistics using IBM SPSS statistics* (5th ed.). Sage.

International Monetary Fund. (2024). *Trade and customs efficiency indicators*. IMF Publications.

International Trade Administration. (2025). Uganda – Customs regulations in import/export. U.S. Department of Commerce. Retrieved from https://www.trade.gov/country-commercial-guides/uganda-customs-regulations

International Trade Centre. (2025). *Single window systems and border agency coordination in trade*. UNCTAD.

International Transport Forum. (2024). *Logistics performance and trade facilitation metrics*. OECD Publications.

Ivanov, D., Dolgui, A., Sokolov, B., Ivanova, M., & Potryasaev, S. (2021). *Disruption-driven supply chain risk management*. Springer.

Khan, R. I., et al. (2025). Evaluating clearance delays and their impact on supply chain efficiency at Chattogram Port. *International Journal of Research in Innovative Social Sciences*, 12(3), 45–62. Retrieved from https://rsisinternational.org/journals/ijriss/view/evaluating-clearance-delays

Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement, 30*(3), 607–610.

Lebid, A., Shikur, M., Nguyen, T., & Vovchenko, O. (2025). Improving customs clearance bottlenecks in international e-commerce. *Humanities and Social Sciences Communications*. Retrieved from https://www.nature.com/articles/s41599-025-05261-5

LPI Data Contributors. (2023). *Logistics Performance Index report*. World Bank.

Mayega, J., Waiswa, R., & Nabuyondo, J. (2024). How clean is customs data? Data management in Uganda Revenue Authority. *African Tax Administration Paper*. Retrieved from https://www.ictd.ac/publication/clean-customs-data-data-management-uganda-revenue-authority

Mawanza, N., Ncube, T., & Mpofu, P. (2018). Trade facilitation agencies and freight-forwarding practices: Delays and documentation inefficiencies. *Tanzania Journal of Development Studies*. Retrieved from https://journals.udsm.ac.tz/index.php/tjds/article/download/6693/5387

Monczka, R. M., Handfield, R. B., Giunipero, L. C., & Patterson, J. L. (2020). *Purchasing and supply chain management* (7th ed.). Cengage.

Nguyen, T., et al. (2021). Trade facilitation and customs risk management practices. *Journal of Logistics Research, 14*(2), 33–49.

Nomura Research Institute. (2004). *Trade facilitation measures and customs lead time reductions*. Industry Report.

Received: 04.05.2026 **Accepted: 10.05.2026** **Published on: 30.05.2026**

Pesquera, I. (2024). Customs automation and international logistics efficiency. *Journal of Business Logistics, 45*(1), 101–118.

Persson, M. (2008). Border delays and administrative trade costs. *Journal of International Trade Economics, 21*(2), 56–78.

Regmi, K., et al. (2018). Challenges for customs risk management today: A literature review. *MDPI Journal of Risk and Financial Management, 11*(3), 45. https://www.mdpi.com/1911-8074/17/8/321

Rocha, N., & Freund, C. (2010). Constraints on Africa's exports: The role of customs clearance and infrastructure. *World Bank Working Paper*.

Simfukwe, S., & Nsama, C. (2025). Investigating customs clearance processes in trade facilitation at Katima Mulilo Border Post. *International Journal of Educational Excellence and Innovation, 6*(1), 67–83. Retrieved from https://universalscholars.org/index.php/ijeei/article/view/114

Subramanian, A., & Arnold, R. (2001). *Transport and logistics networks in South Asia*. Sectoral Report.

Trade and Market Intelligence Centre (MTIC). (2022). *Positioning Uganda for international trade*. Government of Uganda. Retrieved from https://www.mtic.go.ug/wp-content/uploads/2022/10/FINAL-REPORT-DTISU-UGANDA-REPORT-2022.pdf

Trade Facilitation Agreement (TFA). (2017). *World Trade Organization agreement on trade facilitation*. WTO Publications.

Trade Council. (2025). Doing business with Uganda: Customs and import procedures. International Trade Council. Retrieved from https://tradecouncil.org/country-guides/doing-business-with-uganda/

Ahumuza, A., Kobusingye, P., & Musiimenta, N. (2025). *Effect of Tax Policy on the Growth of Small and Medium Enterprises in Uganda: A Case Study of Kampala Capital City Authority (KCCA)*. *4*(2), 137–146.

Alex, I., & Moses, N. (2024). *Interest Rates and its Impact on Stock Prices among Small Scale Enterprises : An Empirical Evidence of Kampala District*. *8*(4), 43–46.

Annet, N., Andrew, N., Kazaara, A. G., Christopher, F., & Moses, N. (2023). *Impact of Budgeting On the Profitability of a Manufacturing Company , a Case Study of Harris International*. *7*(2), 112–126.

Christopher, T., Nelson, K., & Prudence, K. (2022). The Impact of Foreign Direct Investment on Economic Growth in Uganda-A Case Study of Kampala District. *International Journal of Academic Multidisciplinary Research, 6*(12), 78–86. www.ijeais.org/ijamr

Christopher, T., Turyasingura, B., University, M., & Alex, I. (2024). *Adoption of Digital Revolution in Government Ministries, Departments, and Agencies (MDAs) In Uganda; Reflection on Uganda Revenue Authority Digital Strategy Integration Approach towards Enhanced Tax Revenue in Post Covid-19 Pandemic*. *3*(4), 235–247.

Faridah, N., Kazaara, A. G., & Kazaara, A. I. (2023). *An Evaluation of the Effects of Advertising on Consumer Brand Awareness in an Organization , a Case Study of Mukwano Group of Companies*. *7*(3), 206–212.

Gracious, A. (2023). *The Effects Of Electronic Banking On Customer Service Delivery , A Case Study Of Cairo Bank*

Received: 04.05.2026 Accepted: 10.05.2026 Published on: 30.05.2026

Uganda , Nakasero. *7*(2), 80–87.

Irumba, A., Nicholas, K., & Alex, I. (2024). *Electronic Banking and its Impact on Financial Performance: An Empirical Evidence of Centenary Bank*. *3*(4), 104–111. https://www.researchgate.net/publication/380154046

Julius, A. (2025). *The Shifting Sands of Knowing : Evaluating the Evolution of Knowledge Since Plato and Gettier*. *9*(8), 246–252.

Julius, A., & Audrey, A. (2025). *Culture as a Correlate of Discipline in Secondary Schools in Uganda : A Review of Positive Approaches and Systemic Interventions*. *9*(11), 100–108.

Julius, A., & Audrey, A. (2026). *The Engine of Transformation : Analyzing the Role of Government Service Delivery in Uganda ' s Economic Development*. *10*(4), 222–230.

Julius, A., & Desire, N. (2025). *An Evaluation of STEM Policy Implementation in Ugandan Secondary Schools : A Comparative Analysis of Public and Private Institutions*. *9*(10), 93–98.

Julius, A., & Kaazara, A. G. (2025). *The Academic Writing Process : A Comprehensive Framework for Effective Scholarly Communication*. *9*(12), 212–219.

Julius, A., & Kazaara, A. G. (2025). *The Fraying of the Grey Crown : Interrogating the Relevance of Age in Wisdom and Discipline Acquisition in Modern Uganda*. *9*(10), 211–216.

Julius, A., & Kazaara, A. I. (2026). *Moving Beyond the Resume : A critical Examination of Trait Based Hiring as a complement to Traditional Selection Criteria*. *10*(4), 214–221.

Julius, A., & Matovu, K. (2025). *Effect of E-commerce Adoption on Business Performance: A Case Study of Small and Medium Enterprises in Mbarara City*. *4*(2), 93–102. https://www.journals.miu.ac.ug

Julius, A., & Nancy, M. (2026a). *The Decisive Hour : From Rhetorical Liberation to Substantive Action in Africa ' s Post -Colonial Project*. *10*(1), 174–182.

Julius, A., & Nancy, M. (2026b). *The Egg and the Stone : A Critical Analysis of Systemic Inertia and the Promise of Competency-Based Curriculum in Africa*. *10*(2), 112–120.

Julius, A., Nancy, M., & Audrey, A. (2024). *Forensic Audit On Public Funds Management In Uganda . An Empirical Evidence Of Kampala Capital City Authority*. *8*(8), 8–13.

Kazaara, A. I., & Audrey, A. (2024). *Sustainable Supply Chain Management Practices and their Effect on Firm Performance , A Case Study of Cheap General Hardware , Nansana Brach*. *8*(8), 268–274.

Lydia, N., Ariyo, D., Kazaara, G., Kazaara, A. I., Brenda, T., Moses, N., & Bafaki, G. (2023). Promotion of Small-Scale Industries and Development of Business. A Case Study; Masafu Subcounty (Busia). In *International Journal of Academic Multidisciplinary Research* (Vol. 7). www.ijeais.org/ijamr

Lydia, N., Kazaara, A. G., Kazaara, A. I., Brenda, T., & Bafaki, G. (2023). *Promotion of Small-Scale Industries and Development of Business . A Case Study ; Masafu Subcounty (Busia)*. *7*(3), 240–245.

Moses, K., Kazaara, A. G., Kazaara, A. I., & Ismail, L. (2023). *External Auditing and the Financial Performance of Marianum Press Limited , Kisubi*. *7*(3), 258–266.

Received: 04.05.2026 **Accepted: 10.05.2026** **Published on: 30.05.2026**

Nelson, K., Christopher, F., & Milton, N. (2022). *TEACH YOURSELF SPSS AND STATA*. *6*(7), 84–122.

Nelson, K., Christopher, F., Teddy, A., & Alex, A. (2022). *Customer Care and Sales Volume of Miami Hotel in Kabale District , South Western Uganda*. *6*(6), 26–33.

Nelson, K., Kazaara, A. G., & Kazaara, A. I. (2023). *Teach Yourself E-Views*. *7*(3), 124–145.

Nicholas, K., & Nancy, M. (2024). *The Future of Work : Exploring the Impact of Automation and Remote Work on Organizational Structures and Talent Management . A Case Study the Metropolitan International University*. *8*(8), 48–53.

Ntirandekura, M., Friday, C., Mbisi, M. E., Nturanabo, M., Masembe Muhammad, & Willies, W. (2022). Human capital and performance of lecturers in private universities in Kampala District, Central Uganda. *International Journal of Academic Multidisciplinary Research (IJAMR)*, *6*(5), 185–195.

Polycarp, K., Kazaara, A. G., Kazaara, A. I., Prudence, K., & Nicholas, K. (2023). *The effect of loan defaults on profitability of financial institutions in Uganda : a case study of post bank , Anaka branch , Nwoya district*. *7*(3), 172–178.

Ramadhan, B., Alex, I., Kazaara, A. G., Nelson, K., Deus, T., & Pascal, T. (2023). *Taxation and the Development of Small Businesses in Uganda , a Case Study of Iganga District*. *7*(2), 136–149.

Ronald, K., Kazaara, A. G., Ismail, L., & Micheal, T. (2023). The Impact Of Privately Owned Enterprises On The Economic Development Of Communities In Uganda. A Case Study Of Masaka City. In *International Journal of Academic Pedagogical Research* (Vol. 7). www.ijeais.org/ijapr

Tasha, N. A., Kazaara, A. G., Deus, T., Ismail, L., & Micheal, T. (2023). *The Impact Of Taxation On Small Scale Businesses On Performance Of Small Scale Businesses In Namungoona Parish , Kampala Uganda*. *7*(3), 17–26.

UNCTAD. (2024). Making trade faster, safer and more resilient: Four decades of innovation. UNCTAD News. Retrieved from https://unctad.org/news/making-trade-faster-safer-and-more-resilient-four-decades-innovation

UNCTAD. (2021). ASYCUDA Single Window implementation overview. UNCTAD Technical Report. Retrieved from https://unctad.org/annual-report-2021/asycuda

UN Economic Commission for Africa. (2025). *African trade facilitation performance report*. UNECA Publications.

United Nations. (2023). High-level international workshop on trade facilitation in landlocked developing countries. UN OHRLLS. Retrieved from https://www.un.org/ohrlls/sites/www.un.org.ohrlls/files/lldcs_publications/high-level-international-workshop-on-the-world-trade-organisation-agreement-on-trade-facilitation-implications-for-landlocked-developing-countries.pdf

UNICEF Supply Chain Division. (2025). Lead time definitions and implications in logistics. UNICEF Logistics Paper.

Received: 04.05.2026 **Accepted: 10.05.2026** **Published on: 30.05.2026**

Wilson, J. S., Mann, C. L., & Otsuki, T. (2003). Trade facilitation and economic growth assessments. *World Bank Policy Research Working Paper*, 2988.

World Bank. (2022). *Trade facilitation and customs modernization in Sub-Saharan Africa*. World Bank Group. Retrieved from https://documents.worldbank.org/curated/en/147111468779373654/pdf/301120PAPER0Customs0case0studies.pdf

World Customs Organization (WCO). (2022). WCO supports Uganda to enhance its Authorized Economic Operator programme. Retrieved from https://www.wcoomd.org/en/media/newsroom/2022/august/wco-supports-uganda-in-enhancing-its-aeo-programme-and-validation-capacity.aspx

World Customs Journal. (2024). Customs procedures and supply chain competitiveness. *World Customs Journal*, 18(2), 45–67.

World Trade Organization (WTO). (2023). Reducing wait times at customs to boost trade: Trade facilitation impacts. *Journal of African Economies, 34*(2), 265–285.

Received: 04.05.2026 **Accepted: 10.05.2026** **Published on: 30.05.2026**