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EVALUATING THE IMPACT OF BORDER MANAGEMENT STRATEGIES ON ILLICIT TRADE REDUCTION IN KENYA'S ONE STOP BORDER POST OF BUSIA

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Abstract
This study evaluated the impact of border management strategies on illicit trade reduction in Kenya's One-Stop Border post (OSBP) of Busia. A descriptive research design was used. The target population comprised community members living along the border, law enforcement officers, and relevant government officials such as chiefs and immigration officers, all of whom had valuable information regarding the issue. Purposive sampling was used to select the residents along the Kenya-Uganda border and they were 156 in total. Purposive sampling was also used to select law enforcement officers, chiefs, and immigration officials. The questionnaire used was researcher-administered. A structured questionnaire was used to obtain information from the residents while interview schedule guides were used to obtain information from law enforcement officers, chiefs, and immigration officials. Hypotheses were tested using Pearson's Correlation Coefficient (r)at α =0.05 level of significance. The results obtained from Kenya's One Stop Border Post of Busia reveal that corruption and weak enforcement mechanisms are the primary factors driving illicit trade along the Kenya-Uganda border, accounting for 27% and 21% of respondent feedback, respectively. Smuggling routes (19%) also play a significant role, facilitating the illegal movement of goods. Additional contributors include cross-border demand (11%), political instability (9%), inadequate infrastructure (8%), and poverty (5%), each exacerbating the problem to varying degrees. Statistical analysis shows the critical role of technological adoption, inter-agency collaboration, and stringent border control measures in mitigating illicit trade. Pearson's Correlation Coefficients demonstrate strong negative correlations between these variables and illicit trade prevalence, indicating that increased adoption of technology, enhanced inter-agency cooperation, and stricter border inspections significantly reduce illicit trade. Recommendations include implementing robust anti-corruption measures, equipping and training border officials, investing in advanced surveillance technologies, and fostering inter-agency coordination with integrated policies to ensure a comprehensive and unified approach to combating illicit trade

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1 Introduction

Illicit trade continues to prosper despite the border management strategies being put in place. Border enforcement agencies have been trying to put measures to prevent the flow of illegal goods. Although several techniques have been incorporated for dealing with such vices, bureaucracies and poor funding have led to the flourishing of illicit trade. The benefits accrued from illicit activities such as international trade and existing market forces are a cornerstone of economic growth, however, these factors present challenges such as smuggling, counterfeiting which undermines economies and threatens security. In many countries outside Africa, such as the United States, the use of advanced technologies and stringent border management strategies has significantly reduced illicit trade. For example, the U.S. Customs and Border Protection (CBP) employs sophisticated monitoring systems, including non-intrusive inspection technologies and electronic cargo tracking, to detect smuggling activities [1]. These technologies have enhanced the ability to monitor and control goods crossing the border, curbing activities such as drug trafficking and counterfeit goods trade. Additionally, inter-agency collaboration involving customs, border patrol, and federal law enforcement has streamlined enforcement and compliance, creating a robust framework to address trade-related crimes. Policy integration has also played a pivotal role, aligning national laws with international standards to close gaps that illicit traders could exploit. The success of these approaches in reducing illegal trade has made them models for other nations grappling with similar challenges [2]

In Africa, illicit trade remains a pervasive issue, often fueled by porous borders, weak enforcement mechanisms, and insufficient technological capabilities. South Africa, a regional economic powerhouse, has faced significant challenges with counterfeit goods, smuggled cigarettes, and illegal mining products [3]. To counter these threats, South Africa has implemented targeted strategies, such as enhancing technological monitoring at border points and forming multi-agency task forces to address illicit trade. The integration of customs systems across Southern African Development Community (SADC) member states has also facilitated better information sharing, making it harder for smugglers to exploit regulatory loopholes. However, the scale of the problem and the adaptability of smugglers highlight the need for continuous improvement in policy, technology, and inter-agency collaboration across the region [4].

At the national level, Kenya occupies a strategic position within East Africa, serving as a critical transit hub along the Northern Corridor, a major trade route connecting the port of Mombasa to landlocked countries such as Uganda, Rwanda, and South Sudan [5]. This strategic location makes Kenya a focal point for both legitimate trade and illicit activities, including smuggling, counterfeit goods, and tax evasion. Illicit trade has been a persistent problem, undermining economic development and posing security risks [6]. To address these challenges, the Kenyan government has adopted several border management strategies, particularly at One-Stop Border Posts (OSBPs) like the one in Busia. OSBPs aim to enhance the efficiency of border crossings by integrating the operations of two neighboring countries at a single location, thereby reducing time and costs associated with cross-border trade. At the national level, Kenya has implemented technological systems such as the Integrated Customs Management System (iCMS) and the Regional Electronic Cargo Tracking System (RECTS). These tools provide real-time monitoring of cargo movement, reducing opportunities for illicit trade. However, limited adoption of advanced technologies at smaller OSBPs and inconsistent enforcement remain challenges.

The Busia One-Stop Border Post, located on the Kenya-Uganda border, plays a critical role in facilitating trade along the Northern Corridor, East Africa's main trade route. However, its proximity to porous border areas has made it vulnerable to smuggling, tax evasion, and counterfeit goods trade [7]. The adoption of technology, such as cargo scanners and electronic tracking, has improved monitoring capabilities, but gaps remain due to inadequate resources and uneven application of these systems. Additionally, the integration of policies between Kenya and Uganda has encountered challenges, including differences in legal frameworks and enforcement practices. Inter-agency collaboration has improved, with customs, immigration, and law enforcement agencies working together, but coordination challenges persist, particularly in managing informal trade routes near the OSBP.

At the local level in Busia, the success of border management strategies in reducing illicit trade depends on several factors. These include the adoption of robust inspection and control measures, such as frequent spot checks and stringent customs procedures. Community involvement and sensitization also play a critical role, as residents near the border are often aware of illicit trade activities. However, enforcement efforts can be undermined by corruption, resource constraints, and the adaptability of smugglers who use informal routes to evade detection.

This study evaluates the impact of border management strategies on illicit trade reduction at the Busia One-Stop Border Post, focusing on three critical areas: technological adoption and monitoring systems, inter-agency collaboration and policy integration, and the stringency of border inspection and control measures. It aims to provide insights into the effectiveness of current strategies and identify areas for improvement to combat illicit trade effectively.

2 Purpose and objectives of the study

The study aimed to evaluate the impact of border management strategies on illicit trade reduction in Kenya's One Stop Border (OSBP) post of Busia: The study was guided by the following objectives:

i. To determine the impact of technological adoption and monitoring systems on Illicit Trade Reduction in Kenya's One Stop Border Post of Busia.
ii. To assess the impact of inter-agency collaboration and policy integration on Illicit Trade Reduction in Kenya's One Stop Border Post of Busia.
iii. To find out the impact of stringency of border inspection and control measures on Illicit Trade Reduction in Kenya's One Stop Border Post of Busia.

3 Research Hypotheses

$H_0$1 There is no statistically significant impact of technological adoption and monitoring systems on illicit trade reduction in Kenya's One Stop Border Post of Busia.
$H_0$2 There is no statistically significant impact of inter-agency collaboration and policy integration on illicit trade reduction in Kenya's One Stop Border Post of Busia.
$H_0$3 There is no statistically significant impact of the stringency of border inspection and control measures on illicit trade reduction in Kenya's One Stop Border Post of Busia.

4 Conceptual Framework

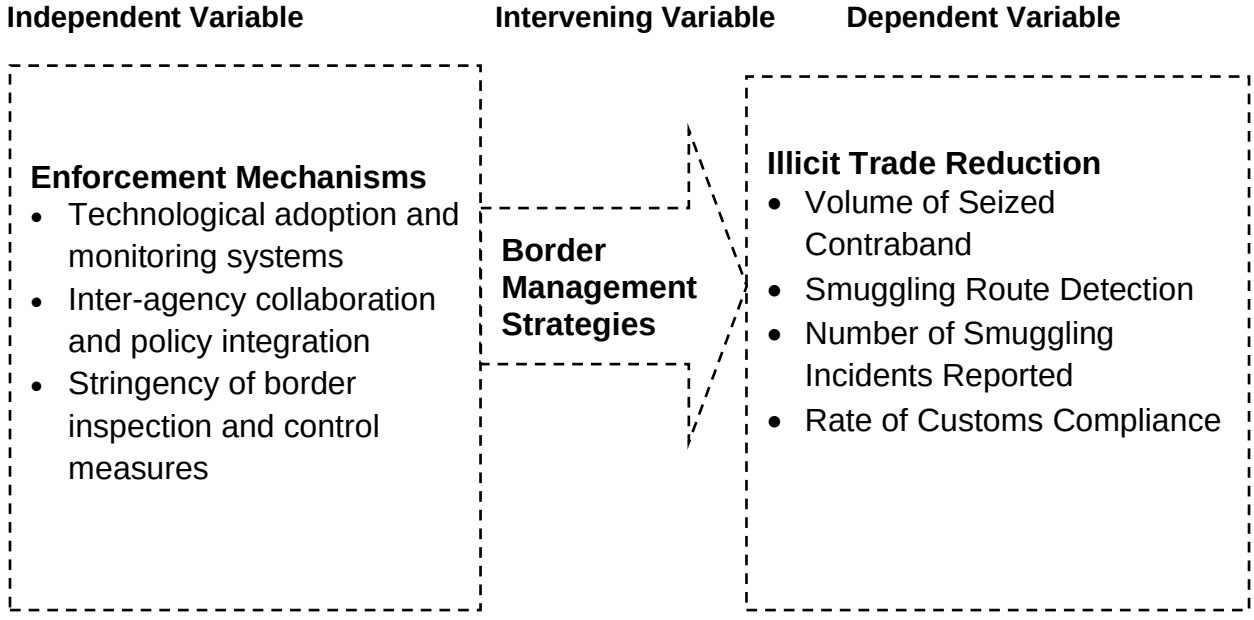

Figure 1. Conceptual framework

The conceptual framework illustrates the relationship between border management strategies and the reduction of illicit trade at Kenya's One Stop Border Post (OSBP) in Busia. The framework is divided into two main sections: the independent variable and the dependent variable. The independent variable is impact of border management strategies. This consists of three key elements: technological adoption and monitoring systems, inter-agency collaboration and policy integration, and the stringency of border inspection and control measures. Technological adoption and monitoring systems here are the integration of advanced technologies like scanners, biometric tools, and cargo tracking systems to monitor the movement of goods and people across the border. Inter-agency collaboration and policy integration highlight the cooperation between various government agencies, such as customs, police, and immigration, to streamline processes and share intelligence to combat illicit trade. The third element, stringency of border inspection and control measures, focuses on the thoroughness and frequency of checks at the border post. Stronger border controls, including detailed inspections of goods, vehicles, and individuals, play a crucial role in preventing the flow of illicit goods. The dependent variable in this framework is illicit trade, which is the outcome that the study aims to influence and measure based on the border management strategies. Illicit trade is represented by four indicators that reflect its prevalence and the effectiveness of the implemented strategies. The first indicator, the volume of seized contraband, measures the amount of illegal goods intercepted at the border. A higher volume of seized contraband suggests that border control measures are effectively detecting and preventing illicit trade. The second indicator, smuggling route detection, tracks the identification and disruption of unauthorized routes used to bypass formal border controls. A rise in detecting such routes implies that border management strategies, particularly technological tools, are succeeding in identifying hidden smuggling channels. The third indicator, the number of smuggling incidents reported, counts the number of smuggling cases that are detected and documented at the border. A decrease in these incidents can signify a reduction in illicit trade due to effective border strategies. Lastly, the rate of customs compliance reflects the level of adherence to customs regulations by traders and individuals crossing the border. Higher compliance indicates that fewer goods are entering or leaving the country illegally, suggesting that border management measures are becoming more successful in ensuring that only legally declared goods are allowed entry.

5 Methodology

The study utilized a descriptive research design, which involved the use of absolute and relative (percentages) frequencies and measures of central tendency and dispersion (mean and standard deviation, respectively). Tables and graphs were used to display quantitative data, and prose was used for explanations. Additionally, the study employed inferential statistics to determine the variables influencing the Busia border's one-stop border post strategy's implementation. To be more precise, the study established this relationship using Karl Pearson's coefficient of correlation. Given the 95% confidence level and the expectation that the relationship outcome will be either positive or negative, the correlation coefficient should be two-tailed.

The regression equation was:

$$Y=\beta_0+\beta_1X_1+\beta_2X_2+\beta_3X_3+\beta_4X_4+\beta_5X_5+\varepsilon \quad (1)$$

Where: Y = Impact of Border Management Strategies on illicit trade ; X_1 = Corruption; X_2 = Weak enforcement ; X_3 = Technology ; X_4 = Smuggling Routes; X_5 = Inadequate Infrastructre ; β_0 = Intercept (constant term), While β_1, β_2, β_3, β_4 and β_5 are regression coefficients and ε is the error term [10]. A regression analysis was used to predict the value of the dependent variable for individuals for whom some information concerning the explanatory variables is available or to estimate the effect of some explanatory variable on the dependent variable [8].The target population comprised community members living along the border, law enforcement officers, and relevant government officials such as chiefs and immigration officers, all of whom had valuable information regarding the issue. The population in the border area was approximately 116,000 people, from which 156 respondents were purposively selected to participate in the study. Data collection involved

administering a structured questionnaire directly to 156 community residents, allowing for a thorough understanding of local perceptions and experiences concerning illicit trade. In addition, interview schedules were employed to obtain detailed insights from law enforcement officers, chiefs, and immigration officials, with a focus on evaluating the effectiveness of legal frameworks and cross-border cooperation in combating illicit trade.

5.1 Pilot Testing, Validity and Reliability Analysis

The pilot testing was conducted using the questionnaire on 10 officials. The pilot group was done through random sampling. The purpose of the pilot testing was to establish the validity and reliability of the research instruments and hence enhance face validity [9]. According to [10] validity as the extent to which the test's sample of items accurately reflects the subject matter it is intended to assess. It demonstrates how well a test measures what it is supposed to measure, as well as how true, accurate, authentic, genuine, or sound it is. It also shows whether the measurement tools are accurate and measuring what they are supposed to measure. By asking respondents for their opinions, the researcher made it easier to make the necessary changes to the research tool, increasing its validity.

A pre-test study was carried out to ascertain the questionnaire's internal consistency and reliability. The Statistical Package for Social Sciences (SPSS) was used to perform a reliability analysis using Cronbach's Alpha. Cronbach's Alpha was calculated for each research objective that was a scale. Cronbach's Alpha is a metric used to quantify internal consistency, or the degree to which a group of items are related to one another. A reliability test was carried out to evaluate the instruments' dependability in order to ascertain how well various scale items measure the concepts that they are intended to measure. Internal consistency is calculated by measuring a statistic known as Cronbach's alpha. When Cronbach's alpha is 0.70 or higher, it is regarded as a reliable indicator in social science research. The Cronbach's Alpha coefficient (α) was used to measure this reliability estimate. According to [11] , research instruments should have a reliability of 0.70 or higher.

Table 1. Reliability Test Results

Variable	No of Items	Respondents	α=Alpha	Comment
Corruption	7	10	0.725	Reliable
Weak Enforcement	7	10	0.756	Reliable
Technology	7	10	0.815	Reliable
Smuggling Routes	7	10	0.834	Reliable
Inadequate Infrastructure	8	10	0.981	Reliable

5.2 Ethical Considerations

The researcher ensured that the participants were fully informed about the research procedure and gave their consent to participate in the research before data collection took place. The researcher was careful to avoid causing physical or psychological harm to respondents by asking embarrassing and irrelevant question, threatening language or making respondents nervous. The researcher ensured that the participants were fully informed about the research procedure. The researcher assured the respondents that the information collected was to be used for academic purposes only.

6 Results

What factors do you believe contribute most to the prevalence of illicit trade along the Kenya-Uganda border?

The table provides a breakdown of factors contributing to the prevalence of illicit trade along the Kenya-Uganda border, based on the responses from 156 participants. The factor with the highest frequency is corruption, which was identified by 42 respondents, accounting for 27% of the total responses. This suggests that corruption is considered the most significant contributor to illicit trade

in the region. The second most commonly identified factor is weak enforcement, with 33 respondents (21%) acknowledging it as a key issue. This highlights the role of insufficient law enforcement in enabling the continuation of illicit trade activities. Smuggling routes emerged as the third most influential factor, identified by 30 respondents (19%), pointing to the critical role of established illicit paths used to transport goods illegally across the border. Cross-border demand was mentioned by 18 respondents (11%), indicating that the demand for certain goods across the border is a major driver of illicit trade. The factor of political instability was cited by 13 respondents (9%), showing that instability in the region can exacerbate illicit trade by disrupting regulatory and enforcement measures. Inadequate infrastructure was identified by 12 respondents (8%), suggesting that the lack of proper infrastructure, such as roads and border facilities, hinders effective border control and monitoring, facilitating the flow of illicit goods. Finally, poverty was mentioned by 8 respondents (5%), indicating that economic hardship and the lack of alternative livelihoods may encourage some individuals to engage in illicit trade. Overall, the table emphasizes that corruption and weak enforcement are the primary drivers of illicit trade along the Kenya-Uganda border, while other factors such as infrastructure and poverty play a less significant but still notable role. The information is shown in Table 2 and Figure 2.

Table 2. Table showing factors that contribute most to the prevalence of illicit trades along the Kenya-Uganda border

Factor	Frequency	Percentage (%)
Corruption	42	27
Weak enforcement	33	21
Poverty	8	5
Smuggling routes	30	19
Inadequate infrastructure	12	8
Cross-border demand	18	11
Political instability	13	9
Total	**156**	**100**

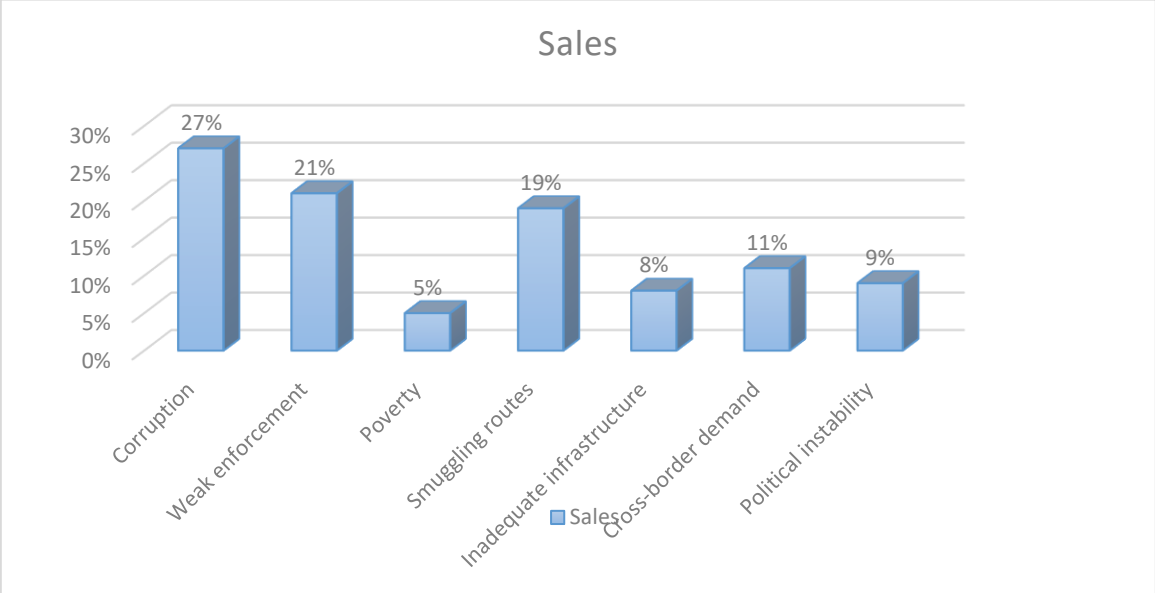

Figure 2. Showing factors that contribute most to the prevalence of illicit trade along the Kenya-Uganda border

Disseminating the findings of the study on the factors contributing to the prevalence of illicit trade along the Kenya-Uganda border revealed several recurring themes, derived through a thematic analysis of responses from interviewed law enforcement officers, chiefs, and immigration officials. The findings indicate that corruption, weak enforcement, smuggling routes, and cross-border demand are the most significant drivers of illicit trade in the region, with other factors such as political instability, inadequate infrastructure, and poverty also playing roles, though to a lesser extent.

Corruption emerged as the dominant theme, consistently highlighted by respondents as a critical enabler of illicit trade. One police officer stated, *"Corruption is a deep-rooted problem here. Some officers accept bribes to look the other way, and this undermines all efforts to stop smuggling."* Another respondent, a chief in the border region, remarked, *"You'll find that goods pass through checkpoints easily if the right palms are greased. This is common knowledge here."* These observations highlight how corruption compromises the integrity of border control and allows illicit trade to thrive, often with the involvement of both low-level and high-ranking officials.

Weak enforcement was another prominent theme, with many respondents pointing to insufficient resources and limited manpower as major challenges. An officer from the Rural Border Patrol Unit explained, *"We are severely understaffed. Sometimes, we cannot patrol the entire border effectively, which creates gaps that smugglers exploit."* Similarly, an immigration official noted, *"We lack the technology and tools to monitor the border properly. Without proper surveillance, it's impossible to stop all illegal trade."* These responses explain how logistical constraints and inadequate training weaken enforcement capabilities, making it easier for illicit goods to cross the border undetected.

The theme of established smuggling routes also emerged strongly in the analysis. Respondents frequently mentioned the existence of informal pathways that are well-known to smugglers but difficult to police. One border patrol officer explained, *"The smugglers know this terrain better than we do. They have been using these routes for years, and some of them are in remote areas we can't easily access."* A local chief added, *"There are routes that have been used for generations, even before borders were formally established. People know how to evade checkpoints."* These insights highlight the strategic advantage smugglers have in navigating and exploiting the physical geography of the border region.

Cross-border demand also featured prominently in the findings. Several respondents noted that the demand for specific goods on either side of the border drives illicit trade. An immigration officer observed, *"There's always a market for cheaper goods, whether it's counterfeit products, second-hand clothes, or even illegal firearms."* Another respondent, a police officer, stated, *"People will always find a way to get what they want, especially when legal channels are too expensive or restrictive."* These perspectives suggest that economic disparities and market dynamics contribute significantly to the persistence of illicit trade.

Political instability and inadequate infrastructure were also mentioned, though less frequently. One respondent noted, *"When there is political unrest in neighboring regions, it creates loopholes that smugglers take advantage of. Security forces are often focused on other issues."* Another officer highlighted the role of poor infrastructure, stating, *"The roads leading to some border points are in terrible condition, which limits our ability to respond quickly."* Finally, poverty was identified as a driving factor by a few respondents. A chief explained, *"Many people here are struggling to make ends meet. They see smuggling as an easy way to earn a living."*

In conclusion, the thematic analysis reveals that corruption and weak enforcement are perceived as the primary factors contributing to the prevalence of illicit trade along the Kenya-Uganda border. Established smuggling routes and cross-border demand further exacerbate the problem, while political instability, inadequate infrastructure, and poverty act as additional, though secondary, drivers.

The following questions and hypotheses were answered and tested respectively:

Table 3. Summary of questions answered and hypotheses tested

		Corruption	Weak Enforcement	Technology	Smuggling Routes	Inadequate Infrastructure
Corruption	Pearson Correlation	1	.648**	-0.165	-0.019	.512**
	Sig. (2-tailed)		0	0.223	0.889	0
	N	156	156	156	156	156
Weak Enforcement	Pearson Correlation	.648**	1	-0.186	-0.064	.382**
	Sig. (2-tailed)	0		0.17	0.64	0.004
	N	156	156	156	156	156
Technology	Pearson Correlation	-0.165	-0.186	1	0.116	-0.14
	Sig. (2-tailed)	0.223	0.17		0.395	0.304
	N	156	156	156	156	156
Smuggling Routes	Pearson Correlation	-0.019	-0.064	0.116	1	.415**
	Sig. (2-tailed)	0.889	0.64	0.395		0.001
	N	156	156	156	156	156
Inadequate Infrastructure	Pearson Correlation	.512**	.382**	-0.14	.415**	1
	Sig. (2-tailed)	0	0.004	0.304	0.001	
	N	156	156	156	156	156
**Correlation is significant at the 0.01 level (2-tailed)						

Table 4. There is no statistically significant impact of technological adoption and monitoring systems on Illicit Trade Reduction in Kenya's One Stop Border Post of Busia.

Area of Study	Technological Adoption and Monitoring Systems	Illicit Trade Reduction	Pearson Correlation Coefficient Value	Sig. (2-tailed)
Kenya-Uganda Border			-.724*	.000

* - Means significant at 5% level

Pearson's Correlation Coefficient (r) of the variables i.e., technological adoption and monitoring systems is -.724 and a significant level of .000 which is less than .05. This means that there is a statistically significant impact of technological adoption and monitoring systems in reduction of illicit trade in Kenya. The coefficient (r) is a strong negative correlation which means that an increase in technological adoption and monitoring systems leads to illicit trade reduction. Thus, the null hypothesis was rejected.

Table 5. There is no statistically significant impact of inter-agency collaboration and policy integration on Illicit Trade Reduction in Kenya's One Stop Border Post of Busia.

Area of Study	Inter-agency Collaboration and Policy Integration	Illicit Trade Reduction	Pearson Correlation Coefficient Value	Sig. (2-tailed)
Kenya-Uganda Border			-.653*	.001

* - Means significant at 5% level

Pearson's Correlation Coefficient (r) of the variables i.e., inter-agency collaboration and policy integration is -.653 and a significant level of .001 which is less than .05. This means that there is a statistically significant impact of inter-agency collaboration and policy integration in reduction of illicit trade in Kenya. The coefficient (r) is a strong negative correlation which means that an increase in inter-agency collaboration and policy integration leads to illicit trade reduction. Thus, the null hypothesis was rejected.

Table 6. There is no statistically significant impact of stringency of border inspection and control measures on Illicit Trade Reduction in Kenya's One Stop Border Post of Busia.

Area of Study	Stringency of Border Inspection and Control Measures	Illicit Trade Reduction	Pearson Correlation Coefficient Value	Sig. (2-tailed)
Kenya-Uganda Border			-.691*	.001

* - Means significant at 5% level

Pearson's Correlation Coefficient (r) of the variables, i.e., stringency of border inspection and control measures, is -.691 and a significant level of .001, which is less than .05. This means that there is a statistically significant impact of stringency of border inspection and control measures in the reduction of illicit trade in Kenya. The coefficient (r) is a strong negative correlation,which means that an increase in the stringency of border inspection and control measures leads to illicit trade. Thus, the null hypothesis was rejected.

7 Discussion

The issue of illicit trade along the Kenya-Uganda border has garnered significant academic attention, with scholars examining various factors that contribute to its prevalence and potential solutions. Recent findings from this current study on the Kenya-Uganda border suggest that corruption and weak enforcement are the leading contributors to illicit trade, with smuggling routes and cross-border demand also playing important roles.

One of the most significant findings from the current study is that corruption is identified as the primary factor contributing to illicit trade along the border, with 27% of respondents citing it as a key issue. This aligns with the work of [12], who argues that corruption in border management institutions weakens the enforcement of customs regulations, facilitating illegal trade flows. Similarly, [13] highlights how corrupt practices at border points often lead to inadequate inspections and lower compliance with trade laws, a factor that mirrors the study's findings. However, while Baker and De Waal emphasize the systemic nature of corruption within state institutions, the current study also links corruption to specific actors in the border region, such as customs officials and local authorities, pointing to more localized corrupt practices.

Weak enforcement is another key factor identified in the findings, cited by 21% of respondents. This is consistent with the work of [14] who argue that poor law enforcement at borders allows illicit trade to thrive. Their research suggests that weak institutional frameworks, lack of resources, and political will to address illegal trade significantly hamper border control efforts. The findings from this study corroborate these arguments, further emphasizing that insufficient law enforcement at the Kenya-Uganda border contributes to the ease with which illicit trade operates. On the other hand, [15] offers a more optimistic view, asserting that law enforcement can be strengthened through technological innovations and inter-agency collaboration. While the current study does not delve deeply into these aspects of enforcement, the findings on technological adoption, which will be discussed later, suggest that these solutions could indeed play a role in addressing weak enforcement.

The factor of smuggling routes, which is identified by 19% of respondents, is also explored in the work of [16]. These scholars argue that established smuggling routes, often used by organized criminal groups, are a significant obstacle to reducing illicit trade. Their research indicates that the physical geography of the border region and the existence of well-established routes make it difficult to stop the flow of illegal goods. This finding is echoed in the current study, which points to the critical role of these smuggling pathways in perpetuating illicit trade. However, it is argued that better intelligence sharing and monitoring can reduce the effectiveness of these routes, which aligns with the technological solutions discussed in the study. The role of technology in curbing smuggling routes is explored further in the study, where it is shown that technological adoption is negatively correlated with illicit trade, indicating that improvements in border surveillance could disrupt these smuggling pathways[17].

Another factor mentioned in the study is cross-border demand, which was cited by 11% of respondents. This supports [18], who suggests that the demand for certain goods, such as drugs, firearms, and counterfeit products, drives illicit trade in regions with porous borders. Arndt's work focuses on the consumer demand that fuels smuggling, a factor not directly addressed in the current study. The findings in this study, however, show that while demand plays a role, it is secondary to factors such as corruption and weak enforcement. This contrast suggests that while the supply-side factors may be more pressing in the Kenya-Uganda border region, demand-side factors cannot be neglected in broader strategies for reducing illicit trade.

Political instability, cited by 9% of respondents, is another key factor affecting illicit trade in the region. According to [19], political instability in border regions disrupts governance structures, weakening border control measures. Moyo argues that unstable political environments create opportunities for illicit trade networks to flourish, as law enforcement agencies may be under-resourced or distracted by broader national security concerns. This concurs with the current study's assertion that political instability exacerbates illicit trade by undermining effective governance at the border. However, it offers a counterpoint, claiming that the rise of non-state actors and organized criminal groups in politically unstable regions may also fuel illicit trade, a perspective not directly addressed in the current study but worthy of consideration in future research[20].

Finally, the findings also suggest that inadequate infrastructure and poverty are less significant contributors to illicit trade, accounting for 8% and 5% of responses, respectively. These findings align with the work of [21], who argue that while infrastructure challenges and poverty contribute to the prevalence of illicit trade, they are often secondary to governance and regulatory failures. [22] Who highlight the importance of political and institutional factors in mitigating illicit trade, rather than simply addressing infrastructural deficits shares this view. However, [23] posits that infrastructural improvements, particularly in terms of transport and communication, can greatly enhance border control efficiency, a factor that is tangentially supported by the findings on the effectiveness of technological adoption in reducing illicit trade.

In terms of the impact of border management strategies, the study shows a significant negative correlation between technological adoption and illicit trade reduction, with a Pearson correlation coefficient of -0.724. This finding echoes the conclusions of [24] who found that technological innovations such as automated customs systems and surveillance technologies greatly reduce the flow of illicit goods. Smith's work emphasizes the role of technology in modernizing border control systems and disrupting illicit trade, which is consistent with the study's findings. Similarly, Smith and others support the view that technological improvements are a critical factor in curbing illicit trade, particularly in regions with limited physical resources for border enforcement.

The study also highlights the significant role of inter-agency collaboration and policy integration, with a correlation coefficient of -0.653. This finding is consistent with [25], who argues that effective cross-border cooperation among agencies, including customs, immigration, and police, is crucial in combatting illicit trade. Ngugi's work underscores the importance of policy alignment and shared information systems in strengthening border control, a sentiment supported by the current findings.

Lastly, the study finds that stringency of border inspection and control measures significantly impacts illicit trade reduction, with a Pearson correlation of -0.691. This is in line with [26], who suggests that rigorous inspections and the enforcement of stricter border controls are necessary to reduce illicit trade. Flynn's research points to the fact that without effective inspections, illegal goods are easily smuggled through borders [27], an argument that is directly supported by the study's findings on the importance of stringency in reducing illicit trade.

In summary, while there is significant consensus among scholars regarding the factors that contribute to illicit trade, the current findings provide valuable insights into the specific dynamics at the Kenya-Uganda border. The role of corruption, weak enforcement, smuggling routes, and technological adoption in reducing illicit trade align with existing research, but the study also highlights the need for a coordinated approach, including stronger inter-agency collaboration, stricter inspections, and continued investments in infrastructure.

8 Conclusions

The statistically significant but very weak positive effect of intelligence sharing in combating financial crimes calls to attention the existing systemic challenges in the form of a lack of trust between counterparty stakeholders, inadequate communication channels, and institutional silos that create impediments to smooth joint operations. Moreover, harmonizing regulations correlates very poorly with tackling financial crime, largely due to disjointed implementation, divergent mandates among supervisory authorities, and uneven treatment of policy interpretation and enforcement employed by different jurisdictions. Together, these limits dilute the intensity of financial crime busters.

9 Recommendations

To overcome these ongoing hurdles, measures of trust building, including inter-agency agreements, standardized communication protocols, and robust accountability framework, should be established to enhance the efficiency and effectiveness of sharing that intelligence. Furthermore, the need is great to unify ideas in their entirety and create a regulatory governing framework that would fit right across the sectors, align priorities, ensure consistency in policy implementation, and fill the existing gaps in enforcement and monitoring mechanisms. The approach should be unified by mechanisms of regular review, stakeholder consultations, and capacity-building initiatives aimed at the sustainability of efforts in the fight against financial crimes inclusive of all stakeholders.

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