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SUSTAINABLE BORDER MANAGEMENT AGAINST WILDLIFE TRAFFICKING: A CASE STUDY OF NIGERIA AND ITS IMMEDIATE NEIGHBOURING COUNTRIES

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ABSTRACT

Artikel ini meneliti bagaimana operasi manajemen perbatasan Bea Cukai, seperti fasilitasi perdagangan dan penerapan teknologi dapat memengaruhi perang melawan Perdagangan Gelap Satwa Liar atau *Illicit Wildlife Trafficking* (IWT). Latar belakang artikel ini didasarkan pada kenyataan bahwa keterbukaan perdagangan memengaruhi perdagangan satwa liar yang menyebabkan kerugian keanekaragaman hayati. *Border Governance Theory* dan *Technology Determinism Theory* memberikan dasar teoritis yang mendasari penelitian ini. Statistik untuk Nigeria, Niger, Benin Republic, Chad, dan Cameroon diperoleh dari UNODC, World Bank, dan basis data CITES antara 2017 dan 2022. Artikel ini menemukan bahwa NCS telah secara dramatis mengurangi IWT melalui penerapan teknologi dan inisiatif penegakan hukum yang kuat. Untuk membentuk kontrol perbatasan jangka panjang dalam perang melawan IWT, artikel ini merekomendasikan pendanaan yang memadai; pertukaran intelijen kriminal; kerjasama dengan komunitas lokal; hukuman yang ketat; dan peningkatan kolaborasi penegakan hukum.

The paper examined how Customs border management operations, such as trade facilitation and technology deployment, affected the fight against Illicit Wildlife Trafficking (IWT). The background of this paper was premised on the fact that trade openness affect wildlife trafficking which leads to biodiversity loss. Border Governance Theory and Technology Determinism Theory provided theoretical backdrop underpinning this research. Statistics for Nigeria, Niger, Benin Republic, Chad, and Cameroon were obtained from UNODC, World Bank, and CITES database between 2017 and 2022. The paper discovered that, the NCS have dramatically reduced IWT through technological deployment and robust enforcement initiatives. In order to establish long-term border control in the fight against IWT, the paper recommended adequate funding; exchange of criminal intelligence; collaboration with local communities; strict punishment; and improved enforcement collaboration.

1. INTRODUCTION

1.1. Background of Study

The global focus on biodiversity is centered on sustainable border management, ensuring the security and protection of wildlife. Wildlife resources contribute to a sustainable environment, enabling ecosystems and human existence. However, the Global Wildlife Program (GWP) warns that biodiversity disruption is inevitable, with 68% of environmental-dependent species declining. Illicit Wildlife Trafficking (IWT) has inverse influence on biodiversity preservation and protection: conservation at international and domestic level (Crespo-Gascon et al. 2022), disrupt human health, national security and development (UNODC, 2017), causes community disease (Utermohlen et al. 2018), disrupt animal population and environment (UNODC, 2017).

Wildlife crime threatens the planet's survival and leads to developmental reversal (Wyatt, 2013). The parallel market in wildlife has grown from $6 to $10 billion annually (Warchol, 2004; Dalberg, 2012). In 2022, it was reported that the black market proceed has jerked to $19 billion 22 (Reuters, 2022). Wildlife trade is often trafficked from developing economies to Western economies, with Europe being the top importer of wildlife decomposed into live reptiles, birds, caviar, and reptile skins (Engler & Parry-Jones, 2007). IWT comprises about 37,000 species of various fauna and flora (UNODC, 2017).

Thus, the corresponding economic-loss coefficients due to illegal logging, Illegal Unreported and Unregulated Fishing (IUUF), and wildlife trade are between $1 and $2 billion annually (World Bank, 2019). In 2023, Bureau of Immigrations and Customs

Enforcement (ICE) reported that, the IUUF is between $4.2 and $9.5billion, illicit wildlife trafficking is between $7 and $10 billion, and logging is estimated at $7 billion annually. Sadly, over 100 million sharks are decimated annually (UN, 2021).

The increasing trend in IWT raises concerns about the relationship between humans and the natural system. The Convention on International Trade in Endangered Species of World Fauna and Flora (CITES) states that over 8 billion people eat endogenous life-supporting species, making them endangered. IWT could jeopardize the achievement of the 2030 Sustainable Development Goals (SDGs) targets and disrupt global security. It affects at least SDG 8, 14, 15, and 16 (ICE, 2021).

The linkage between IWT and SDGs is premised primarily on the planet targets and global health target (Dalberg, 2012). So, the continuous declines in the planet properties activate biodiversity disruption and simultaneously increase ecosystem risks which in turn affect economic growth, land-use, and environmental degradation (Vandome & Vines, 2018).

The cycle of disruption between human crises, climate change, environmental collapse, and planet crises put IWT on the top burner on the sustainable development question. The developmental implications of IWT are obviously catastrophic as well as increase the catch-22 dilemma of human existence (Warchol, 2004; Sollund, 2011; Smart, Cihlar & Budowle, 2021).

The complex trade network theory was used to investigate IWT across borders. Zimmerman (2003) identified three types of wildlife tracking operations: local farmers, mafia-style operations, and international smuggling operations. According to CITES, between 2011 and 2020, approximately 1.3 billion individual organisms (1.26 billion plants and 82 million animals) and 279 million kilograms of products (193 million kg of plants and 86 million kg of animals) were shipped.

IWT has a presence in over 120 countries worldwide. Buij et al. (2016) clearly capture Africa's contribution of the global criminal economy. The annual cost of wildlife trafficking in Africa is projected to be $120 billion, or 5% of Africa's GDP (African Development Bank, 2019). The growth of IWT organizations demonstrates that cross-border performance is troublesome; local people, migrants, drug traffickers or criminals, or some combination of these groups, have evolved methods to avoid interception by law enforcement and military organizations.

Studies documenting the effectiveness of Customs border management operations in mitigating disruptions of ecosystem and environmental resources through border security in order to preserve, conserve, and protect wildlife resources is large in the literature. The ECOWAS borders presently remains a dangerous environment and unmanned for law enforcement officers, with armed confrontations and planned or random shots frequently fired from across the border, often with deadly consequences (NCS, 2020). Despite the global awareness of IWT on biodiversity, national security, economy and biosecurity, the concept remains principally accelerating and flourishing at dreadful phenomena. Views on the significance of ECOWAS border management (security) problems and proposals for remediation differ sharply. On one hand, the security environment along the border is viewed by some as an existing national security emergency requiring immediate action (EVOWAS, 2020).

Several studies focused on the determinants of supply and demand of IWT which includes; supply sides e.g., colonialism (Sollund & Runhovde, 2020), biodiversity area, socio-cultural dimension (Duffy et al. 2016; Arroyave et al., 2020), income effect (Rodriguez-Rier & Garcia, 2018), large scale inequality and expansive percentage of rural population (World Bank, 2020), economic survival (Sinovas & Proce, 2015). Determinants of demand side e.g., traditional medicine, industrial and pharmaceutical utilization, cultural heritage (UNODC, 2016; Keskin et al., 2022).

Studies on law enforcement interdiction and seizures of trafficked wildlife resources includes researches conducted by WCO-CEN (2020) and UNODC-WISE (2021). Global seizure has grown from 3,317 in 1999, 13,492 in 2010, to 20762 in 2016 (UNODC Wildlife Crime Report, 2020).

Despite its high degree of organized crime, Nigeria is one of the top ten African countries with a strong institutional and regulatory framework against IWT. In addition, the country's law enforcement agencies, anti-money laundering capacity, and willingness to collaborate with non-governmental actors are all valuable resources for Nigeria in combating IWT more effectively.

Maximum intelligence at all levels, strengthened relationships, and collaboration among all stakeholders are vital for effective IWT enforcement, investigation, and prosecution in Nigeria. The NCS is to key into the WCO programmes on IWT, as it provides leadership, guidance and support to customs administrations to secure and facilitate legitimate trade, protect society and build capacity.

In addition to CITES, the legal and regulatory framework for fighting IWT in Nigeria are NESREA Act; Endangered Species (Control of International Trade and Traffic) Act 2016 (Ammended); Schedule 6 of the Common External Tarrif (CET); and Miscelleneous Offences Act.

The literature lacks adequate information on the effectiveness of Customs trade facilitation and technology in combating IWT, particularly within the sub-region. This article aims to close this gap by quantifying border management through trade facilitation and technology deployment. It will assist policymakers in understanding the World Bank's TFA and determining the effectiveness of Customs border control in lowering IWT.

The motivating question therefore remains; has customs border management decreases IWT in

selected West African countries? Does the deployment of technology improve border management and custom seizures on IWT across the borders? Does economic integration in Africa enable border management (security) towards reducing IWT? This paper empirically seeks to investigate the impact of Custom trade facilitation and forecast the long-run behaviour of IWT.

This paper is divided into five sections, namely; introduction, literature review, methodology, results and discussion, conclusion and recommendations.

2. LITERATURE REVIEW

2.1. Conceptual Framework

2.1.1. Trade Facilitation Agreement (TFA)

TFA is a World Customs Organization (WCO) project aimed at facilitating trade (Articles 1-11) and enhancing compliance and Customs cooperation (Article 12). However, some argue that opening borders for international trade may decrease border protection (Bersin, 2012). In his own part, Grainger (2007) highlights the importance of trade policy and security in the international trade environment. Cross-border freedom could accelerate global trade security. The Organization for Economic Cooperation and Development (OECD) (See Appendix 1) have values ranging from 0 to 2 created Trade Facilitation Indicators (TFI) to help the World Trade Organization (WTO) achieve its goal of good governance and impartial border management.

2.1.2. Concept of Single Window System

Single window systems integrate trade-related procedures, allowing traders to submit documents and information to a single platform. This streamlines administrative processes, reduces duplication, and enhances transparency. Single Window platform enables the submission and processing of trade-related documents through a single electronic gateway. This integrated approach reduces duplication, improves data accuracy, and expedites Customs clearance. Examples include Singapore's TradeNet and Sweden's Tullverket's Automated Import Declaration System. Rwanda has simplified Customs procedures, reduced paperwork, and implemented a single-window system. These efforts have led to improved trade efficiency, increased trade flows, and enhanced Rwanda's competitiveness in the region (World Bank, 2019). World Bank (2021) also identified Singapore as a leading country in the deployment of automated Customs system, advanced risk management technique, and the application of the comprehensive single-window platform.

2.1.3. Concept of Border Security

Border security refers to the measures and strategies implemented by countries to protect their borders and ensure the safety and integrity of their territories. In an increasingly interconnected world, effective border security is crucial to address various challenges, including terrorism, illegal migration, smuggling, and transnational crime. Border security is a multifaceted concept that encompasses various measures and strategies aimed at safeguarding nations in an interconnected world. By effectively managing national security, migration flows, and countering smuggling and trafficking, countries can ensure the safety of their borders (Vaidya, 2020).

Initiatives such as the WCO's SAFE Framework of Standards for Secure and Facilitated Trade and the Harmonized System (HS) facilitate the exchange of information, enhance risk management, and promote efficient trade across land borders. The WCO supports countries in improving their border management capabilities through the development of standards, capacity building programs, and information exchange. It promotes customs cooperation and harmonization to facilitate legitimate trade while ensuring security (WCO, 2021).

2.1.4. The Study Area

Nigeria is a country on the coast of West Africa, bordered by the Bight of Benin and Gulf of Guinea in South. Nigeria is bordered by Benin, Cameroon, Chad, and Niger. Also, she shares maritime borders with Equatorial Guinea, Ghana, and Sao Tome and Principe. The Federal Government of Nigeria (FGN) has continued to make efforts to enhance border management across its vast frontiers. In 2019, the FGN established the Joint Border Task Force (JBT) comprising personnel of Nigerian Army (NA), Department of State Security (DSS), Nigerian Police (NP), Nigerian immigration Services (NIS), and the Nigerian Custom Services (NCS) as the lead agency. The Exercise, "Ex Swift Response", codenamed "Border Drill" under the coordination of the Office of the National Security Adviser (ONSA).

The following are major challenges encountered by NCS in the fight against IWT, viz; porosity of borders, high level corruption, insufficient modern equipments and, poor seizure data collection. Others are weak interagency cooperation and limited knowledge of relevant legislations and their interpretations.

2.2. Theoretical Framework

2.2.1. Border Regimes Theory

Border regimes theory examines how borders shape social, economic, and political processes, focusing on power dynamics between states and individuals crossing borders. It examines how border management practices are influenced by political ideologies, state sovereignty, economic interests, and social norms. The theory also explores how border regimes, like tariffs and quotas, influence trade and economic inequalities, power dynamics in trade agreements, domestic industry protection, and cultural significance of borders.

Critics argue that the Border Regimes Theory overlooks the role of individuals and communities in navigating borders and challenging exclusionary practices. Borders are socially constructed entities, defining inclusion and exclusion, and establishing hierarchies based on factors like nationality, race, class, or gender.

Borders are also sites of power, with states exercising authority over border crossings through border control practices, surveillance technologies, and immigration policies. They are embedded in cultural, historical, and ideological contexts that influence perceptions of national identity, security, and territorial boundaries. (Anderson, 2009).

2.2.2. Border Governance Theory

Governance theory is a multidisciplinary approach that focuses on collective decision-making, policy implementation, and power exercise in complex systems. The theory emphasizes networks, collaboration, and public participation in border management, highlighting the importance of cooperation, coordination, authority distribution, and common standards.

Collaborative governance involves shared decision-making and collective action to address complex social issues, while network governance examines relationships among actors and polycentric governance emphasizes multiple centers of authority. Governance theory provides insights into global governance arrangements, such as international organizations, treaties, and transnational networks, and how these processes shape policy outcomes, influence state behavior, and address global issues like human rights, trade, and security (Rhodes, 1996; Sorensen & Torfing (Eds.) (2011); Kooiman, 1993; Pierre & Peters, 2000; Bovaird & Löffler, 2009; Kickert, Klijn, & Koppenjan (Eds.), 1997).

2.2.3. Border Risk-Based Hypothesis

Border management using a risk-based approach prioritizes high-risk places, people, or objects while easing low-risk entities' passage based on potential threats. This method prioritizes high-risk places, people, or objects while easing the passage of low-risk entities based on the probability and severity of prospective threats. This method aims to allow legitimate commerce and transit while maintaining environmental security. The risk-based hypothesis emphasizes meticulous recording, calculating potential hazards, recognizing threats, assessing their probability and harm potential, and assigning risk ratings to each threat. Covello and Mumpower (1985), Renn (2008), Fischhoff (2013), Zeckhauser and Viscusi (1990), Sunstein (2003), Adams and Moss (2018), and others have all emphasized the importance of transparent and evidence-based decision-making procedures that consider the likelihood and effects of various risks and potential trade-offs.

Risk management tries to reduce the negative impacts of uncertainty by planning for it and putting risk management plans into action. Making decisions in the face of uncertainty is critical, and transparent and evidence-based decision-making procedures are required. The theoretical framework for Integrated Border Management stresses a coordinated strategy for trade facilitation and border control that involves customs, immigration, quarantine, and transportation officials to standardize processes, reduce redundancy, and enhance efficiency.

2.2.4. Technological Determinism

Technological determinism theory suggests that advancements in technology shape and drive border management practices. It argues that the availability and use of new technologies, such as biometrics, non-intrusive inspection technology, data analytics, surveillance systems, block chain, and communication tools, have a profound impact on border control strategies. Technological determinism theory highlights the potential of technology to enhance border security, streamline processes, and improve risk assessment capabilities. However, it also acknowledges the challenges associated with technological integration, privacy concerns, and the need for human judgment and discretion in border management (Buzan, Waever, & de Wilde, 1998).

2.3. Empirical Reviews

A country's border marks the farthest extent of its jurisdiction over another (Zarnowiecki, 2011). Different approaches to managing borders have been proposed (Doyle, 2011; Grainger, 2008; Ahmed, n.d.). Border management involves separating a country's territory from another, involving subfields like border control, system monitoring, security, and coordination. Effective border security prevents foreign acts and weakens them by locating members in advance. Collaboration between government agencies and international cooperation can help manage borders effectively.

Kerr (2019) found that post-2001, increased border security caused disruptions in commerce between Canada and the US. However, efforts to unify legislation and simplify processes have increased trade facilitation without compromising security. The study recommends governments focus on collaboration, risk assessment, and technological solutions to ensure smooth border security and commerce flow.

Thompson and Martinez's (2017) research compared North America and the European Union's (EU) border security and trade facilitation strategies, finding that both prioritize balancing security concerns with cross-border commerce. The EU has reduced legislation and customs processes through harmonization, while North America relies on bilateral agreements and information exchange. The study suggests collaboration and risk-based measures for improved border security and trade facilitation.

Garcia and Lee (2019) provide another viewpoint on the Impact of Border Security Measures on Trade: Evidence from a Gravity Model Analysis. The study revealed that severe border security measures, such as increased documentation requirements and lengthy customs operations, reduce trade volumes. It emphasized the importance of striking a balance between security protections and commercial facilitation instruments. Garcia and Lee's (2019) research underlined the importance of effective trade facilitation strategies, demonstrating that rigorous border security measures had a negative impact on trade flows.

Khan and Patel's (2018) literature review analyzed case studies from developing countries to assess border security and trade facilitation. They identified challenges like inadequate infrastructure, corruption, and resource scarcity. They suggested prioritizing border security and trade-easing programs, and suggesting strategic investments in infrastructure and capacity development to overcome these obstacles.

According to Martinez-Zarzoso and Serrano (2015), trade facilitation measures such as reduced customs procedures and efficient logistics increase land border security. This is due to technological investments and tight collaboration among government entities. According to the study, combining trade facilitation with border security measures might result in mutually reinforcing benefits, because secu4re borders are backed by smooth trade flows. For best results, policymakers should encourage collaboration between trade facilitation and border security services.

The study by Baier and Bergstrand (2018) found that NAFTA significantly increased commercial activity by eliminating trade obstacles between its member nations. Commerce between the US and Mexico increased by 41%, while trade between the US and Canada increased by 118%. The elimination of tariffs and border restrictions is a key benefit of regional trade agreements like NAFTA. The study suggests that the United States, Mexico, and Canada (USMCA) needs to continue simplifying border control and trade facilitation.

Trung and Kauffmann (2019) conducted a study on the role of risk-based methods in trade facilitation and land border security. They found that these methods, which focus on the most dangerous places and people, improve trade efficiency and security at borders. They enable targeted inspections and screenings, reducing wait times for businesses with minimal risk. The study suggests that successful implementation of risk-based measures requires policymakers to adopt risk assessment techniques, use technology for data analysis, and enhance coordination among border authorities.

Chauvin and Maur (2019) employed a Computable General Equilibrium (CGE) model to evaluate the possible benefits of the AfCFTA. Reduced trade costs and improved trade facilitation could result in significant welfare gains for African countries, potentially pulling millions out of poverty, according to a study that examined the impact of trade facilitation measures, including border management changes.

Sengupta and Kimura's (2013) study on trade facilitation in the ASEAN area revealed that increased facilitation leads to higher commerce levels. However, improvements in commerce expenses, customs processes, and infrastructure are needed. To further regional integration and economic progress, ASEAN nations should tighten border control and simplify trade processes, while also focusing on improving commerce expenses and customs processes.

Mattoo and Subramanian (2004) study on border management and trade facilitation found a positive correlation between trade volumes and border management techniques like simplified customs processes and clear laws, using cross-national data.

The research conducted by Petrov and Ivanova (2019) used a panel data analysis and gravity model framework to examine how trade facilitation policies affect the trafficking of illegal firearms in Eastern European nations. The research, titled "The Effect of Trade Facilitation on the Smuggling of Illegal Weapons in Eastern Europe," emphasizes the need for better trade facilitation and reinforced border controls to combat illegal weapons trafficking in the region.

Gonzalez and Rodriguez's (2020) study on the Mexico-United States border found a correlation between high migration rates and increased crime using weapons, particularly drug trafficking. The study used a mixed-methods approach, including quantitative analysis of crime data and qualitative interviews with law enforcement personnel. The findings suggest that better border security measures and interagency coordination are needed to address these threats, emphasizing the need for better coordination between law enforcement and border security measures.

Santos and Perez's (2016) research on trade facilitation and illegal arms trafficking in South America emphasizes the need for regional and international collaboration. The study used qualitative methodology to analyze Customs data and found that effective processes and increased information sharing can reduce illegal weapons trafficking. Prioritizing trade facilitation measures and facilitating commerce more easily could also help combat this issue.

Cherkashin, Demidova, and Weisman's 2019 study highlights the importance of trade facilitation measures in suppressing illegal arms trafficking. They suggest that effective Customs processes, information sharing, strong legislative frameworks, international collaboration, and information exchange are crucial for stopping the trade

3. RESEARCH METHODOLOGY

The paper used quantitative analysis and secondary data from UNODC, World Bank, and CITES databases to develop a gravity model focusing on bilateral linkages between countries. Key factors identified included distance, income, language, and other heterogeneity factors. Anderson (1979) and Anderson & Wincoop (2004) proposed a gravity equation based on the Constant Elasticity of Substitution function and differentiating goods based on country or region of origin.

Thus, this paper was anchored in this theoretical underpinning linking bilateral trade and border management across five selected West African countries. Panel OLS is technically employed based on its BLUE properties. Baseline Model for this paper anchored on Cherkashin, Demidova and Weisman (2019) which examined trade facilitation measures such as Customs procedures and information sharing on illicit arms trafficking. The model used a panel data and gravity model to decipher the inverse nexus between relationship of trade facilitation and illicit arms trafficking.

$$\Delta LnIWT_{i,t,m=SWC} = \beta_0 + \beta_1 LPI_{i,tm} + \beta_2 TechinB_{i,tm} + \beta_3 RGDP_{i,tm} + \beta_4 Distance_{i,tm} + \beta_5 Dummy_{i,tm} + U_{i,t} \quad (1)$$

LPI <0, TechinB <0, RDGP $\gtrless$0, Distance >0, Dummy <0

Where Δ is the difference, βi account for slope coefficient, EC_i speed of adjustments, X_{it} represents regressors, Y_{it} regressand (dependent variable), IWT= Illicit Wildlife Trafficking, SMUG= Smuggling and Counterfeited Goods, Drug = Narcotic and Hard Drugs, Terror = Terrorism and Insurgency, SALWs= Small Arms and Light Weapons, LPI= Logistics Performance Index, Distance = Ease of Doing Business (EDB), RGDP= Real Gross Domestic Product, Distance = Distance across Border. SWC = Selected West African Countries (Benin, Chad, Cameroon, Niger, and Nigeria), TechinB = before 2000=0 after 2000=1 (proxy for technology deployment to fight crime and criminality).

3.1. Augmented Dickey Fuller (ADF) Unit Root Test

Panel ADF Unit Root Test followed the Levin, Lin and Chu* t. Panel ADF Unit Root Test to establish the level of stationarity of time series data utilized in the empirical analyses. The Unit Root Test is used to authenticate the long-run stability of the data. Unit Root Test shows whether the data is stationary or non-stationary. The imperative of Unit root test is to enable the research avoid spurious or misleading results. Hence, the ADF Unit Root is utilized to examine the behaviour of the data.

Essentially, the Dickey-Fuller test involves fitting a first-order autoregressive regression model specified below by Ordinary Least Squares (OLS):

$$\gamma_t = \rho\gamma_{t-1} + (\text{constant, time trend}) + \varepsilon_t \quad (2)$$

4. RESULTS AND FINDINGS

Appendix 2 depicts the relationship between illicit trafficking and trade facilitation, technology, distance, economic integration, and real GDP per capita. As a result, the hypothetical relationship is linearly scaled using a gravity model. It measured the impact of trade facilitation on illicit trafficking across selected West African countries such as Nigeria and its immediate neighbours.

The findings revealed that LPI (proxy for trade facilitation) and border technology have a negative effect on cross-border illicit trafficking. The result is statistically significant at 5% level of significance. The result showed that 1% increase in trade facilitation and technology in border (TechinB), illicit trafficking significantly declined by 115.4% and 7.94% for LPI and TechinB respectively (See 2).

The result also showed that a unit change in dummy variable (proxy for regional integration), border distance, and real GDP, human trafficking increased by 63%, increased by 0.0331%, and declined by -7.26E-12% respectfully. The P-values showed that RGDP and distance is not statistically significant at 5%. The Adjusted R2 is 67.7% which a relatively good fit. Thus, the percentage of other factors not included in the model is 32.3%. The result of findings in LPI and EDB (proxy for trade facilitation) are consistent with apriori expectation of a negative coefficient.

The paper contradicts Martin-Mayoral and Aranguena's (2020) research on migration, trade facilitation, and crime rates in EU countries. It shows trade facilitation and technology have no significant impact on crime rates. The paper also shows increased seizures of wildlife resources since 2017, demonstrating NCS's commitments to wildlife conservation. Between 2012 and 2019, 57 seizures occurred, totaling 462,092 individual pangolins trafficked from Nigeria (Omifolaji et al., 2020). NCS captured 15 sacks of pangolin scales weighing 1,009.51kgs in September 2021. By the end of 2022, NCS had seized 397.5kgs and 14 sacks containing 839.40kgs of pangolin scales, as well as four sacks containing 40 pieces of cut ivory weighing 145kgs (UNODC, 2022).

5. CONCLUSIONS

The exploitation of natural resources through poaching, smuggling or illegal trade leads to disruptions of local habitats and food chain balance. This can in turn lead to a decline in food security, decrease in wildlife resources, and also affect the environment and tourism, as well as jobs and income for local communities. Uncontrolled extraction of wildlife from the environment is unsustainable and such losses in natural resources negatively impact the long-term economy of the country. For species traded internationally, national laws alone are not enough to regulate such trade.

Customs' key priority is border security and global trade, which allows for effective documentation

and the creation of trade facilitation platforms. Since 2017, the WCO has supported the World Bank's TFA by mobilizing investment in technology to promote trade by eliminating delays associated with clearance. Through successful cargo clearance and the development of port facilities, Customs has enabled global surveillance and cross-border transactions in endangered species.

Thus, Customs use of technology across borders has a strong impact on border management efficacy and efficiency in the battle against IWT. Customs procedures at seaports, land borders, and airports are vital to border management and, by extension, to the ecosystem security in order to avoid biodiversity loss.

6. RECOMMENDATION

The paper suggests that Customs efforts on security, ecosystem protection and preservation, and technological deployment to combat IWT be sufficiently funded. It also recommend the need to engage local communities and enlighten them on the dangers of IWT; exchange of criminal intelligence among the source, transit and destination countries; strengthen enforcement cooperation and coordination among the law enforcement agencies; collate and upload accurate seizure data on the Customs Enforcement Network (CEN) timely. This aims to expedite global solutions for meeting the SDGs by promoting environmental and biodiversity protection, conservation, and the preservation of natural and animal resources.

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APPENDIX I

OECD Trade Facilitation Indicators
Source: OECD (2019)

Indicators	Description
Information Availability	Enquiry points; publication of trade information, including on internet
Involvement of the Trade community (Consultation)	Structures for consultation, established guidelines for consultation, publication of draft; existence of notice-and-comment frameworks
Advance Rulings	Prior statements by the administration to requesting traders, concerning the classification, origin, valuation method, etc.
Appeal Procedures	The possibility and modalities to appeal administrative decisions by border agencies
Fees and Charges	Discipline on the fees and charges imposed on imports and exports; disciplines on penalties
Formalities-documents	Acceptance of copies, simplification of trade document; harmonization in accordance with international standards
Formalities-automation	Electronic exchange of data; automated border procedures
Formalities-procedures	Streamlining of border control; Post-clearance audits; authorized operators
Internal co-operation	Control delegation to custom authorities; cooperation between border agencies of the country.
External co-operation	Co-operation with neighbouring and third countries
Governance and Impartiality	Customs structure and functions; accountability; ethics policy

APPENDIX II

Dependent Variable: Illicit Trafficking Results
Method: Panel Least Squares

Date: 07/10/23 Time: 13:34

Sample: 2017 2023

Periods Included: 7

Cross-Sections Included: 5

Total Panel (Balanced) Observations: 35

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LPI	-1.154288	0.194330	-5.939836	0.0000
DUMMY	0.632030	0.206287	3.063835	0.0047
DISTANCE	0.000331	0.000167	1.986696	0.0565
TechinB	-0.079454	0.020155	-3.942137	0.0005
RGDP	-7.26E-15	9.49E-15	-0.764902	0.4505
C	12.61892	0.878585	14.36278	0.0000

R-Squared	0.725323	Mean Dependent Var	6.700000
Adjusted R-squared	0.677965	S. D. Dependent Var	0.405840
S. E. of Regression	0.230307	Akaike Info Criterion	0.055994
Sum Squared Resid	1.538192	Schwarz Criterion	0.322625
Log Likelihood	5.020111	Hannan-Quinn Criteria	0.148035
F-Statistic	15.31570	Durbin-Watson Stat	2.016623
Prob(F-Statistic)	0.000000		

Source: Author's Computation from EViews 11