



INVESTIGATING THE ROLE OF CUSTOMS CLEARANCE PROCESSES IN ENHANCING TRADE FACILITATION AT KATIMA MULILO BORDER POST

By

¹Sonny Simfukwe, ²Chaste Nsama

University of Zambia

Graduate School of Business Studies

ABSTRACT

This study investigated the role of the customs clearance process on trade facilitation at KatimaMulilo Border Post, Zambia. The study assessed the procedural processes, identified the common causes of clearance delays, and the efficiency of trade facilitation at KatimaMulilo Border. The mixed-method research approach was adopted, utilizing interview guides and questionnaires to collect data from 168 respondents involved in trade and customs activities at KatimaMulilo Border Post. Descriptive statistics, chi-square tests, ANOVA regression analysis, and symmetric measures were used to analyze the data and test relationships between variables. The findings revealed that while the customs documentation process is moderately clear, other factors such as inadequate infrastructure (mean = 3.50), insufficient staffing (mean = 3.10), inefficient customs processes (mean = 3.07), and poor inter-agency coordination (mean = 2.85) significantly contribute to delays in goods clearance. The chi-square test indicated a significant relationship between the clarity of documentation and clearance time, while the regression analysis showed that infrastructure and procedural inefficiencies are the main drivers of delays. The study found that delays due to inspections were not statistically significant, suggesting that they are not the primary cause of clearance delays. The overall efficiency of the clearance process is perceived as moderate, with a majority of respondents expressing neutrality or suggesting that improvements are necessary. While time reduction and cost lowering are sometimes observed, there is still inconsistency in these outcomes, and trade predictability remains an area for further enhancement. The study concludes that while documentation clarity plays a role in facilitating trade, systemic issues like poor infrastructure and ASYCUDA challenges are more critical factors in delaying clearance times. Based on these findings, recommendations are made to streamline documentation processes, invest in infrastructure improvements, enhance staff capacity through training, improve inter-agency coordination, and leverage technology to reduce clearance times.

Keywords: customs clearance, trade facilitation, KatimaMulilo Border Post, infrastructure, interagency coordination, documentation, delays

How to cite: Sonny Simfukwe, and Chaste Nsama. "INVESTIGATING THE ROLE OF CUSTOMS CLEARANCE PROCESSES IN ENHANCING TRADE FACILITATION AT KATIMA MULILO BORDER POST". International Journal of Educational Excellence and Innovation, vol. 2, no. 11, Nov. 2025, pp. 20-46, <https://doi.org/10.5281/zenodo.17614594>.



INTRODUCTION

The KatimaMulilo border post, situated in Sesheke District of Zambia's Western Province, plays a pivotal role in facilitating trade between Zambia and Namibia. Known as Wenela on the Namibian side, the KatimaMulilo border has historically evolved from a colonial trade route to a modern customs gateway (Mubita, 2010). The name "KatimaMulilo," derived from the Silozi language, meaning "quenches the fire," captures the historical and cultural significance of this site, which has transitioned from colonial administration to an essential component of Zambia's regional integration and trade infrastructure (Zeller, 2009).

The strategic importance of this border has been shaped by a complex colonial history involving German, British, and South African interests. The Caprivi Strip, where the Namibian side of the border lies, was acquired by Germany in 1890 through the Heligoland-Zanzibar Treaty, only for control to revert to British administration after World War I (Zeller, 2009). Concurrently, Zambia then Northern Rhodesia was under the control of the British South African Company, which had instituted forms of revenue collection as early as 1901 (Chali, 2007). Following independence in 1964, Zambia placed customs and tax administration under the Ministry of Finance, yet this approach suffered from inefficiencies, technological limitations, and an inability to align with global trade norms (Chali, 2007).

The liberalization of Zambia's political and economic system in the early 1990s marked a turning point. Influenced by Structural Adjustment Programmes (SAPs) championed by the IMF, Zambia established the Zambia Revenue Authority (ZRA) in 1994 with a mandate to enhance integrity, efficiency, and professionalism in revenue collection (Chali, 2007). Since then, the ZRA has implemented several reforms to modernize border operations, including the adoption of Automated System for Customs Data (ASYCUDA), with KatimaMulilo transitioning from ASYCUDA 2.7 to ASYCUDA++ in 2006, and finally to ASYCUDA World in 2014 (Zambia Revenue Authority, 2021).

These reforms have significantly improved revenue collection. For example, export revenues at KatimaMulilo grew from K5,266.7 million in 2017 to K35,560.1 million in 2021, while import revenues increased from K3,695.1 million to K7,926.9 million over the same period (ZRA, 2021). Similarly, Zambia's exports to Namibia rose at an annualized rate of 19.4%, from \$2.2 million in 2000 to \$93.3 million in 2021, while Namibia's exports to Zambia grew at 23%, reaching \$123 million in 2021 (Observatory of Economic Complexity, 2021). Zambia has consistently ranked among Namibia's top five export destinations, accounting for 7.6% of Namibia's exports in 2021 (Namibia Trade Statistics, 2022).

Despite these achievements, trade facilitation at KatimaMulilo remains hampered by several structural and operational challenges. Excessive paperwork, high transport costs, poor inter-agency coordination, and outdated procedures still prevail (Widdowson, 2007; Chali, 2007). These inefficiencies not only slow down clearance processes but also raise the cost of doing business, reduce competitiveness, and discourage foreign investment (Girma, 2019).

Specifically, the KatimaMulilo border post continues to experience serious congestion and processing delays. Recent studies reveal that the border processes only 33–37.5% of its monthly truck-handling capacity, clearing between 1,000 to 1,500 trucks against a potential of 3,000 to 4,000 trucks (IOM, 2023). This results in average waiting periods of up to four

days and queues of over 500 trucks daily (New Era, 2024). According to the Zambia Revenue Authority (2020), clearance inefficiencies at KatimaMulilo have contributed to a monthly clearance rate of just 30%, falling far below the optimal threshold.

These challenges present a significant threat to Zambia's economic growth. Widdowson (2007) and Girma (2019) emphasize that inefficient border processes can lead to GDP losses of 10–15%, while poor clearance practices may result in a 20–25% decline in government revenue an especially critical concern in a country where customs duties are a major source of income. Thus, this study seeks to investigate the role of the customs clearance process in enhancing trade facilitation at KatimaMulilo Border Post.

Research context

In today's increasingly interconnected global economy, trade facilitation has emerged as a cornerstone of economic development, regional integration, and competitiveness. Beyond merely the movement of goods across borders, trade facilitation encompasses the efficiency, transparency, and security of cross-border transactions (WTO, 2015). Countries that have prioritized streamlined and modernized trade systems have gained a competitive edge in attracting investment, reducing transaction costs, and fostering market expansion. A central pillar of these systems is the customs clearance process, which can either function as a trade enabler or act as a bottleneck stifling economic activity.

Globally, innovations such as digital customs systems, risk-based inspections, Single Window Systems (SWS), and Coordinated Border Management (CBM) have redefined the customs landscape. According to a study by Trade Facilitation and Customs (2017), the concept of trade facilitation has evolved from addressing narrow customs provisions to encompassing wider regulatory and border management reforms. These now include transparency, predictability, simplification of procedures, and enhanced public-private cooperation.

Despite these global advancements, many developing countries continue to grapple with inefficiencies in their customs systems. For example, Uzzaman and Yusuf (2012) found that traders in Bangladesh experienced significant delays due to bureaucratic hurdles, inefficiencies, and arbitrary enforcement of procedures mainly within customs and port authorities. Similarly, Dhakal (2020) reported that freight vehicle processing delays in Nepal were often exacerbated by a lack of agent coordination and opaque syndicate operations.

In contrast, evidence from Kenya demonstrates that digitalization and automation can substantially improve customs efficiency. Kosgei (2019) found that automation enhanced clearance speed, minimized fraud, improved tax collection, and reduced overall costs. Wanjao (2022) further emphasized the importance of aligning customs documentation and verification processes with international standards, noting their significant positive impact on trade facilitation. These studies underscore the transformative potential of technology in border management.

However, ICT infrastructure and power supply remain critical limitations to digital reforms in many parts of Africa. At the Victoria Falls Border Post in Zambia, Kanyinji, Hapunda, and Hikacila (2020) observed that while the introduction of the SWS improved customs

integration, its effectiveness was hindered by unreliable internet connectivity and electricity outages. This technological gap compromises the full realization of trade facilitation goals.

The socioeconomic dimensions of trade facilitation are equally important. Ngarachu et al. (2019) and Willie & Chikabwi (2024) emphasized how border delays inflate transport costs and reduce trade flows, especially in the COMESA region. Their findings suggest that coordinated reforms, such as One Stop Border Posts (OSBPs) and regional integration strategies, are vital for minimizing inefficiencies.

In the Zambian context, mixed progress has been observed. The OECD (2013) acknowledged efforts in document simplification and automation, while other studies, such as Ngo'na and Dube (2012), criticized the inadequate public availability of trade information and overly complex customs procedures. Mfuné (2015), in a case study at Kasumbalesa Border Post, identified persistent inconsistencies in the application of trade facilitation measures and recommended modern techniques like SWS and CBM. Despite these recommendations, multiple border posts in Zambia still face challenges with implementation consistency, infrastructure, and procedural clarity.

This backdrop highlights the need to investigate other strategic border points particularly KatimaMulilo Border Post, which plays a pivotal role in Zambia's trade with Namibia and other SADC countries. While it serves as a key entry point for goods, empirical research on its trade facilitation performance remains limited, and little is known about the extent to which digital systems, procedural reforms, or capacity-building initiatives have been implemented or are effective.

Research methods

The research was conducted at KatimaMulilo Border Post in Sesheke district, in Western Province of Zambia. The study was conducted at KatimaMulilo border post due to the fact that it is among one of the busy borders saving the Walvis Bay-Ndola-Lubumbashi corridor as well as the gateway to Malawi, Zimbabwe, and Tanzania. This study employed a mixed methods research approach, integrating both quantitative and qualitative approaches (Creswell, 2014). The rationale for using a mixed methods approach lies in the complementary strengths of each method (Creswell & Plano, 2018). The sample size for the study was determined using Yamane's formula, which calculated a representative sample size based on a known population size and a desired margin of error (Yamane, 1967). Yamane's formula is expressed as:

$$n = \frac{N}{1 + Ne^2}$$

Where:

- n = sample size
- N = population size (542)
- e = margin of error (5% or 0.05) $n = 542 / 1 + 542 \times 0.1$ $n = 230$

Thus, the sample size for the study was targeting 230 participants. However, the researcher only managed to engage 168 participants due to population availability and time constraints. Simple random sampling was applied to select clearing agents and drivers involved in trade

facilitation at the border, allowing each member of the target population an equal chance of being selected (Sharma, 2017). This probability sampling technique enhanced the representativeness of the sample, minimizing selection bias and enabling generalizations to be made from the sample to the larger population (Saunders, Lewis, & Thornhill, 2019). On the other hand, purposive sampling was used to select key informants, including customs officers, at the target border post. These participants were chosen because they possessed specific knowledge and experience related to trade facilitation processes and clearance procedures.

The field work took about two (2) weeks, from 8th January to 22nd January 2025. The researcher had formulated informed consents and questionnaires that were distributed to clearing agents, drivers and ZRA officers. Upon distributing the questionnaires, the researcher ensured that the respondents were rightly highlighted about the work and were asked to respond to the questions honestly. Those who would not understand certain questions were given an opportunity to ask and explanation was given. Interview guides were also used in carrying out one to one interview with ZRA officers. Interviews were held with key informants; every interview was taking about 30 minutes. Open ended questions guided the interview process while giving the participants enough time to share their experiences.

The quantitative data was cleaned to detect and correct, possible errors and omissions that were likely to occur, to ensure consistency across respondents. The quantitative data was then coded to enable the responses to be grouped into limited number of categories. After coding, the data was exported to Microsoft Excel Version 20. The software was used for construction of tables and graphs for the analyzed data. For further statistical analysis such as the mean, standard deviation, correlation and ANOVA the IBM Statistical Package for Social Sciences Version 28 was utilised. The data was presented in tabular, graphical and narrative forms (Bryman & Gramer, 1998). Further, qualitative data were coded and then analysed using thematic analysis. This was done in order to fracture the data and rearrange them into categories that facilitated the comparison between responses in the same category and that aided the development of theoretical concepts. In addition, coding helped to organize the data into broader themes and issues. Thereafter, a thematic analysis was employed to analyse the data. This is a method for developing, analysing, and interpreting patterns across qualitative datasets. It offers a set of tools, concepts, techniques, practices, and guidelines to organize, interrogate and interpret a dataset (Bryman, 2016).

Pilot study was done as stated by Saunders et al. (2019) and this helped to test the survey instrument, it helped to validate the questions, remove errors of omission and commission, rectify mistakes and check the general structure of the questionnaire. Into elicit for information from the respondents the researcher made sure to take the issue of ethics seriously. Firstly, the researcher sort for approval from the University of Zambia Ethics Committee as well as ZRA before conducting the field work, this was done so to ensure concert from the two institutions. Further, the researcher sort for consent from every participant that was selected to be part of the study. Moreover, the privacy and confidentiality of respondents and their responses were administered in utmost professional manner. In order to seal the identity of the respondent, there was no provision to indicate neither personal name, phone number of the respondent in the questionnaire.

Results presentation

Respondents characteristics

The study incorporated 168 respondents in providing quantitative data through questionnaires. A subset of this sample size was purposively selected to participate in interviews and focus group discussions. Therefore, the demographic characteristics of the participants in the study were captured through the questionnaires and were as outlined in the following sections:

Gender of respondents

The gender distribution of respondents at the KatimaMulilo Border Post is highly skewed towards males, with 88.1% of participants being male and only 11.9% female. This indicates that the customs clearance and trade facilitation sector at this border is male-dominated. The low representation of women could be due to the nature of work involved, which may be physically demanding, or due to socio-cultural factors that influence female participation in customs-related roles.

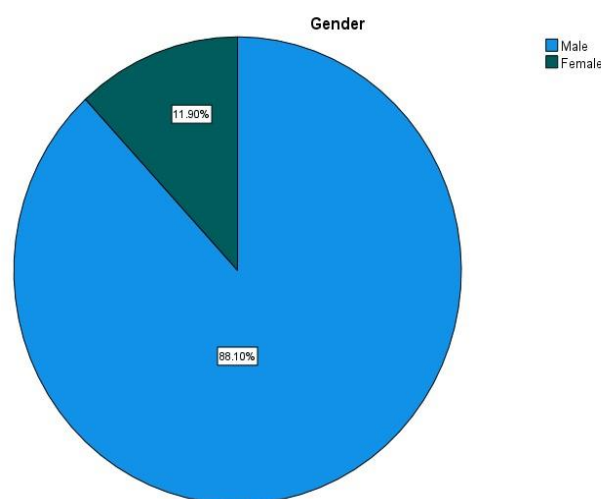


Figure 1. Gender of respondents

Age group of respondents

The age distribution shows that the majority of respondents fall within the 26–40 years age range, collectively making up 65.9% of the sample. This suggests that the customs clearance industry at the KatimaMulilo Border Post is primarily composed of individuals in their prime working years, which imply a workforce with significant energy and experience. The smaller representation of individuals above 46 years (10.1%) suggests that the industry may not retain older workers for extended periods, possibly due to job demands or turnover trends.

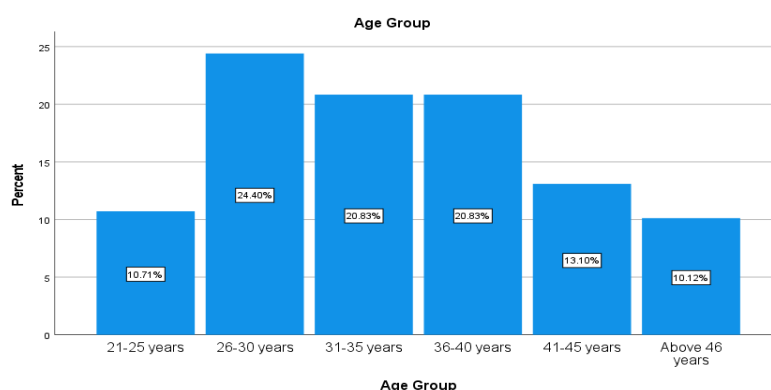
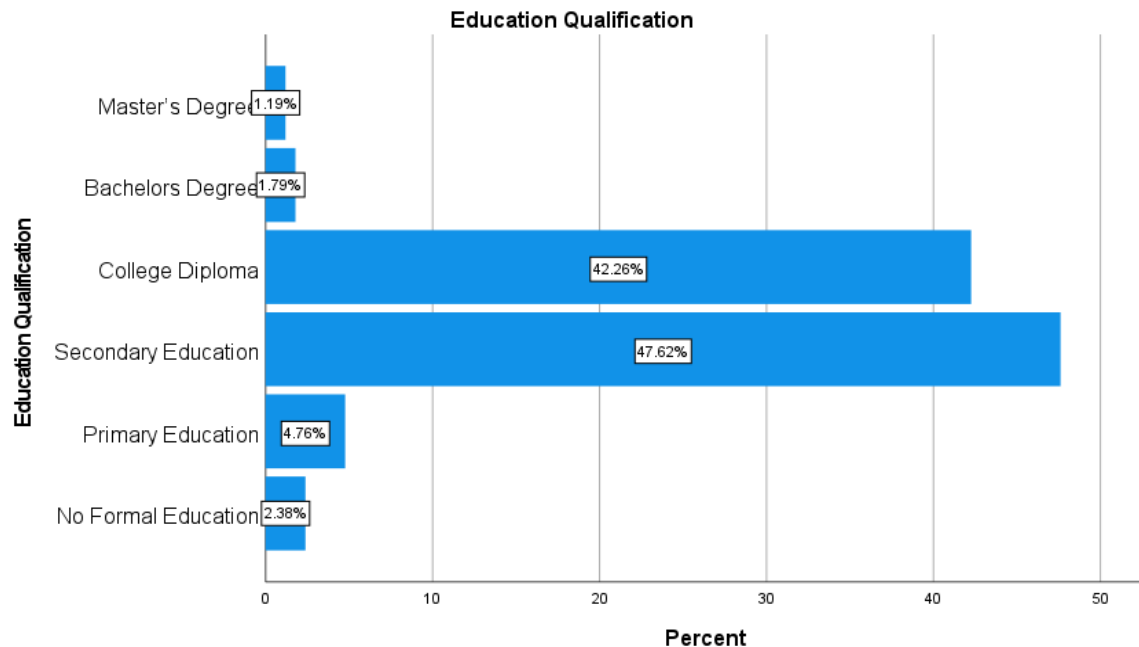


Figure 2: Age group of respondents

Highest Educational Qualification

The educational qualifications of respondents reveal that nearly half (47.6%) possess secondary education, while 42.3% hold a college diploma. This suggests that most workers in the customs clearance process have at least a basic level of formal education, with a significant portion having technical or vocational training. However, the percentage of individuals with higher education, such as bachelor's (1.8%) and master's degrees (1.2%), is quite low. This could imply that customs clearance processes at this border post are primarily operational rather than highly specialized roles requiring advanced academic qualifications.



Source: Field work, 2025

Role of the Respondent

The distribution of roles highlights that the majority of respondents are either clearing agents (48.8%) or drivers (47.0%). This is expected since clearing agents are directly responsible for processing documentation, while drivers are key stakeholders in the movement of goods across the border. The presence of customs officers (3.0%) and truck runners (1.2%) is minimal, suggesting that either their involvement in the survey was limited or their representation in the workforce is smaller compared to clearing agents and drivers.

Figure 4: Role of the Respondent

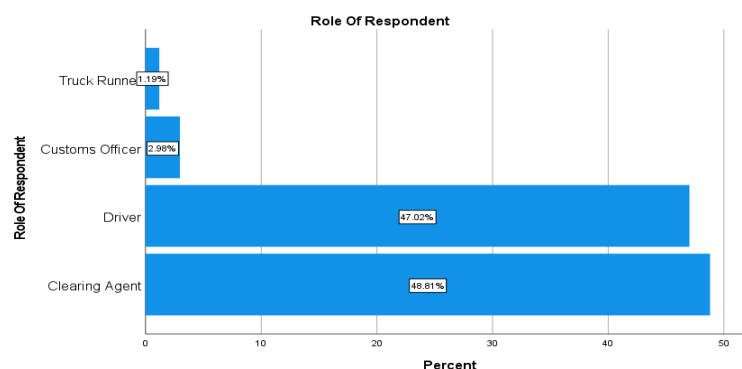


Figure 3: Highest education qualification

Years of Experience in the Position

The experience levels among respondents show that the majority have been in their roles for a considerable period, with 36.3% having between 6 to 10 years of experience and 31.0% having more than 10 years. This indicates a well-seasoned workforce, which is essential for efficient trade facilitation and customs processes. However, the 2.4% of respondents with less than a year of experience suggests that there is still some new entry into the sector, ensuring continuity.

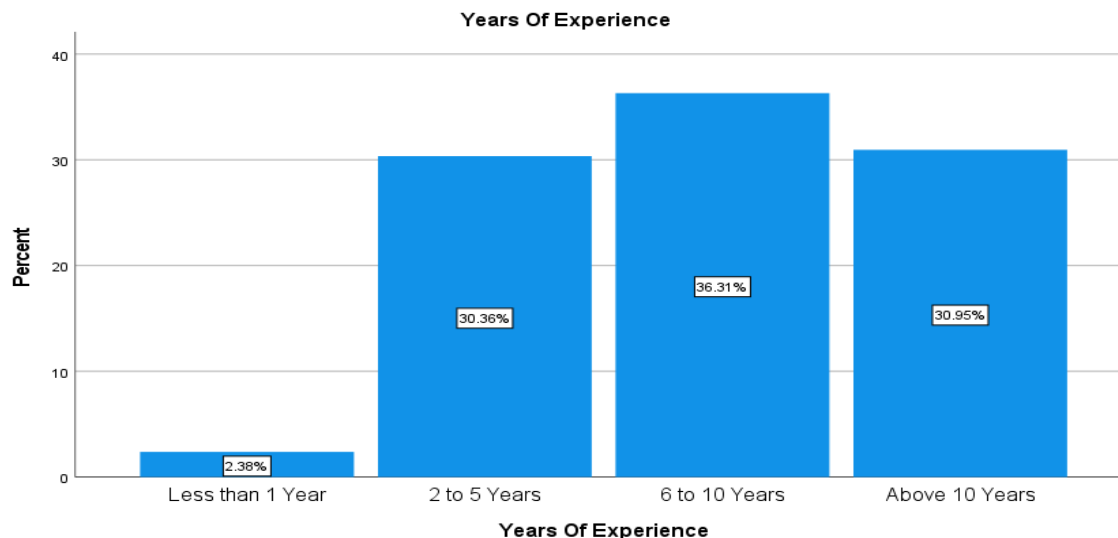


Figure 5: Years of experience in the position

The procedural process for the clearance of goods at KatimaMulilo

Type of Clearance Done

The data on customs clearance procedures shows that pre-clearance is the dominant process, used in 82.1% of cases. This suggests that most trade transactions are streamlined before goods arrive at the border, potentially reducing delays. Pre-registration (15.5%) is another commonly used approach, but the reliance on standard customs clearance (2.4%) is minimal. This indicates a shift towards more efficient clearance methods, which could be contributing to improved trade facilitation at KatimaMulilo Border Post.

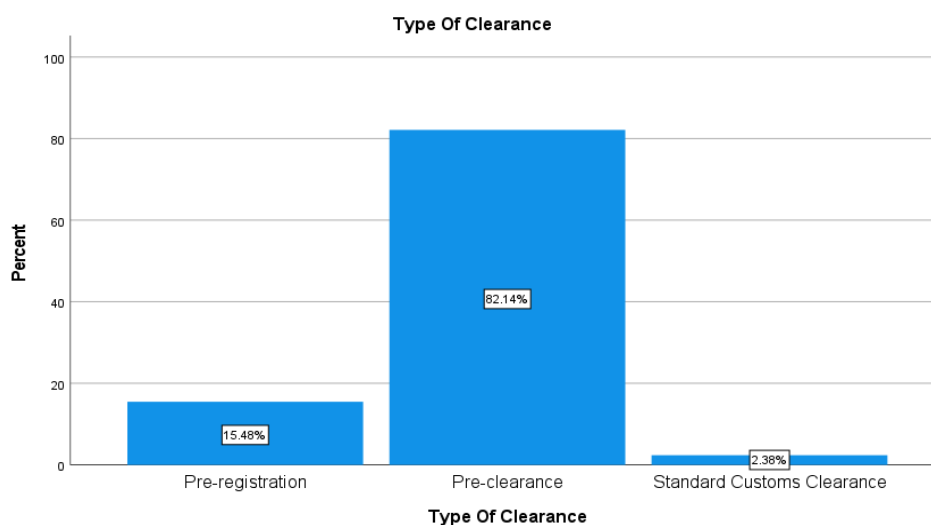


Figure 6: Type of clearance done

Similarly, interviews with the officers revealed that the preclearance is the commonly used type of clearance at KatimaMulilo Border Post as regulated in the service charter.

Officer 1 shared that:

“The clearance process at Katima follows a pre-clearance system, meaning that before goods arrive at the border, an entry must be registered in advance. This allows customs officials to process documentation and approvals beforehand, reducing waiting times once the goods arrive.” Officer 3 had this to say:

“Preclearance is the process of declaring goods before they physically arrive at the border. This allows customs to assess and approve shipments in advance, reducing delays. The process involves submitting declarations, attaching relevant permits, and ensuring compliance with customs regulations. When the consignment arrives, customs has already been notified and can clear the goods more efficiently.”

Procedures in the clearance of goods

Interviews with the officers unveiled that key players in the clearance of goods include customs officers, clearing agents, drivers, and other agencies such as Agriculture and the Zambia Bureau of Standards (ZABS). The figure below shows the procedures followed in the clearance of goods;

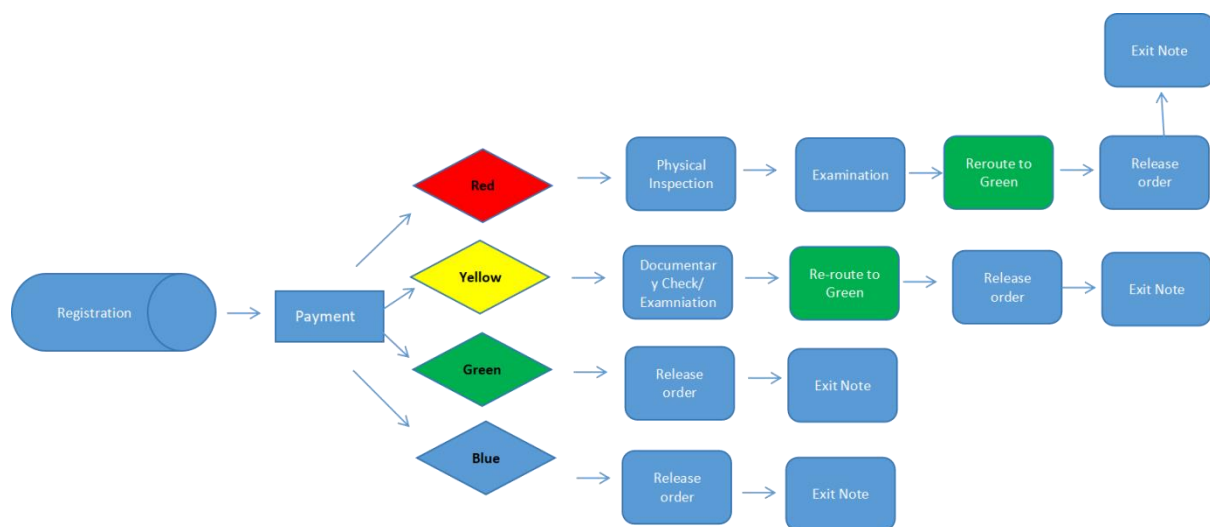


Figure 7: procedures followed in the clearance of goods

The figure indicates the various stages goods undergo for clearance, beginning with the initial stage which is registration through an agent. Then going through the asycuda, examination officer and finally the final assessment upon approve from the asycuda. Detailed explanations of these stages were given during interviews. In an interview Officer 2 shared that:

“On the customs side, customs officers are not involved at the initial stage when the truck is still in route. Before the goods arrive at the border, the clearing agents are responsible for registering the goods in the system. They enter details such as the type of goods, quantity, and description. Duties are paid at this stage, ensuring that by the time the goods reach the border, most of the formalities are completed.”

Asked on the various steps involved, Officer 4 disclosed that:

“The clearance process involves the following steps: Registration of Entry where the client or their agent submits necessary documentation before the goods arrive. System Check: Customs officers review and verify submitted details in the system. Pre-clearance is for all the general goods and the key steps include: Obtaining an invoice that includes Incoterms. Ensuring that all necessary details, are captured correctly.”

It was further shared by Officer 4 that:

“Physical Inspection (if required): If necessary, customs officers physically inspect the shipment to confirm that the declared goods match what has arrived. If everything is in order, customs finalises the clearance, and the truck can proceed.”

When asked about what is involved in the physical inspection of goods, it was unveiled that:

“Physical inspection is done to verify that the goods match the details declared in the documents. The type of goods (e.g., if the documents state Model A, they confirm that Model A has arrived). Quantity ensuring it matches what was declared. Country of origin verifying that it aligns with the provided documentation. This step is necessary when there are inconsistencies or when customs regulations require physical verification,” (Officer 5).

It was further revealed that the clearance process is also determined by the different colour lanes that help with an automated risk assessment of goods, as shared by Officer 6:

“The customs clearance process is managed through different lanes based on risk assessment: Green Lane: This is the fastest lane for clearance, used for goods that are regularly imported and pose minimal risk. There are two types: standby green, where goods are initially assigned and await clearance, and cleared green, where the consignment is fully cleared.” Officer 6 further shared:

“Yellow Lane: This is for documentary checks, meaning customs officials only examine the paperwork without physically inspecting the goods. Red Lane: This requires a full examination, both documentary and physical, to ensure compliance with customs regulations.” Another officer also had this to say:

“Risk management principles determine which lane a consignment falls into, with automated systems occasionally diverting shipments for further inspection, even if they typically qualify for green clearance” (Officer 7).

When asked about how the lanes determine the types of goods that require special permits for clearance, Officer 8 disclosed:

“Goods fall into three categories: normal goods, restricted goods, and prohibited goods. Normal Goods: These can be imported with standard documentation. Restricted Goods: These require specific permits, such as phytosanitary certificates for agricultural products, health import permits, or proof of compliance with GMO regulations. Prohibited Goods: These cannot be imported by individuals without government intervention, such as drugs and

other controlled substances. Restricted goods are often subject to detailed checks to ensure they comply with import regulations, such as moisture content for maize imports.”

Clarity of Customs Documentation Requirements and Length of Goods Clearance

The cross-tabulation data suggests a mixed perception of customs documentation clarity and its effect on clearance time. A majority of respondents who rated the process as "neutral" or "clear" experienced goods clearance in the range of 1 to 5 days. Specifically, 56% of those who viewed the documentation process as "neutral" reported clearance taking 3–5 days, while 48 respondents who found the process "clear" also reported a clearance time of 3–5 days. This indicates that even with clear documentation, clearance procedures still take a few days, potentially due to other logistical factors. Remarkably, respondents who rated the process as "very unclear" or "unclear" had inconsistent clearance times, suggesting that confusion in documentation does not always directly lead to delays but may contribute to unpredictability.

Table 1: Clarity of Customs Documentation Requirements and Length of Goods Clearance Cross tabulation

		Length of Goods Clearance 1				Total
		Less than 1 Day	1 - 2 Day	3 - 5 days	6 - 7 days	
Clarity of Customs Documentation Requirements	Very Unclear	1	0	2	0	3
	Unclear	0	1	1	0	2
	Neutral	1	17	51	3	72
	Clear	5	38	48	0	91
Total		7	56	102	3	168

Source: Field work, 2025

Clarity of Customs Documentation Requirements and Length of Goods Clearance Chi Square Tests

The chi-square test result (p-value = 0.023) indicates a statistically significant relationship between the clarity of customs documentation requirements and the length of goods clearance. This suggests that the level of understanding of documentation requirements plays a role in determining how quickly goods are cleared. The likelihood ratio test also supports this conclusion (p-value = 0.033). Since 75% of the expected counts are below five, this result should be interpreted cautiously, but overall, it supports the claim that clearer documentation processes contribute to faster trade facilitation.

Table 2: Clarity of Customs Documentation Requirements and Length of Goods Clearance Chi Square Tests

Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	19.294 ^a	9	.023

Likelihood Ratio	18.229	9	.033
Linear-by-Linear Association	4.242	1	.039
N of Valid Cases	168		

a. 12 cells (75.0%) have expected count less than 5. The minimum expected count is .04.

Source: Field work, 2025

Clarity of Customs Documentation Requirements and Length of Goods Clearance Symmetric Measures

The Pearson correlation (-0.159, $p = 0.039$) and Spearman correlation (-0.221, $p = 0.004$) indicate a weak but significant negative relationship between clarity of customs documentation and length of goods clearance. This means that as clarity improves, the time required for clearance slightly decreases. Although the correlation is not very strong, it reinforces the importance of clear documentation in streamlining the clearance process.

Table 3: Clarity of Customs Documentation Requirements and Length of Goods Clearance Symmetric Measures

		Symmetric Measures			
		Value	Asymptotic Standard Error ^a	Approximate T ^b	Approximate Significance
Interval by Interval	Pearson's R	-.159	.096	-2.080	.039 ^c
Ordinal by Ordinal	Spearman Correlation	-.221	.075	-2.926	.004 ^c
N of Valid Cases		168			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Source: Field work, 2025

Frequency of Delays and Trade Facilitation

Frequency of Delays and length of Goods Clearance Cross tabulations

Table 4: Frequency of Delays and length of Goods Clearance Cross tabulations

			Crosstab Count				Total
			Length of Goods Clearance				
			Less than 1 Day	1 - 2 Day	3 - 5 days	6 - 7 days	
How Inspections Cause Delays in Clearance Process	Often	Never	1	4	11	1	17
		Rarely	4	19	37	2	62
		Sometimes	2	33	52	0	87
		Often	0	0	2	0	2
Total			7	56	102	3	168

Source: Field work, 2025

The cross tabulation shows that most respondents experience occasional delays due to inspections, with 51.8% (87 out of 168) reporting that delays "sometimes" occur. A significant portion (36.9%) reported that delays "rarely" happen, while only a small number (1.2%) stated that inspections "often" cause delays. For those who reported that delays "never" occur, clearance times were still spread across various durations, indicating that other factors beyond inspections influence the overall clearance process. Notably, the "often" category had only two cases, both of which experienced clearance times of 3–5 days, suggesting that frequent delays may not necessarily translate into longer clearance times.

Frequency of Delays and length of Goods Clearance Chi Square

The chi-square test results ($p = 0.531$) indicate no significant relationship between the frequency of delays caused by inspections and the length of goods clearance. The likelihood ratio test ($p = 0.384$) further supports this finding. This suggests that while delays due to inspections may occur, they do not consistently impact how long it takes to clear goods. Other factors, such as documentation processing and coordination among customs agencies, might have a more direct effect on clearance times.

Table 5: Frequency of Delays and length of Goods Clearance Chi Square

Chi-Square Tests			
	Value	Df	Asymptotic Significance (2-sided)
Pearson Chi-Square	8.036 ^a	9	.531
Likelihood Ratio	9.597	9	.384
Linear-by-Linear Association	.216	1	.642
N of Valid Cases	168		

a. 10 cells (62.5%) have expected count less than 5. The minimum expected count is .04.

Source: Field work, 2025

Frequency of Delays and length of Goods Clearance Symmetric Measures

Table 6: Frequency of Delays and length of Goods Clearance Symmetric Measures

Symmetric Measures					
		Value	Asymptotic Standard Error ^a	Approximate T ^b	Approximate Significance
Interval by Interval	Pearson's R	-.036	.079	-.464	.644 ^c
Ordinal by Ordinal	Spearman Correlation	-.047	.077	-.611	.542 ^c
N of Valid Cases		168			

a. Not assuming the null hypothesis.

- b. Using the asymptotic standard error assuming the null hypothesis.
- c. Based on normal approximation.

Source: Field work, 2025

Both Pearson's correlation (-0.036 , $p = 0.644$) and Spearman's correlation (-0.047 , $p = 0.542$) indicate a very weak and statistically insignificant relationship between the frequency of delays and the length of goods clearance. This further reinforces the idea that customs inspections, while occasionally causing delays, do not have a predictable impact on clearance time.

To substantiate the quantitative findings, interviews with officers disclosed that inspections do not often cause delays. It was found that inspections are not always done as such it is not every time that there are delays due to inspections. This is revealed in an interview with Officer 4 who had this to say:

"Inspections can also contribute to delays, but not always. Sometimes they conduct a physical inspection, while other times they only review the documents. If they decide to conduct a physical check, that can add to the waiting time. However, it is not something that happens every time." Similarly, Officer 5 also shared:

"Inspections vary based on the risk level of the goods. Goods are categorised into four lanes green (direct clearance), yellow (document verification), blue (post-clearance audit), and red (physical inspection). Only goods in the red lane require physical inspection, so the impact on overall clearance is moderate."

The common causes of clearance delay of goods at KatimaMulilo border post.

Descriptive Statistics

The descriptive statistics was carried out to better comprehend the common causes of clearance delay of goods at KatimaMulilo border post. The findings are as indicated in the table below;

Table 7: Descriptive Statistics

Descriptive Statistics			
	Mean	Std. Deviation	N
Length of Goods Clearance	2.60	.601	168
Inadequate Staffing	3.10	.937	168
Inefficient Customs Processes	3.07	.886	168
Lack of Coordination between Agencies	2.85	.970	168
Infrastructure Challenges	3.50	.948	168
Documentation Errors by Traders	2.67	.970	168

Source: Field work, 2025

The descriptive statistics provide insight into the key factors contributing to clearance delays. The mean value for length of goods clearance is 2.60, indicating that most goods take between 2 to 5 days to clear. Among the identified causes, infrastructure challenges had the highest mean score (3.50), suggesting that it is the most frequently reported cause of delays. Inadequate staffing (3.10) and inefficient customs processes (3.07) also ranked high, highlighting their significance in prolonging clearance times. Lack of coordination between agencies (2.85) and documentation errors by traders (2.67) were less frequently reported but still contributed to delays. These results suggest that delays at KatimaMulilo Border Post are largely influenced by physical infrastructure, staffing levels, and procedural inefficiencies rather than trader-related errors.

Model Summary

The regression model explains 9.1% of the variation in goods clearance time ($R^2 = 0.091$), indicating that while the identified factors contribute to delays, there may be other significant factors not included in this model. The ANOVA test ($p = 0.008$) confirms that at least one of these predictors significantly impacts the length of clearance time. However, the relatively low R^2 suggests that further investigation is needed to uncover additional causes of delays.

Table 8: Model Summary

Model Summary ^b										
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	Statistics df1	df2	Sig. F Change	Durbin-Watson
1	.302 ^a	.091	.063	.581	.091	3.254	5	162	.008	1.353

a. Predictors: (Constant), Documentation Errors by Traders, Inefficient Customs Processes, Infrastructure Challenges, Inadequate Staffing, Lack of Coordination between Agencies b. Dependent Variable: Length of Goods Clearance

Source: Field work, 2025

ANOVA

The ANOVA results indicate that the regression model is statistically significant, with a p-value of 0.008, which is below the 0.05 threshold. This suggests that the independent variables such as inadequate staffing, inefficient customs processes, lack of coordination between agencies, infrastructure challenges, and documentation errors have a collective influence on the length of goods clearance at the KatimaMulilo border post. The F-statistic of 3.254 further supports the idea that the model provides some explanatory power in understanding delays in customs clearance.

Table 9: ANOVA

ANOVA ^a						
Model		Sum Squares	of Df	Mean Square	F	Sig.
1	Regression	5.502	5	1.100	3.254	.008 ^b

Residual	54.778	162	.338		
Total	60.280	167			

a. Dependent Variable: LengthofGoodsClearance1

b. Predictors: (Constant), Documentation Errors by Traders, Inefficient Customs Processes, Infrastructure Challenges, Inadequate Staffing, Lack of Coordination between Agencies

Source: Field work, 2025

Coefficients Analysis

Table 10: Coefficients

Model		Coefficients ^a						
		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.996	.279		7.148	.000		
	Inadequate Staffing	-.013	.053	-.020	-.236	.814	.811	1.233
	Inefficient Customs Processes	-.033	.054	-.048	-.607	.545	.890	1.124
	Lack of Coordination between Agencies	-.102	.053	-.165	-1.908	.058	.753	1.328
	Infrastructure Challenges	-.174	.049	-.274	-3.525	.001	.928	1.078
	Documentation Errors by Traders	-.085	.051	-.136	-1.658	.099	.828	1.208

a. Dependent Variable: LengthofGoodsClearance

Source: Field work, 2025

The table presents the findings that describe the coefficients of the ANOVA model. Infrastructure

Challenges ($p = 0.001$, $\beta = -0.274$) was the only statistically significant predictor, meaning inadequate infrastructure plays a major role in clearance delays. System failures, ASYCUDA and CPC challenges are some of the infrastructural issues likely to contribute to prolonged clearance times. Lack of Coordination between Agencies ($p = 0.058$, $\beta = -0.165$). Although not statistically significant at the 5% level, the negative coefficient suggests that poor inter-agency communication and overlapping mandates may contribute to delays. Documentation Errors by Traders ($p = 0.099$, $\beta = -0.136$). While not statistically significant, errors in paperwork can still contribute to extended clearance times, as incorrect or incomplete documentation leads to additional scrutiny. Inefficient Customs Processes ($p = 0.545$, $\beta = -0.048$) and Inadequate Staffing ($p = 0.814$, $\beta = -0.020$). These were not statistically

significant, suggesting that while they may contribute to delays, their impact is not as pronounced as infrastructure-related issues.

The findings highlight the urgent need for infrastructure improvements at KatimaMulilo Border Post. Enhancing the ASYCUDA and CPC, and clearance zones, and investing in modern clearance technologies could significantly reduce delays. Additionally, improving coordination between agencies through streamlined procedures and better communication can further enhance efficiency. While trader documentation errors are a concern, their impact is relatively minor compared to structural issues.

Other issues that sparked in the interviews with the key informants include:

“The border is officially labeled as a 24-hour facility, but it does not operate as such in practice. For instance, if a truck arrives at 11 PM, it should ideally be processed immediately. However, most agents knock off at 8 PM, meaning nothing can be done until the next morning. This means that while people walking in and out of the border can be processed at any time, transporters are forced to wait,” driver 1 shared.

On the same issue, an interview with Officer 7 unveiled that:

“The failure to operate 24-hours creates congestion because truck drivers arrive expecting immediate clearance, but instead, they have to park and wait for the agents to return the next morning. This leads to unnecessary piling up of vehicles, which slows down overall operations. If the border were truly operating 24 hours, trucks would not need to wait.”

Driver 1 further commented:

“Trucks pile up because they arrive expecting a 24-hour service, but in reality, that is not the case.”

The CPC challenge was another issue disclosed, an interview with Officer 2 found that:

“The CPC is not at KatimaMulilo, but at Kasungula, processing stops at 22:00 hours. Once the CPC closes, processing resumes the next day. Processing center workload entries are handled at a central processing office, and a high workload there can slow down clearance.”

Officer 3 also shared:

“One of the biggest challenges is the network system. When the system is down, everything comes to a halt, and we have to wait until it is back up. Sometimes there are electricity issues, which also affect the process.”

On the same issue, Officer 4 lamented that:

“The biggest challenge is the network system. Since all documents are processed online, any network failure disrupts the entire process. Additionally, small traders who lack proper

smartphones struggle to process documents online, leading to further delays as they have to rely on clearing agents.”

The efficiency of trade facilitation at KatimaMulilo Border Post

Efficiency of the clearance types used at the border

Efficiency of the clearance types used at KatimaMulilo was another key aspect of the study. Respondents were asked to share on the efficiency of the clearance type of the other, and the findings were as follows:

Table 11: Efficiency of the clearance type as compared to other types

	Efficient	Inefficient	Neutral	Very efficient
Other	25.0		75.0	
Pre-clearance	44.4		50.1	5.5
Pre-registration	30.8	7.7	46.2	15.4
Total	62	2	91	13

Source: Field work, 2025

The efficiency of different clearance types varies significantly. Pre-clearance (44.4%) and preregistration (30.8%) are seen as more efficient compared to other clearance methods. However, pre-registration has a mixed response, with 46.2% of respondents remaining neutral and 15.4% considering it very efficient, suggesting that its benefits are not universally recognised. The "Other" category is rated mostly inefficient (75%), indicating that traditional clearance methods may not be effective. Overall, neutral dominates (91 cases), highlighting the need for process improvements in the clearance system.

In an interview with Officer 2, it was also disclosed that:

“Pre-clearance is highly effective, provided that all key players customs officials, clearing agents, and importers understand their roles and work efficiently. The system is designed to speed up the clearance process, ensuring that consignments do not stay at the border longer than necessary. Many companies are moving away from warehousing and adopting materials requirement planning systems, meaning they only import what is needed for immediate production, usually for a month or two. Therefore, delays in clearance directly impact production schedules. Ideally, no consignment should take more than two days to clear, and in most cases, cargo arrives and leaves on the same day. The pre-clearance minimises lead time and ensures a smooth supply chain.” Another officer had this to say:

“The effectiveness of preclearance has been somewhat limited. Many agents were initially overlooking preclearance since the penalties for failing to do so were minimal. To encourage compliance, penalties were recently increased by more than ten times. This measure is expected to improve efficiency and facilitate faster trade processing,” (Officer 1).

The efficiency of the clearance process on trade facilitation

The respondents were asked to share the efficiency of the clearance process on trade facilitation at KatimaMulilo Border Post. The respondents were asked to indicate on whether

the clearance process has been efficient in reducing time for border trade facilitation, cost for trade facilitation and the predictability of the trade facility. As shown in the table below, the respondents firstly indicated on the efficiency of trade facilitation:

Table 12: Efficiency of trade facilitation

Efficiency	Frequency	Percentage
Efficient	57	33.9
Inefficient	4	2.4
Neutral	99	58.9
Very inefficient	8	4.8
Total	168	100.0

Source: Field Work, 2025

Trade facilitation at KatimaMulilo Border is perceived as moderately effective. While 33.9% of respondents find it efficient, the majority (58.9%) remain neutral, suggesting that the system is neither highly efficient nor highly inefficient. However, 7.2% believe it is inefficient, indicating that there is room for optimisation to enhance trade facilitation.

To further establish the efficiency of the clearance process on trade facilitation, the researcher asked the respondents on the extent to which the clearance process reduces time for border trade facilitation. The findings are as outlined in the table below:

Table 13: Reduced time for border trade facilitation

Extent	Frequency	Percentage
Always	7	4.2
Not at all	16	9.5
Often	48	28.6
Rarely	23	13.7
Sometimes	74	44.0
Total	168	100.0

Source: Field work, 2025

The reduction of time for border trade facilitation is another area of focus, with 44% of respondents sometimes experiencing reduced clearance time and 28.6% often noticing improvements. However, 9.5% do not see any reduction in clearance time, meaning that further enhancements are still needed to make the process more time-efficient.

Another key area for establishing efficiency is the trade cost facilitation outcomes. As such as the respondents were asked to share on the extent to which the clearance process at KatimaMulilo Border Post lowered trade cost facilitation outcomes. And the findings were as follows:

Table 14: Lowered trade cost facilitation outcomes

Extent	Frequency	Percentage
Always	14	8.3

Not at all	4	2.4
Often	33	19.6
Rarely	36	21.4
Sometimes	81	48.2
Total	168	100.0

Source: Field work, 2025

Trade cost facilitation has shown mixed results, with 48.2% of respondents sometimes experiencing reduced trade costs, while 21.4% rarely notice any improvements. This suggests that while trade cost reduction is occurring to some extent, it remains insufficient for many traders, pointing to the need for further cost-cutting measures.

Lastly, the respondents shared on how the clearance process at KatimaMulilo has been efficient towards enhancing predictability of trade facilitation outcomes. The findings are presented in the table below:

Table 15: Enhanced predictability of trade facilitation outcomes

Extent	Frequency	Percentage
Always	10	6.0
Not at all	6	3.6
Often	49	29.2
Rarely	36	21.4
Sometimes	67	39.9
Total	168	100.0

Source: Field work, 2025

Predictability in trade facilitation outcomes is another key factor in efficient customs clearance. About 39.9% of respondents sometimes experience predictability, while 29.2% often do. However, only 6% always observe enhanced predictability, indicating that while some improvements have been made, more consistency is needed.

Discussion of Findings

The procedural process for the clearance of goods at KatimaMulilo

The findings reveal that the procedural processes for clearing goods at KatimaMulilo Border Post are characterized by mixed perceptions of clarity and efficiency. While a majority of respondents (54.2%) rated the customs documentation process as "clear" or "neutral," a significant portion still experienced clearance times of 3–5 days. This suggests that even when documentation requirements are understood, other procedural inefficiencies, such as logistical delays or inter-agency coordination, contribute to prolonged clearance times. The chi-square test ($p = 0.023$) confirmed a statistically significant relationship between the clarity of documentation and the length of goods clearance, indicating that clearer documentation can marginally improve trade facilitation. However, the weak negative correlation (Pearson's $R = -0.159$, $p = 0.039$) suggests that other factors, such as infrastructure and coordination, play a more substantial role in determining clearance times. This implies that while improving documentation clarity is important, it must be

complemented by addressing systemic inefficiencies to achieve meaningful reductions in clearance times.

The study's findings are consistent with prior research highlighting the impact of regulatory bottlenecks on customs efficiency. Similar to Chali (2007) and Widdowson (2007), this research confirms that excessive documentation requirements contribute to clearance delays. Additionally, the inefficiencies in risk assessment lanes at KatimaMulilo reflect broader trends in Zambia's customs operations, where only 30% of monthly clearances are completed efficiently, as reported by the Zambia Revenue Authority (ZRA, 2020). However, the study contrasts with previous research by Kosgei (2019), which found that automation alone significantly improves clearance efficiency. In this study, findings suggest that while automation has facilitated some improvements, it is insufficient without corresponding regulatory reforms, particularly concerning SADC certificate processing. These insights emphasize the need for an integrated approach that combines technological advancements with procedural streamlining.

The lack of clarity in documentation for perishable goods, particularly regarding the SADC certificate, highlights a critical procedural bottleneck. Eighty percent of respondents who found the process unclear cited issues with the CPC requiring a signed SADC certificate, which can only be assigned upon the truck's arrival at the border. This finding aligns with studies by Buyonge and Kireeva (2008), who emphasized that excessive documentation and procedural inefficiencies are major barriers to trade facilitation in Africa. Similarly, the World Bank (2004) noted that customs delays in developing countries are often exacerbated by redundant documentation requirements and poor inter-agency coordination. These findings underscore the need for streamlined documentation processes, particularly for time-sensitive goods, to enhance trade facilitation at KatimaMulilo Border Post. The implications are significant: delays in clearing perishable goods not only increase costs for traders but also reduce the competitiveness of Zambian exports in regional markets, where timely delivery is critical.

Furthermore, the frequency of delays caused by inspections did not significantly impact clearance times ($p = 0.531$), suggesting that inspections are not the primary cause of delays. This finding contrasts with studies by Uzzaman and Yusuf (2012), who identified inspections as a major source of delays in Bangladesh. Instead, the results indicate that delays at KatimaMulilo are more likely due to systemic issues, such as inadequate infrastructure and inefficient customs processes, which are consistent with findings by Mfunne (2015) in her study of Zambia's Kasumbalesa border post. This implies that while inspections are necessary for security and compliance, their impact on clearance times can be minimized through better planning and resource allocation. For instance, adopting risk-based inspection systems, as recommended by the World Customs Organization (WCO), could allow customs authorities to focus on high-risk shipments while expediting low-risk goods (Charles et al, 2024).

The study found that most respondents indicated clearance takes between 3-5 days, with some cases extending beyond this period. However, customs officers revealed that clearance time is influenced by multiple factors, including system failures, high document volumes, and inadequate staffing. The lack of a Central Processing Center (CPC) and asycuda were cited as

a challenge, with customs officers emphasizing that clearance could take hours or days depending on system efficiency. The absence of a centralized processing mechanism leads to inconsistencies in service delivery, increasing waiting times for traders and transporters. This finding aligns with Widdowson (2007) and New Era (2024), which highlight inefficiencies in customs and transport as major barriers to trade facilitation. The trade facilitation theory suggests that streamlined processes and efficient procedures are critical for reducing trade-related costs (Wilson, Mann, & Otsuki, 2003). However, the findings show that Zambia's clearance process remains inefficient, negatively impacting trade flows. The findings reinforce Zambia Revenue Authority (2020) statistics, which indicate that only 30% of consignments are cleared monthly due to inefficiencies in customs processes.

The Common Causes of Clearance Delay of Goods at Katima Mulilo Border Post

The study identified infrastructure challenges as the most significant cause of clearance delays, with a mean score of 3.50. Respondents frequently cited poor road networks, limited inspection areas, and inefficient cargo handling facilities as major obstacles. This finding corroborates the work of Djankov et al. (2006), who found that inadequate infrastructure is a primary contributor to trade delays in Africa. Similarly, Kanyinji, Hapunda, and Hikacila (2020) highlighted the role of poor infrastructure in hindering the effectiveness of the Single Window System at Zambia's Victoria Falls Border Post. The implications of these infrastructure challenges are far-reaching: they not only increase the cost of doing business but also undermine Zambia's ability to attract foreign direct investment (FDI), as multinational corporations often prioritize countries with efficient logistics and trade facilitation systems (Radelet & Sachs, 1998).

Inadequate staffing (mean = 3.10) and inefficient customs processes (mean = 3.07) were also identified as significant contributors to delays. These findings align with studies by Kosgei (2019), who found that staff capacity and training are critical for efficient customs operations. The lack of coordination between agencies (mean = 2.85) further exacerbates delays, as overlapping mandates and poor communication create bottlenecks. This is consistent with findings by Widdowson (2005), who emphasized the importance of inter-agency collaboration in streamlining customs processes. The implications of these findings are clear: without addressing staffing shortages and improving coordination, efforts to modernize customs processes will have limited impact. For example, the introduction of advanced technologies, such as automated clearance systems, may fail to deliver expected benefits if staff are not adequately trained to use them or if inter-agency conflicts persist.

Documentation errors by traders (mean = 2.67) were less frequently cited but still contributed to delays. This finding is supported by Grainger (2011), who argued that trader education and simplified documentation processes are essential for reducing delays. The regression analysis ($R^2 = 0.091$) indicated that while these factors collectively explain some variation in clearance times, other unexamined factors, such as corruption or technological limitations, may also play a role. This aligns with Kireeva and Buyonge (2008), who identified corruption and lack of transparency as significant barriers to trade facilitation in Africa. The implications are significant: addressing these underlying issues requires a holistic approach that combines regulatory reforms, capacity building, and anti-corruption measures. For instance, implementing transparent and predictable customs procedures, as recommended by the

Revised Kyoto Convention (RKC), could help build trust between traders and customs authorities, reducing the likelihood of delays caused by disputes or misunderstandings.

Another critical issue identified in the study was the instability of the Automated System for Customs Data (ASYCUDA), reporting frequent system failures. Officers described the system as a major bottleneck, as network outages completely halt operations. This aligns with World Bank (2004), which identified limited IT infrastructure as a barrier to customs efficiency. The Trade Facilitation Theory underscores the importance of digitalization in customs processes to enhance efficiency. The ASYCUDA failures represent a weak link in the clearance process, causing cascading inefficiencies. Hence, there is a need for deliberate efforts to ensure that infrastructure such as ICT are improved since they are a significant determinant in improving trade facilitation.

The study found that 32.7% of respondents indicated that inadequate staffing often causes delays, while an additional 38.7% said it sometimes does. While improvements have been made, the current manpower remains insufficient for expediting the clearance process. Inefficiencies in customs procedures were also found to be a key issue, with 42.9% of respondents stating that they sometimes cause delays, and 33.3% indicating that they often do. This aligns with Widdowson (2007), who cited inadequate staffing as a challenge in customs operations. According to Systems Theory, a shortage of personnel and inefficient procedures disrupt workflow, creating bottlenecks in customs clearance. The Trade Facilitation Theory also emphasizes the role of efficient human resource deployment and modernized customs procedures, such as automation and round-the-clock operations, in improving clearance processes (Wilson, Mann, & Otsuki, 2003).

An interview with a driver revealed that although the border is designated as a 24-hour facility, it does not operate as such in practice. This contradicts the service charter of ZRA in which KatimaMulilo Border post is required to operate 24/7. This inefficiency creates unnecessary congestion, as truck drivers must wait overnight for agents to resume work. The failure to operate continuously results in a backlog of vehicles, exacerbating delays. This then affects the clearing of goods at KatimaMulilo Border, as found by Zambia Revenue Authority (2020) that only a fraction of goods are cleared on time due to procedural inefficiencies. CPC-related delays were reported as a significant issue, with 44% of respondents stating that they sometimes occur, while 33.9% said they often do. The CPC at Kazungula does not operate 24 hours, meaning that once it closes at 22:00 hours, clearance stops until the following day. This was also found by Widdowson (2007), who highlighted the inefficiencies of centralized processing models that do not accommodate realtime trade needs. From a Systems Theory perspective, the CPC delay disrupts clearance processes, affecting supply chain efficiency. CPC at Kazungula closing at 22:00 hours does not align with KatimaMulilo border 24 hour operation, as such there is need for a CPC system that aligns with the operations at KatimaMulilo so as curtail the delays in the clearing of goods at the border.

The overall efficiency of trade facilitation at KatimaMulilo Border Post

The study found that the efficiency of clearance procedures varies depending on risk assessment lanes and compliance measures. The study found that 44.4% of respondents perceived preclearance as efficient, while 50.1% remained neutral regarding the efficiency of

the clearance type. This neutrality suggests that a significant proportion of traders may lack awareness or experience inconsistencies in the application of pre-clearance procedures (IOM, 2023). Additionally, interviews with customs officials indicated that increased penalties for non-compliance have recently improved clearance efficiency. This finding feeds into the trade facilitation theories emphasizing the role of regulatory enforcement in ensuring regulatory and procedural compliance (Otsuki, 2003).

The moderate effectiveness of trade facilitation, as perceived by respondents, aligns with global trends where border efficiency improvements take time due to bureaucratic and infrastructural constraints. However, the fact that only a small fraction of respondents find the system highly efficient suggests that the reforms undertaken are not fully addressing critical pain points such as time delays, high trade costs, and unpredictability.

The discussion also highlights that trade cost reduction remains an area requiring urgent intervention. The study reveals that while some traders experience reduced costs, a significant portion does not, suggesting that trade facilitation measures have yet to deliver widespread financial relief. This aligns with findings from Hoekman and Nicita (2010), who emphasize that while trade facilitation reduces transaction costs in theory, its actual impact depends on the efficiency of customs procedures, the reduction of non-tariff barriers, and the simplification of documentation requirements. Given that the study still identifies instances where traders face high costs, it is evident that more aggressive reforms are needed, such as the introduction of preferential treatment for compliant traders and the elimination of redundant paperwork.

Predictability in trade facilitation also emerges as an issue requiring attention. The study finds that while some respondents experience predictability in border procedures, a substantial percentage does not, making it difficult for traders to plan effectively. This unpredictability contradicts the principles outlined in the WTO Trade Facilitation Agreement (2013), which stresses the importance of transparency and consistency in customs operations. The inconsistency in responses suggests that while efforts are being made to standardize procedures, their implementation remains uneven. This echoes the argument by Wilson et al. (2003) that fragmented and uncoordinated trade facilitation measures result in inefficiencies that ultimately reduce competitiveness.

The study findings align with the literature in recognizing that trade facilitation at the KatimaMulilo Border Post requires a multi-faceted approach. While some reforms are in progress, the effectiveness of these measures remains limited due to implementation challenges, infrastructural weaknesses, and lack of coordination. The study reinforces the need for a holistic strategy that integrates automation, capacity building, ICT investment and procedural streamlining. Without a concerted effort to address these issues, the full benefits of trade facilitation will remain unrealized, ultimately hampering economic growth and regional trade efficiency.

Conclusion

The main objective of this study was to investigate the role of the clearance process in enhancing trade facilitation at KatimaMulilo Border Post. The study found that procedural processes at KatimaMulilo Border Post were clear in some areas but inefficient in others. The

chi-square test revealed a statistically significant relationship between the clarity of documentation and clearance times, indicating that improved documentation can somewhat reduce delays. However, the weak negative correlation suggests that addressing other systemic inefficiencies, such as infrastructure and agency coordination, is crucial for improving trade facilitation. Under the second objective, the study found that infrastructure challenges were the most significant cause of delays, with poor road networks, limited inspection areas, and inadequate cargo handling facilities being key contributors. Finally, the findings from the study on the efficiency of trade facilitation at KatimaMulilo Border Post reveal that while there have been some improvements, there is still significant room for optimisation. Pre-clearance is seen as a relatively effective method, with many respondents acknowledging its role in reducing congestion and time delays, although challenges such as discrepancies in documentation and compliance issues remain. The overall efficiency of the clearance process is perceived as moderate, with a majority of respondents expressing neutrality or suggesting that improvements are necessary. While time reduction and cost lowering are sometimes observed, there is still inconsistency in these outcomes, and trade predictability remains an area for further enhancement.

Recommendations

Based on the conclusions drawn from the study, the following recommendations are proposed for improving customs clearance processes at KatimaMulilo Border Post:

- i. Simplify and standardize documentation requirements, especially for perishable goods, to reduce delays. The implementation of a Single Window System would allow traders to submit all documents through one platform, improving efficiency and transparency.
- ii. Address infrastructure challenges by improving road networks, expanding inspection areas, and upgrading cargo handling facilities. These measures would reduce bottlenecks and improve the overall efficiency of the clearance process.
- iii. Provide regular training to customs officers to improve their handling of modern clearance technologies and complex trade procedures. Additionally, address staffing shortages through recruitment and retention strategies to ensure customs operations can keep pace with growing trade volumes.
- iv. Establish clear protocols for collaboration between different agencies involved in the clearance process. Adopting Coordinated Border Management (CBM) practices could reduce overlap and improve communication, ensuring that clearance processes run more smoothly.
- v. Invest in modern technologies such as automated customs systems and electronic document processing. Implementing electronic cargo tracking systems and modern cargo scanners could reduce manual inspections and expedite clearance while maintaining security standards.

ACKNOWLEDGEMENTS

I wholeheartedly give gratitude to everyone who helped me during the writing of this research work.

NOTES ON CONTRIBUTORS

All listed authors played a major role to see to it that this paper comes to completion.

REFERENCES

- Bryman, A. & Cramer, D., 1997. *Quantitative Data Analysis with SPSS for Windows: A Guide for Social Scientists*. London: Routledge.
- Bryman, A., 2016. *Social Research Methods*. Oxford: Oxford University Press.
- Charles, G., Kanani, R., & Pallangyo, M. (2024). The effect of regulatory requirements on the effectiveness of cross-border clearance of goods: Lessons from selected border posts in Tanzania. *Tanzania Journal of Development Studies*, 22(2), 95–114.
- Cooper, D. R. & Schindler, P. S., 2014. *Business Research Methods*. 12th ed. New York: McGrawHill.
- Creswell, J. W. & Plano Clark, V. L., 2018. *Designing and Conducting Mixed Methods Research* (3rd ed.). Thousand Oaks, CA: SAGE.
- Creswell, J. W., 2014. *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. 4th ed. SAGE Publications.
- Dhakal, A., & Jha, A. (2020). Custom clearance processing time analysis and factors affecting clearance time for goods in Birgunj, Nepal. *Journal of Advanced Research in Civil & Environmental Engineering*, 7(3&4), 27–37.
- Etikan, I., Musa, S. A. & Alkassim, R. S., 2016. Comparison of convenience sampling and purposive sampling. *American Journal of Theoretical and Applied Statistics*, 5(1), pp. 1-4.
- Hoffman, A. J., Grater, S., Venter, W. C., Maree, J., & Liebenberg, D. (2024). An explorative study into the effectiveness of a customs operation and its impact on trade. *World Customs Journal*, 12(2), 63–86.
- Jonath, A., Panga, F., Nkunda, R., & Scovia, A. (2024). Customs clearance procedures and crossborder logistics performance in East Africa: A case of Malaba-Busia and Taveta-Holili one-stop border posts. *Journal of Co-operative and Business Studies*, 8(1), 1–20.
- Kanyinji, P., Hapunda, V., & Hikacila, C. C. (2020). The impact of single window system on customs administration at Victoria Falls border post in Zambia. *The University Journal*.
- Kast, F. E., & Rosenzweig, J. E. (1972). *General Systems Theory: Applications for Organization and Management*. *Academy of Management Journal*, 15(4), pp. 447-465.
- Kosgei, S. K. (2019). Effect of automated customs procedures on trade facilitation: A case of clearing and forwarding agents in Nairobi region. Master's thesis, University of Nairobi.
- Kothari, C. R., 2011. *Research Methodology: Methods and Techniques*. 2nd ed. New Delhi: New Age International.
- Mfune, M. L. (2015). A case study on customs trade facilitation at Zambia's Kasumbalesa border post. Master's thesis, University of Zambia.
- Morgan, D. L., 2007. Paradigms Lost and Pragmatism Regained: Methodological Implications of Combining Qualitative and Quantitative Methods. *Journal of Mixed Methods Research*, 1, pp. 48-76.
- Ngarachu, A., Wood, C., Krogman, H., Tshuma, E., & Mudenda, D. (2019). Bottlenecks or growth zones? A study of the Chirundu and Beitbridge border economies. *Southern African Journal of Policy and Development*, 4(2), Article 5.
- Nunnally, J. C., 1978. *Psychometric Theory*. McGraw-Hill.
- P Liehr, M. J. S., 1999. Middle range theory: Spinning research and practice to create knowledge for the new millennium. *National Library of Medicine*, 21(4), pp. 81-91.
- Peshkin, A., 1993. The Goodness of Qualitative Research. *Educational Researcher*, 22(2), pp. 23-

29.

Saunders, M., Lewis, P. & Thornhill, A., 2019. *Research Methods for Business Students*. 8th ed. New York: Pearson.

Sharma, G., 2017. Pros and Cons of Different Sampling Techniques. *International Journal of Applied Research*, 3, pp. 749-752.

Sourdin, P., & Pomfret, R. W., 2012. *Trade Facilitation: Defining, Measuring, Explaining and Reducing the Cost of International Trade*. Edward Elgar Publishing.

Wanjao, L. (2022). *Effect of customs administration procedures on trade facilitation in Kenya*. Doctoral dissertation, Moi University.

Willie, A., & Chikwabi, D. (2024). Impact of border delays and costs on COMESA cross-border trade. *Key Issues in Regional Integration*, 6, 67–87.

Wilson, J. S., Mann, C. L., & Otsuki, T., 2003. Trade Facilitation and Economic Development: A New Approach to Quantifying the Impact. *The World Bank Economic Review*, 17(3), pp. 367-389.