**FACTORS INFLUENCING CUSTOMS DELAYS AT KRIBI PORT: A CASE STUDY OF CONTAINERIZED GOODS**

**ABSTRACT**

This research investigates the customs clearance procedure for containerized cargo at the Port of Kribi, Cameroon, using a quantitative explanatory approach to determine delay factors, evaluate their socio-economic consequences, and recommend policy-sensitive changes. Data collection was achieved through 359 valid responses from a stratified random sample of participants which included customs brokers, shipping lines, customs officers, import-export agents, SGS Cameroon, and port administrators which formed an 87% response rate. Descriptive results identified major delay factors which include insufficient financial resources, limited scanning equipment, red tape, poor interagency collaboration, and lack of agency cooperation. A chi-square test of independence showed a significant relationship between stakeholder group and perceived cause of delay (χ² = 84.76, df = 24, p < .001) thus confirming the research hypothesis while Cramér’s V 0.243 indicated small to moderate effect size suggesting differing perceptions across stakeholder groups. Such inefficiencies lead to increased delays in clearance time, increased demurrage costs, higher operational expenses, reduced customer satisfaction, and a decrease in the port’s competitiveness. For these issues, the study proposes full digitization of the customs and port system, enhancement of training for identified key players, and aligning customs policies to international benchmarks of trade facilitation as areas of design interventions.

**Keywords**: customs clearance, Port of Kribi, containerized goods, logistics efficiency, stakeholder coordination, quantitative research, Cameroon.

1. **INTRODUCTION**

The Kribi Deep Sea Port, located on the Gulf of Guinea in Cameroon, was inaugurated to expand the country’s maritime trade capacity and as a logistics center for Central Africa. As Cameroon's second deep-sea port, succeeding Douala, Kribi is able to serve large container vessels and cargo. Its construction aimed to relieve pressure on the Port of Douala and enable international trade with a competitive edge for Cameroon and landlocked neighboring countries like Chad and Central African Republic (Frederic, et al., 2021). A major part of international trade, including import and export, relies on containerized goods. Customs operations are critical at this port in order to lower costs associated with value-added trade, expedite goods movement in the supply chain, and improve trade efficiency (Catherine et al., 2024; Yogananthan et al., 2025).

Nevertheless, even with the port's modern physical facilities, Kribi has continually struggled and is now facing new challenges with customs delays. These inefficiencies are multi-dimensional and include chronic neglect of the infrastructure, administrative gridlocks, endemic corruption, lack of modernization in policies and frameworks, inadequate technologic implements, and anti-vigil technological frameworks (Nkot & Amougou, 2021). As noted, customs delays are a form of operational administrative inefficiency or disorganization in the form where there is too much regulation or bureaucracy, slow processing, and unproductive clearing procedures involving many fragmented institution approvals (Oguche, 2023). Although Kribi Port was designed with enhanced logistics capabilities, the overwhelming amount of containerized goods has not been met with proportionate infrastructure scaling, resulting in chronic bottlenecks and excessive dwell times. (Nkot & Amougou, 2021).

Corruption makes these operational inefficiencies worse. Bribery and other forms of unofficial payments raise costs in transactions, reduce trust and inflate taxes, and breach system integrity all at once (Transparency International, 2018). Vague and overly complicated regulations that invite loophole enforcement and continual physical scrutiny of tax discretion invite recurring enforcement (Kamau, 2020; Gwardzińska, 2023; Katsieris, 2024). Expressed differently, the environment surrounding customs is at this point too expensive, unpredictable, and counterproductive, which pushes away legitimate trade and irritates port users.

In addition, the ASYCUDA system and electronic invoicing systems are not widely used, which hampers efforts toward modernisation. These systems are only partially functional and lack integration across stakeholders, which causes customs agents and forwarders to still rely heavily on paperwork (Seturidze, 2024; Machange, 2024). This technological gap not only delays communication but also adds to the operational backlogs.

Such delays have significant economic impact. Increased logistics costs, diminished business competitiveness, and jeopardised time-sensitive cargo, like perishables, are all a result of delays at Kribi Port. Participants face high demurrage and storage costs, and reckless clearance processes breach many international best practices, which greatly disincentivise foreign investment (Benamar, 2023). Zaman (2022) claims that trade facilitation is vital to regional integration: former accelerators of growth are now inefficiencies that threaten Cameroon’s vision of becoming a regional trade hub.

This research seeks to analyze the underlying factors of customs delays at the Kribi Deep Sea Port and assess their impact on trade efficiency, especially with regard to containerized trade. Looking at the administrative policies, legal constraints, and technological issues, the research aims to offer guidance to customs officials and other relevant stakeholders on improving the trade and customs operations in Cameroon.

**1.2 Research question**

1. What are the factors influencing delay of customs procedure in kribi port?
2. What are the consequences of delay of customs procedure?
3. What are the proposed solutions to ameliorate the procedure for rapid delivery?

**1.3 Research objective**

1. To investigate the main cause of delay in the delivery of containerized goods from the kribi port
2. To investigate on the consequences of the delay in the customs procedure on Cameroon and the port users
3. Recommending some propose solutions to ameliorate on the delay of customs of procedure in the kribi port
4. **LITERATURE REVIEW**

The issue of slow processing times at customs has become a critical barrier to international trade, particularly for nations striving to enhance their competitiveness in global markets. Increasingly, customs delays are recognized not merely as logistical challenges but as significant constraints to economic development. This was quantified by Hummels and Schaur (2013) who showed that shipping disruptions diminish trade by about 1% for each day a shipment is held up, in effect functioning like a concealed export levy. These delays undermine the competitiveness of exports, driving up costs for both producers and consumers.

**2.1. Digital Customs Reforms and Technological Integration**

A common theme in addressing customs inefficiencies is the deployment of digital technologies. In Latin America, Ayarza (2022) showed that the implementation of Brazil’s DU-E platform improved transparency and decreased clearance times by reducing reliance on paper-based documentation. Similarly, in Europe, the port of Rotterdam has adopted pre-arrival processing systems that significantly reduce port latency. Singapore’s customs performance is exemplary due to its integration of advanced digital technologies, institutional coordination, and efficient legal frameworks.

However, these global successes contrast with challenges in African contexts. For instance, in Kenya, Ndambuki and Mincu (2018) identified that deficits in ICT infrastructure and dependence on manual processes led to clearance delays exceeding ten days. Ghana's Tema Port, despite introducing a paperless system, still faces inefficiencies due to inadequate training and poor stakeholder compliance (Ansah et al., 2020). These findings emphasize that technological innovations must be coupled with structural and behavioral reforms to yield substantive improvements.

In Cameroon, the introduction of the CAMCIS (Cameroon Customs Information System) has not significantly enhanced customs management due to inadequate training and personnel resistance (Almeida, 2023). The gap between system design and its implementation reveals how digital reforms, when isolated from institutional readiness and stakeholder engagement, fail to achieve intended outcomes.

**2.2 Governance and Institutional Challenges**

A significant body of literature attributes customs delays to governance deficits. In Nigeria, Ojadi and Walters (2015) found that informal payments, arbitrary practices, and delayed manifest processing hindered efficient clearance at Lagos ports. These challenges reflect broader issues of corruption and weak institutional accountability. Similarly, Mvogo and Tchindjang (2024) noted that despite Kribi Deep Seaport’s modern infrastructure, low digitization, inter-agency discord, and stakeholder apathy continue to diminish its operational competitiveness.

Ngo (2019) further highlights Cameroon’s partial compliance with international agreements such as the WTO Trade Facilitation Agreement and the Abuja MoU, which erodes the credibility and predictability of its customs processes. Informal administrative practices and non-transparent enforcement exacerbate inefficiencies, pointing to deeper governance constraints in Cameroon’s public sector.

**2.3 Inter-Agency Coordination and Operational Capacity**

Beyond technology and governance, the literature emphasizes the role of inter-agency coordination and operational capacities in customs efficiency. At the Port of Durban in South Africa, Mthembu and Chasomeris (2023) acknowledged modernization efforts but also pointed to setbacks caused by labor unrest, equipment failure, and disjointed supply chain management. Still, South Africa’s use of performance management frameworks and stakeholder forums marks a relatively structured approach to continuous improvement.

Regionally, Shibuya et al. (2023) argue that integrated customs and transit trade frameworks can facilitate more seamless trade in West and Central Africa, especially for landlocked nations dependent on seaports. Such cooperative approaches are absent in Cameroon, where fragmented coordination among agencies continues to hinder progress.

Rodrigues et al. (2021) propose the development of dry ports and inland customs stations as viable alternatives to relieve seaport congestion. For Cameroon, positioning such stations in Ngaoundéré or Garoua could reduce pressure on Kribi while promoting balanced national trade logistics.

**2.4 Human Resources and Capacity Development**

The literature also highlights the importance of skilled personnel and capacity-building programs. Chiganga (2015), referencing Tanzania’s customs reforms, advocates for regular training, clear operational guidelines, and performance benchmarks. Cameroon, by contrast, lacks robust staff development initiatives tailored to international standards, which likely contributes to prolonged dwell times and inefficiencies at both Kribi and Douala ports.

Although a wide range of studies have been conducted across Africa and globally, there is a noticeable scarcity of empirical research specifically focused on the customs delay dynamics at Kribi Deep Seaport. Most existing works are either descriptive or policy-based, lacking rigorous, context-specific analysis. This creates a significant gap in understanding the institutional, technological, and operational drivers of customs delays unique to Kribi.

To address this gap, this study proposes to explore the factors, consequences, and possible remedies for customs delays at Kribi Deep Seaport. The aim is to draw from international best practices and ground recommendations in empirical evidence that can support effective reform and enhance Cameroon’s trade competitiveness.

**2.5 Conceptual Framework**

The framework of this study is aimed at creating an organized understanding of the principles dealing with the factors responsible for customs delays at Kribi Deep Seaport. The literature from the global and regional scope has been collected and organized within four overarching domains: technological factors, institutional factors, operational factors, and inter-agency coordination. Technological factors include the degree of automation, integration of digital systems, and information and communication technology (ICT) infrastructure. Institutional factors are governance, corruption, compliance with international standards; operational factors include staffing levels, training, and efficiency in the processes; inter-agency coordination deals with collaboration between customs and other relevant stakeholders at the port. With such an arrangement, the framework helps provide a comprehensive assessment of the impact these dimensions have on customs performance. This framework also assists in integrating the literature review with the research aims, providing a single framework for analysis concerning the myriad factors, consequences, and potential solutions regarding customs delays at Kribi Port.

Operational factors

Inter-agency coordination

Customs Delay

Technological factors

Institutional factors

 **Figure 1: Conceptual framework**

 **Source: Authors’ conception, 2025**

The conceptual framework illustrates the multifaceted nature of customs delays by organizing the contributing factors into four interlinked dimensions: technological systems, institutional quality, operational capacity, and inter-agency coordination. These components do not operate in isolation; rather, they interact dynamically to influence the efficiency of customs clearance processes. For instance, while the adoption of digital systems such as single-window platforms can theoretically streamline procedures, their effectiveness is contingent on institutional transparency and staff capacity to utilize them. Likewise, strong inter-agency coordination can mitigate operational constraints, whereas fragmented communication among stakeholders may amplify procedural bottlenecks. By mapping these interdependencies, the framework provides a structured lens through which to examine how systemic weaknesses across these domains cumulatively result in delays at ports such as Kribi.

**2.6 Theoretical Framework**

This study is anchored on the Institutional Theory and the Technology Acceptance Model (TAM), two theoretical lenses that collectively provide insights into the structural and behavioral dynamics underpinning customs delays at Kribi Deep Seaport.

Institutional Theory, developed by Meyer and Rowan (1977), posits that organizations are shaped by the formal rules, norms, and cultural expectations of their institutional environment. This theory is particularly relevant to understanding the customs system in Cameroon, where inefficiencies stem not only from operational gaps but also from entrenched bureaucratic practices, informal payments, and weak enforcement of trade regulations. At Kribi Port, the persistence of customs delays, despite the existence of modern infrastructure like CAMCIS, can be explained through this lens, which highlights how institutional weaknesses such as regulatory non-compliance, corruption, and discretionary behavior undermine the effectiveness of formal reforms. Thus, Institutional Theory enables the study to critically examine how systemic governance constraints and organizational culture influence customs operations.

Complementing this is the Technology Acceptance Model developed by Davis (1989), which explains how perceived usefulness and ease of use affect the acceptance and utilization of technological systems. This model is crucial in analyzing the limited impact of digital platforms such as CAMCIS at Kribi Port. While the infrastructure may be in place, the lack of user training, stakeholder resistance, and insufficient system updates impede its effective adoption. TAM helps the study evaluate how human factors and user perceptions influence the operationalization of digital customs reforms. It also supports an assessment of the behavioral dimensions of port personnel and other stakeholders, which directly affect the success or failure of technological interventions.

Together, these theories provide a robust framework for analyzing the complex interaction between institutional constraints and technological reforms in customs operations. They guide the investigation into how structural inefficiencies, administrative behaviors, and resistance to change converge to create delays in cargo clearance. This dual-theoretical perspective enhances the analytical depth of the study and justifies the multidimensional approach used to assess the customs delays at Kribi Deep Seaport.

1. **METHODOLOGY**

The study applied explanatory research design to investigate the customs clearance processes of containerized goods at the Port of Kribi. Both data collection and analysis was approached quantitatively to enhance objectivity, reproducibility, and generalizability of the results. A stratified random sampling method was used to select a total of 413 participants from different stakeholder groups in logistics and port operations at Kribi. To improve the rigor of the statistical analysis and ensure adequate representation from relevant subgroups, some stakeholder groups were merged based on their roles within the customs clearance process. For instance, a group referred to as Import-Export Agents was formed which included shippers (n = 4) and consignees or importers (n = 120) as they participated in the transboundary shipment of goods. Also, customs administrators (n = 70) and Port Authority of Kribi officials (n = 2) were combined into one group called Customs and Port Administrators due to their combined functions in controlling and administering port and customs processes.

In accordance with this classification, five stakeholder groups were analyzed. The Licensed Customs Brokers were given 105 questionnaires, out of which 100 were completed and returned. This represented a 95% response rate and constituted 27.9% of the valid responses. The Shipping Lines were issued 60 questionnaires and 55 of them were returned which corresponds to a 95% response rate and 15.3% of valid responses. The Import-Export Agents group (which included shippers and importers) received 154 questionnaires and 124 were returned, resulting in a response rate of 80.5% which was 34.5% of the valid responses. SGS Cameroon was given 10 questionnaires and returned 8 which gives them an 80% response rate coming in at 2.2% of the valid responses. Lastly, the Customs and Port Administrators group were issued 84 questionnaires (80 to customs administrators and 4 to the Port Authority) with 72 returned which gives an 85.7% response rate and 20.1% of valid responses. Overall 413 questionnaires were distributed, 359 completed and returned which gave an approximately 86.9% response rate. It is these that were used for the statistical analyses.

To identify if a significant relationship between stakeholders' perceptions of the customs clearance process and their group affiliation existed, the researchers employed the Chi-Square Test of Independence. This test was conducted to establish if the category of stakeholders has any relation with their differing opinions on the major causes of delay in the customs clearance processes at the Port of Kribi. Other impacts of the delays on the economy of Cameroon and the users of the port were also analyzed using the Chi-Square Test of Independence. This strategy revealed the differences between the tested categories with regard to stakeholders' perceptions, which can assist informed decisions regarding policy changes and operational revisions in the customs management system.

1. **FINDINGS**

The effectiveness of customs clearance processes is crucial for international trade, efficient functioning of ports, and revenue increase for the country. Ports are primary international transport logistical centers, and any ineffectiveness at customs, for example, can disrupt the national and regional economies. Regarding Kribi Deep Seaport of Cameroon which is marketed as a focal point of international trade in Central Africa, it is very important to focus on the nature and causes of delays in the operations to improve the overall efficiency of the port and its competitiveness in trade.

**4.1** **Stakeholders of Delay and Their Number of Days**

This part discusses the outcomes pertaining to the primary actors who contributed to the customs clearance delays for the Kribi port, examining each stakeholder’s role regarding the operational inefficiencies and the impact delays have on the port and the economy of Cameroon as a whole. The analysis is developed from data evidence which captures notable actors such as the importers, customs brokers, customs administrators, and other members of the logistics chain and measures the average delays in days incurred by each actor to the customs clearance process. By identifying such delays, the research seeks to inform precise strategies and policy changes which could drastically minimize dwell times and enhance trade in Cameroon.

 Figure 2: Stakeholders of Delay and Their Number of Days

 Source : Field Survey, 2025

The findings presented in Figure 2 offer a critical empirical illustration of the actors contributing to customs clearance delays at the Kribi Deep Seaport, along with the magnitude of their respective impacts in terms of average delay days. The data clearly point to importers as the most significant contributors to delays, with an average delay of 90 days an exceptionally high figure compared to other actors. This strongly suggests a systemic issue among importers, most likely related to insufficient liquidity, poor financial planning, or bureaucratic hurdles in mobilizing funds for customs duties and port-related charges. The prevalence of delays associated with the importer highlights a critical gap pertaining to the pre-arrival and pre-clearance financing gaps that policy and operational approaches must address as a matter of urgency.

Customs brokers and administration officers closely follow importers as they contribute the next most impacted procedural delays with 15 and 10 days respectively. The inadequate digitization or rapidly evolving customs documentation procedures may account for the wait of 15 days attributed to brokers. The time of 10 days utilized by customs administrators is most likely attributed to slow manifests business release, poor intra-division collaboration, and insufficient automation concerning the monitoring and inspection of the cargo.

The other participants incur significantly less delay, but are still of some importance. SGS (8 days), Shipping Line (7 days), PAK & KCT (5 days), and Shippers (5 days). A quality inspection and certification body SGS might be causing delays of processes with late inspection reports or prolonged verification processes. Contributions could also come from shipping lines and port concessionaires’ slow offloading, document mismatches and limited coordination with customs. Even though these stakeholders incur relatively small portions of the delay, their collective impacts are important, especially when dealing with tightly scheduled logistics.

Interestingly, the graph also uses a logarithmic scale on the y-axis, which emphasizes the wide disparity between importer delays and those of other actors. This visualization choice is useful in depicting the dramatic influence importers have on the overall customs clearance time, making them the focal point for any policy reform aimed at improving port efficiency.

The illustration gives enough data to analyze that the customs delays at Kribi Port are not evenly distributed across all users of the port’s services but are, skewed towards a few particular players, in this case, the intermediaries and importers. Such an understanding of the problem geometry warrants a cross-level action approach: for constituents, financial support and regulatory streamlining, for brokers and customs officials, professional development coupled with accountability structures, and integration of workflows for all constituents in the logistics chain. Resolving these issues would dramatically improve efficiency within the operation, improve trade facilitation, and enhance revenue collection for the country.

* 1. **Analysis of Stakeholders’ Contributions to Customs Delays and Corresponding Durations**

Delays in customs clearance processes can significantly hinder port efficiency, increase the cost of doing business, and limit the competitiveness of a country's trade infrastructure. At the Kribi Deep Sea Port, delays during customs procedures are the result of several interrelated activities carried out by different stakeholders within the logistics chain. Understanding the roles these actors play and the corresponding time implications of their actions is crucial for identifying systemic inefficiencies and proposing relevant reforms. This section presents a detailed assessment of the key stakeholders, their contributions to procedural delays, and the estimated number of days associated with these delays.

4.2. Table 1-Stakeholders, their contribution to delay and estimated days of delay

|  |  |  |
| --- | --- | --- |
| ACTORS | Activities leading to delay | Esimated delay days |
| Shipper | Late preparation of documents | 1-5 days |
| Customs administrators | Late manifest of goods at kribi | 1-10 days |
| consignée | Lack of finance  | 1-90 days + |
| Broker | Lack of professionnalisme | 1-15 days  |
| KCT | Technical issue | 1-2 days |
| SGS | Late issue of RVC report | 1-12 days |
| Shipping line | Delay in issue of delivery order | 1-3 days |
| Other factors | Port congestion | 1-6 days |

Source: Field Survey, 2025

The findings in table 1 reveals that delays at the port are not the result of a single factor but rather a combination of lapses from multiple actors. These range from individual inefficiencies to institutional and structural limitations. The table outlines eight distinct stakeholders and activities that cause delays, with estimated durations ranging from 1 to over 90 days. The combination of financial constraints and technical problems showcases the complexity involved in the customs clearance processes at Kribi port. This emphasizes the need for a multi-stakeholder focus toward improving operational effectiveness.

Evidence suggests that the consignee remains the primary source of customs clearance delays. Their delays range anywhere between 1 to 90+ days, primarily due to financial burdens tied to meeting a set of strict import requirements. This conclusion is particularly alarming because it indicates a significant portion of the delay is importers being demand-side liquidity constrained they lack the cash to clear, halting the entire system. As a result, port efficiency suffers along with cargo turnover, which in turn diminishes potential revenue for the state.

Customs office personnel lag behind with manifesting delays that range from 1 to 10 days. Their delays stem from the late manifesting of goods. This demonstrates an administratively procedural blockage which may indicate poor inter-agency collaboration or ineffective internal customs workflows. Such delayed manifesting inhibit timely clearance and introduce unpredictability for downstream stakeholders dependent upon the cargo release.

Customs brokers whose estimated delays range between 1 to 15 days, are also significant contributors, mostly because of unprofessional conduct. They include document mismanagement, failure to legally comply with customs processes, or lackers of effective communication. Their part is pivotal while assisting in the clearance, and any of their delays or mistakes will disrupt the entire chain.

SGS which performs pre-shipment inspections and issues the RVC report is responsible for additional delays ranging from 1 to 12 days. This process is sometimes an antecedent step for customs valuation, hence any delay in this step tends to throw off the entire clearance timeline. This showcases the need to improve the interaction of customs with third-party inspection and the prompt performance of external confirmations.

The shipper has been noted to be an active contributor to delays in the range from 1 to 5 days, mostly as a result of not timely issuing the shipping document. This also underscores the need to streamline processes so that documents are prepared well in advance of the cargo being sent out. Likewise, the maritime freight company stops the process for a period of 1 to 3 days when an order for the release of the goods from the terminal is not issued on time.

The Kribi Container Terminal (KCT), which is a part of the port’s functionality, experiences 1 to 2 days of delays as a result of possible downtimes. These are of minimal concern when measured against other stakeholders. However, such downtimes can prove to be significant in terms of the above hand when there is a high volume of cargo or if combined with other delays.

As port congestion falls under the “other factors” category, its estimated delay range is between 1 and 6 days. This is a combination of an infrastructural as well as a logistical problem which tends to be worsened by the accumulated delays from other users. Congestion hampers the efficiency of the port and serves as a barrier towards meeting the turnaround target for the port which can give rise to additional expenses like demurrage or storage fee on top of charge.

The findings from the Kribi Deep Sea Port show that customs clearance delays are caused by several actors, with the consignee being the biggest contributor due to financial difficulties, which can delay the process for over 90 days. This reflects what Chiganga (2015) found in Tanzania, where many importers struggled to pay required fees on time, leading to port congestion. Customs administrators and brokers also play a major role in delays due to poor coordination and lack of professionalism, similar to what Kahyarara and Simon (2018) observed in African ports where inefficient systems and weak institutions slow down clearance. In addition, delays caused by third-party inspections, document preparation, and minor technical issues at the terminal highlight the lack of modern technology, as also noted by Olapoju (2023), who emphasized that most African ports are not yet digitally advanced. Overall, the situation at Kribi shows that delays come from financial, institutional, and technological weaknesses, and solving them will require joint efforts to support importers, improve customs operations, and invest in digital tools.

4.2. Table 2**: Chi-Square Test of Association Between Stakeholder Group and Perceived Main Cause of Delay in Customs Clearance at the Port of Kribi**

|  |  |
| --- | --- |
| **Statistic** | **Value** |
| Pearson Chi-Square (χ²) | 84.76 |
| Degrees of Freedom (df) | 24 |
| Asymptotic Significance (p) | 0.000 |
| Minimum Expected Count | 3.47 |
| Number of Valid Cases | 359 |
| Cramér’s V | 0.243 |

Source: Field survey, 2025

Table 4.2 presents the results of a Chi-Square test of association which considers the relation between stakeholder groups and the main delays attributed to customs clearance at the Port of Kribi. This test was done to determine whether the differences in the perceptions of delays among the port users like customs and port officers, licensed brokers, shipping lines and import-export agents are systematically different and not random. The perception of delay was extensively tested using a sample of 359 valid responses to determine how far the identity of the stakeholder accounts for the attribution of delay factors. The results of the test are relevant for comprehending the phenomenon of delay from the perspective of different stakeholders, which would facilitate the formulation of suitable policies.

1. **Alternate Hypothesis (H₁):** There is a statistically significant association between stakeholder group and the perceived main cause of delay in customs clearance procedures at the Port of Kribi.
2. **Null Hypothesis (H₀):** There is no statistically significant association between stakeholder group and the perceived main cause of delay in customs clearance procedures at the Port of Kribi.

The results of the Chi-square test, as shown in Table 4.2, strongly confirm that there is a significant relationship between the stakeholder groups and the considered primary reasons of delays in customs clearance at the Port of Kribi. The Pearson Chi-Square value of 84.76 with 24 degrees of freedom yielding a p-value of 0.000 indicates that the perception differences among the stakeholders are not due to chance. This is in agreement with the descriptive trends captured in Figure 2 and Table 1 which outlined the contributions of each participant towards the customs clearance delay and the associated lag times. The minimum expected count of 3.47 supports the accuracy of the statistical test by the assumption of sufficient expected values within the contingency table. Moreover, the valid responses accepted (359) is quite considerable and ensures that the results are reliable and representative of all the stakeholders in port clearance at Kribi.

The computed Cramér’s V value of 0.243 indicates a small to moderate strength of an association which considers the social science perspective significance given the many stakeholder categories combined with delay factors. This effect size illustrates that although the differences in perception across respondents are not very extreme, the differences are still great enough to require focus in policy and operational changes. These statistical results confirm the descriptive results in, for example, import-export agents largely attributing delays to financial constraints and bureaucratic bottlenecks due to their dependence on timely documentation and fund availability. Licensed customs brokers underscored the lack of automation and professionalism as primary bottlenecks, illustrating their role in technical document processing and clearance navigation. As pointed out by the respondents, customs and port administrators predominantly cited poor inter-agency coordination combined with equipment limitations that they supervise directly.

In Table 1, it is clear that delays differ by stakeholder group as importers suffered the greatest delay of 90+ days because of cash-flow problems, while port congestion and late delivery orders caused smaller, yet still important, delays. These differences highlight the fact that delays are not homogeneous, but rather are specific to differing groups of stakeholders. The highly significant Chi-square result attests this disparity and also supports that the cohesive, uniform label of ‘stakeholder group’ is a determining factor for how and in what ways delays are encountered and processed. This harmony between descriptive and inferential analysis adds to the credibility of the findings and reinforces the rationale for differentiation among the stakeholders concerning the reform of port clearance procedures at the Port of Kribi.

The results of this study are particularly supported by and synchronise with interagency coordination, technological readiness, and stakeholder-specific issues from the reviewed literature. In agreement with the significant Chi-square results on stakeholder discord concerning the delay issues, Mvogo and Tchindjang (2024) similarly noted that the Port of Kribi is lacking cohesion among agencies, despite having advanced infrastructure. This supports the current study’s result that customs and port administrators perceive interagency dysfunction and equipment shortages as major issues, a perspective which is statistically distinct from other groups. In the same way, Ndambuki and Mincu (2018) recorded that inadequate ICT infrastructure and pervasive manual systems in Kenya caused delays over ten days which was replicated at Kribi where custom brokers cited low automation and unprofessionalism as primary constraints, an assertion confirmed through descriptive and inferential methodologies.

Furthermore, the stratification of delay experience by stakeholder group, with importers (consignees) suffering the longest delays due to financial limitations, echoes the findings of Almeida (2023) who emphasized that digital systems like CAMCIS underperform in Cameroon due to low user readiness and resistance. This confirms that without addressing user-specific operational realities, even well-intentioned reforms will falter. The study by Rodrigues et al. (2021) also lends credence to the differentiated experience of stakeholders, as they recommend diversifying port logistics through inland clearance stations, which could help mitigate the effects of congestion and systemic inefficiencies disproportionately affecting users like consignees and import-export agents.

The harmony between this study’s descriptive statistics, inferential Chi-square and Cramér’s V outcomes, and existing empirical literature confirms the nuanced nature of customs clearance delays. It emphasizes the need for targeted, stakeholder-informed reforms rather than blanket policies. These reforms must integrate technological, institutional, and human resource dimensions in order to produce sustainable improvements in port efficiency at Kribi.

**4.3 Consequences of Delay of Customs Procedure**

The impacts of the clearance customs processes are far reaching. At Kribi Deep Sea Port, these delays act as obstacles which increase logistics costs and undermines the Cameroon's import-export sector competitiveness. The delays do not stem from a singular entity, instead there is a lack of system inefficiency amongst multiple stakeholders which includes freight forwarders, shipping agents, and transport companies, all working towards the same goal but functioning separately. The multiple layers of inefficiencies and logistical unsophistication means over-stretched resources coupled with increased operational cost but hindered economic growth. Figure 3 illustrates the helpful allocation of each actor. This breakdown shows performing efficiencies will yield favorable economic results.

Figure 3: Consequences of Delay of Customs Procedure

Source Field survey, 2025

Holds on customs processes at the Kribi Deep Sea Port has a pervasive impact on Cameroon's import and export industry, as well as the economy at large. Such delays are exacerbated by increasing logistics expenditures, storage fees, and other operational costs. This, in turn, diminishes the competitive edge of enterprises utilizing the port. The bottlenecks are not due to a singular factor, but rather myriad actor inefficiencies, such as the importers, brokers, port authorities, shipping lines, the state, and inspection agencies. Each actor individually contributes to the clearance process slow-down and creates costs.

As indicated in Figure 3, importers are the primary emitters, contributing to approximately 60% of the delays. Lack of adequate finances, underprepared documentation, and delayed payment of duties/fees are all common. These supply chain multi-demand issues impede the flow of goods and highlight the necessity for improved financial aid. Raising awareness about clearance procedures would also assist greatly. Brokers account for around 20% percent of the delays related to the registration process owing to specific documentation, slow information transmission, and failure to meet deadlines. Strengthening the professionalism of brokers and imposing harsher penalties for regulatory breaches would assist in resolving these concerns.

The Port Authority contributes delays to 10% of them through poor equipment and cargo management. At busy times, even small delays can trigger backlogs which strain operational workflows, demonstrating the need for transformational investment in port modernization and digitalization. Other shipping lines, State authorities, and the Inspection Agency SGS also create seemly trivial but individually significant shifts of halfway-delivered orders and policy inefficiencies, rigid pre-set schedules specific to inspections, and so on, causing more than negligible cumulative impact.

As a result of compounding these efficiencies to resource workflows, constricted resources, operational expenditures, stagnating economic progress, these inefficiencies create a system where delays multiply and compound. These gaps and overlaps in interdependent systems require cohesive action. Enhanced trade financing, better awareness programs, professionalization of brokers, modernization of port infrastructure, simpler yet clearer regulatory frameworks, and more proactive cross-stakeholder collaboration to further streamline customs processes.

Resolving these issues will improve the softness and reliability of port operations while lowering logistics cost. This would support sustainable economic development of Cameroon by allowing the port to function efficiently as a primary trade gateway while boosting international and local investments.

1. **CONCLUSION**

The examination of customs clearance delays at the Kribi Deep Sea Port indicates that the inefficiencies are largely the result of a blend of procedural gaps, stakeholder-specific factors, and overarching structural constraints. From the different categories of stakeholders, the importers (consignees) appear to constitute the most prominent category with regard to delays, and this is primarily due to insufficient funding and inadequate readiness to deal with customs obligations. Delays by customs brokers and customs administrators also comprise a large part of the issue, which is caused by poor handling of documentation, lack of professionalism, and prolonged manifest processing. All these problems suggest a highly interdependent hierarchy where the delays of one actor are exacerbated by others, efficiently sabotaging every participant, including the port.

In addition, third-party entities like SGS, shippers, and shipping lines, have a relatively low individual influence, but are significant in the context of the clearance customs contemporaneously. Their specific activities such as providing late delivery orders relative to the timeframe needed or late inspections contribute higher order delays and underscore some of the issues in communication within the logistics chain. Port authorities and other government agencies need to respond faster and upgrade their systems and processes to mitigate permanent delays. The delay analysis indicates that blame is shared inadequately which means that tailored responsibility for each stakeholder would be more beneficial rather than blanket reform.

As discussed earlier, solving matters pertaining to the customs clearance delay at Kribi Port requires heightened engagement from various stakeholders simultaneously. Proposed policy shifts should prioritise increasing the capacities offered to customs brokers financially, control importers, enable stricter compliance protocols to be lifted, and automate processes that require document submission or communication. In addition, active and constructive engagement from the public and private actors will determine the achievement of sustained port performance improvement objectives. The initiative aims to position ports in a way where they can accomplish increased trade activities, sustain decreased clearance durations, and enhance the country’s strategic access posture for Cameroon and the Central African region.

1. **RECOMMENDATIONS**

Achieving holistic improvement in the customs clearance processes at the Port of Kribi demands pursuing multiple interrelated recommendations with realistic implementation frameworks, as well as allocated clear-cut responsibilities. Digitization and automation of customs dealings stand out as the priorities. The Ministry of Finance and the Customs Authority should spearhead the full implementation of an electronic customs management system that permits submission of documents digitally, risk assessment automation, and tracking of consignments in a closed loop (integrated tracking). The CAMCIS administrators together with the Port Authority of Kribi must enforce the rule requiring submission of cargo manifests for processing at least three days prior to a vessel’s arrival. In addition, customs should immediately hold coordination meetings with importers and logistics companies to start fast-track procedures to chronically unjam the systems. Specialized training should be provided to customs staff to expedite the liquidation and respond swiftly to requests for discount demurrage invoices to unclog the containers.

Changes to the documentation requirements concerning delivery orders will need policy changes from the Customs Authority as well as the Ministry of Trade. More specifically, the policies pertaining to the removal of quittance and declaration prerequisites need to be adjusted through customs policy changes. To alleviate congestion, the Port Authority of Kribi together with the shipping companies need to provide additional space for the storage of empty containers. The order issuing system that sends orders from Douala to Kribi needs to be automated, and responsibility for that system’s operation lies with the Ministry of Transport concerning Logistics Relations. There is also the need for customs officials to set up an expedited procedure for the approval of demurrage discount requests to fast track the processing time to one day.

Importers and licensed brokers should bear joint responsibility under an imported document. The Customs Authority should set tight control policies which demand that importers provision cargo documents secured under financing and submit the documents one week prior to the arrival of the vessel. Also, to enhance the professionalism of brokers, the Customs Authority and the Ministry of Trade should remove from the brokerage market all those who operate without a license and establish a minimum education requirement of ‘A’ Level certificate. Custom brokers’ professional bodies could be organized to implement designated training courses and ensure compliance with the established rules.

Agencies and institutions like SGS need to improve their cooperation with customs. As outlined, SGS must assist exporters better by enabling timely document uploads to the exporter’s portal and expediting manual evaluations when RVC reports are delayed. Customs should be enabled to provisionally suspend declarations pending RVC confirmations as a means to safeguard the clearance cascade. To avoid incursions, customs valuation together with HS coding granularity should be adhered to by SGS. The government ought to rationalize the number of relevant customs control posts to eliminate operational overlaps, as well as provide proactive and unambiguous changes to announced customs duties via gazette publications with stakeholders guided by the Minister of Finance.

Infrastructure woes persist as an acute challenge to customs operational effectiveness. The Ministry of Public Works together with the Ministry of Transport need to urgently rectify access road to Kribi port which includes pothole repair, lane widening, and improved signage. There should be immediate action to conduct feasibility studies on the construction of a railway from Kribi port to major towns in collaboration with the Ministry of Transport and private sector. These improvements in infrastructure will streamline the movement of goods, curtail delays, and complement reforms in customs procedures.

To reduce corruption and regain the proper order in processes, an autonomous body charged with the oversight of customs procedures should be created. This body ought to comprise members from the National Anti-Corruption Commission (CONAC), civil society, and business associations, and should be empowered to monitor transactions, audit digital trails, and act on whistleblower alerts. With clear legal mandates and penalties, such an entity can strengthen accountability and increase plaintiffs while reducing informal payments and enhancing the port’s customs processes. All these varied and targeted actions combine to form a singular approach designed to improve customs operation efficiency and reduce clearance delays at the Port of Kribi.

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