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Effect Of Technological Reforms On Customs Tax Compliance Of Busia Border Control, Kenya

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Abstract:
The adequate provision of infrastructure is seen as an agent of growth in countries all over the world. The purpose of the study was technological reforms on customs tax compliance: Case of Busia border control post, Kenya.The study was guided by Technological Acceptance Theory, The study adopted explanatory research design. The target population of this study was composed of 212 customs revenue officers at Busia Border post. The sample size of the study was 138 respondents. Primary data was used where questionnaires were employed to collect data. The statistics generated was descriptive and inferential statistics that were analyzed using correlation and a multiple linear regression. The findings revealed a positive and statistically significant relationship between technological reforms exhibit a strong and positive impact ($\beta=0.646$, $p=0.009<0.05$), affirming the importance of embracing technological advancements within customs administration. The study recommends that Kenya revenue authority should ensure that their policies are in line with the findings of this research. This includes adjusting tax and trade policies to encourage and support the identified drivers of tax compliance, such as administrative reforms, technology adoption, and infrastructure development. Further research can be done on how socioeconomic and demographic factors influence customs tax compliance. Investigate how factors such as income levels, education, and location impact compliance behavior, and tailor policy recommendations accordingly

Keywords; *Technological reforms, customs tax compliance, Busia border control post.*

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I. Background Information

Revenue collection remains an apex function of customs administrations in most developing countries (Nnyanzi, Babyenda, & Bbale, 2016). These countries largely depend on imports to support most aspects of their economies and to some extend exports of raw and finished products. This movement of goods and people across borders into or out of their borders place a bigger responsibility on customs administrations (Endres, 2014). Even bigger is the accomplishment of customs responsibilities in the face of the challenges of the 21st century. These new and emerging challenges impact on current and future development hence demand a more proactive and action-orientated approach by customs administrations (Chentsov, Pavlenko, & Triakina, 2015).

Customs Services Department (CSD) in KRA was established in 1978 to collect and account for Import Duty and VAT on imports, protect the society from illegal entry and exit of prohibited and restricted goods while at the same time facilitating legitimate trade. Its vision is to 'be globally recognized as a contemporary Customs Administration that is responsive to the needs of the 21st century customer. The KRA Customs Services Department (CSD) accounts for over 45% of all our revenue collection. The department's functions are geographically scattered throughout the country and include operations, transit management, border operations, air and sea port x-ray cargo scanners, trade statistics management function (KRA, 2013).

KRA (2017) committed to technological transformation in tax administration processes. For instance, in the Financial Year 2014-2015, the Board of Directors was committed to increasing the level of automation in the Authority from 90.6% to 92.4%. Similarly, the 6th Corporate Plan seeks to promote uptake of information management systems to increase efficiency and minimize cost of doing business both to the taxpayer and the Authority (Masese, 2011). Some of the systems that are associated with the Customs and Border Control operations are Cargo Tracking System, Cargo Manifest which reconciles between lodgements made by the shipping line and the declarants so as to assess any volume variances; Customs Oil Stocks Information System; used for stock monitoring and basis of calculation of volume for petroleum products; Manifest Management System used by shipping lines to declare items brought into the country and the Kenya Revenue Authority Valuation System, a database for creating a basis of valuation of goods and services (Okoth, 2017).

Busia is at the international border between Kenya and Uganda. It is situated West of Kenya and East of Uganda, approximately 431 kilometers by road from Kenya's capital city Nairobi and 202 kilometers from Kampala, the capital city of Uganda. It has become a major trading centre for both countries and imports to Kenya from Uganda include cotton, timber, fish, bananas, pineapples, maize, beans, groundnuts and sorghum, while Kenyan exports and goods on transit to Uganda include petroleum products, manufactured goods and household items like cooking oil, soap, clothing, electronics and automobiles (Compete USAID, 2010). The Busia border accounts for the bulk of both trade and human traffic between the two East African countries and is characterized by heavy human traffic, petroleum tankers, small scale cross border trade and containerized cargo trucks carrying imports, exports and goods on transit to other countries such as Rwanda, Burundi, Southern Sudan and DRC.

Problem Statement

Despite the fact that KRA has put in place measures in its customs department to improve on Revenue collection it has continued to post shortfall in revenue collection. Customs and Border Control Department in Kenya has not been performing to the expectations of the treasury. The department has on several occasions missed its collection targets. For instance, in the year 2017/2018, the department collected 443.5 billion out of the targeted 462 billion, in 2019/2020 the customs revenue target was Kshs. 484.97 billion against actual performance of Kshs. 469 billion a variance of Kshs. 15 billion KRA (2021). This clearly indicates that there has been a problem of the customs administration not meeting the set revenue targets which calls for the agency to come up with measures that will help attain higher customs tax compliance therefore the call for reforms and modernization in the administration. Due to this omission revenue estimates have often been inaccurate and unreliable for planning leading to budget deficit. Therefore this research intends to fill this gap. Whilst putting into consideration the documentation provided above, this study seeks to add onto the publications on was effect of technological reforms on customs tax compliance: Case of Busia border control post, Kenya.

Theoretical Literature

Technological Acceptance Theory

Technological Acceptance Theory is a specialized form of Theory of Action towards technological implementation. It describes the relationship between users' beliefs compared to their behavioral intentions; combining attitude to determined intention. This theory was created by Davis et al in the 1989 and was used to model user acceptance of technology. It explains that users are highly likely to use technology when they perceive it will improve job performance and is easy to use. According to Louho, Kallioja & Oittinen (2006), technology acceptance is attributed to how people accept and adopt some technology for use. User acceptance of technology has further been explained as the absolute willingness of a user group to use or implement IT for the tasks it is designed to support (Dillon, 2001). As a result, user acceptance can be viewed as a function of user involvement in technology use.

Technological Acceptance can be further described as the critical factor in determining the success or failure of any technology and acceptance has been conceptualized as an outcome variable in a psychological process that users go through in making decisions about technology. According to Oye, Iahad and Ab-Rahim (2012), technology has little value, unless it is accepted and used. Suvama and Godavari (2012) also explains the importance of understanding technology acceptance it is key since access to the new technologies is the increase in the supply of information.

The Technological Acceptance theory has evolved overtime. It first started with the Cognitive Dissonance Theory; formulated by Festinger (1957) to explain how discrepancies between one's cognition and reality change the person's subsequent cognition and behavior (Bhattacherjee, 2001). It explains a process of an individual's behavior where a user's has a preexistent belief about technology, has experienced its usage overtime and his post usage perception. Then the Innovation Diffusion Theory (IDT) of 1995 came to describe both individual and organizational level of analysis to show how innovation moves from invention to its widespread use. (Dillon & Morris, 1996).

Its relevance to this study is that even when technology is expected to offer efficiencies in processes, it may not be embraced to its full potential and sometimes may have resistance from users. It is therefore important to understand the influence of citizen's acceptance of e-government services has since it may affect potential cost saving and choice in investment in system. Further, Technological Acceptance theory supports border management and trade facilitation amongst all stakeholders in the region. It is key in decision making processes regarding technological implementation and future changes, for greater inclusivity of all customs stakeholders (Bhattacherjee, 2001).

Empirical Literature Review

Technological Reforms and Customs Duty compliance

Customs automation makes extensive use of computer systems consisting of comprehensive and integrated software packages that Greenwood et al. (2018) describes as cargo control, to monitor all movements of importation, transit and exportation, and ensure that all goods are duly cleared before release; and declaration processing, to capture and process data for duty and tax compliance. Swindley (2017) adds payment and accounting, to register and account for payments by importers and exporters; and risk management, to select those consignments bearing higher risks, concealing duty and tax noncompliance, illegal importation of drugs or materials aimed for terrorist activities.

Block chain ensures real time financial data is collected and stored for future use, creating transactional transparency. Artificial Intelligence is loaded with international tax laws, tax codes and globally acceptable administrative guidelines (Okoth, 2017). Developing countries have used system automation to identify anomalies, unusual relationships and patterns using various statistical and data mining techniques. In this way, tax agencies are able to address issues of non-compliance and low tax compliance (Dobell, 2017). KRA introduced Electronic Tax Registers (ETRs) in 2005 to ensure full remittance of VAT by retailer

Musa and Ibrahim (2016) studied Administrative and technological tax reforms and small corporate tax compliance behavior In Nigeria. On administrative reforms study dwells on tax structure variables namely tax rate, tax audit and penalties and how they influenced the level of compliance among small companies. On technological reforms, the study assess the indirect effects of tax compliance costs on the small corporate tax compliance behavior. Results show that both administrative and technological tax reforms have a positive effect on small corporate tax compliance. In context, gaps are clear on need to have the study done locally.

Conceptual Framework

According to Mugenda (2008), a conceptual framework is a concise description of the phenomenon under the study, accompanied by a graphical description of the major variables of the study. The independent variable technological reforms which was measured using Electronic cargo tracking system and Integrated customs management system While, dependent variable customs tax compliance was measured using Returns filed, Payment of tax revenue timely goods clearance as shown in figure 2.1

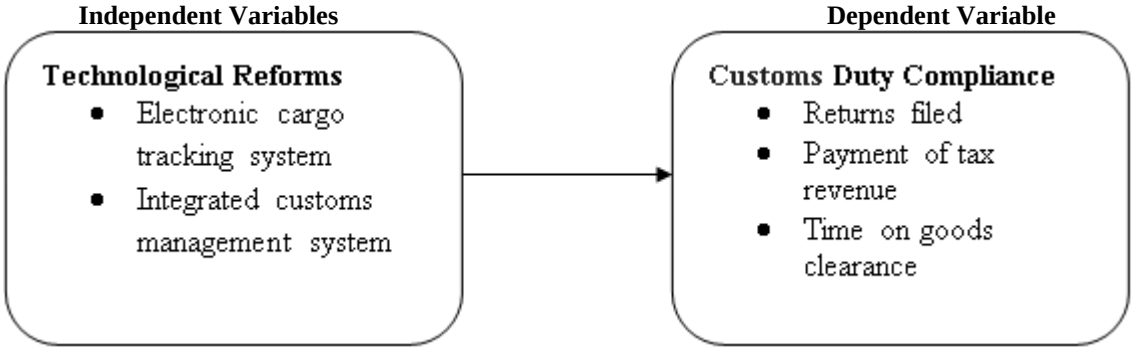

Figure 1: Conceptual Framework
Source: Researcher, (2024)

II. Research Methodology

This study used explanatory research design The target population of this study was composed of 212 customs revenue officers at Busia Border post. The study will use a questionnaire containing closed ended questions. The study will apply Cronbach's Alpha Reliability Analysis to effectively assess the internal consistency reliability status of the instrument. Table 1 indicates results for the alpha value with alpha => 0.7 indicating reliability. Custom duty complaince =0.890>0.7 and technological reforms=0.882>0.7, the results indicates that the questionnaire data is reliable.

Table 1: Reliability tests

Objectives	Cronbach's Alpha	N of Items
Custom duty complaince	0.890	4
Technological reforms	0.882	4

(Source: Research 2024)

Data Analysis

The response rate in research moots is a vital indicator of participant involvement and data reliability. It's computed by dividing the number of completed surveys by the total. Figure 4.1 indicates a response rate of 81% with 112 out of 138 respondents. participants requested.

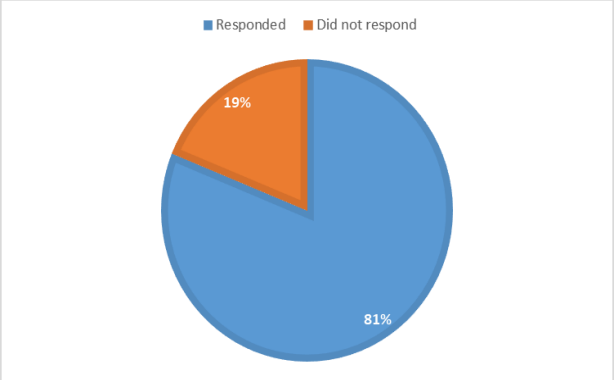

Figure 4.1: Response rate

Descriptive Statistics

Technological reforms

Table 2 presents the results of descriptive statistics for the assessment of technological reforms. The mean values, which indicate the average responses from the participants, range from approximately 4.571 to 4.696. These values suggest a highly positive perception of technological reforms in various aspects related to cargo tracking and tax compliance. The standard deviations (Std.Dev) indicate the degree of variability in responses for each item, with values ranging from approximately 0.927 to 1.011. The minimum aggregate score was 1.0 and highest was 5.0. Indicating a range of various opinions on the items questioned. Overall, the relatively low standard deviations imply a consistent pattern of responses among the participants, indicating a relatively coherent viewpoint regarding the impact of technological reforms on areas such as cargo tracking and tax compliance training.

Table 2: Technological reforms

Statements	Mean	Std.Dev	Minimum	Maximum
There has been training and capacity building on Cargo	4.696	0.994	1.0	5.0
Tracking Systems	4.652	0.927	2.0	5.0
Containerized cargo theft has reduced since incorporation of cargo tracking system	4.571	1.011	2.0	5.0
The revenue authority regular conducts training among taxpayer on use of technology to meet tax obligations	4.679	0.961	1.0	5.0
N	112			

(Source: Research 2024)

Customs duty tax compliance

These statistics from table 4.6: provide an overview of the measures related to custom duty tax compliance. On average, the number of returns filed by taxpayers has a high impact on the revenue collected, with a mean of 4.634 and a moderate level of variability (Std. Dev: 1.057). Increased taxpayer Compliance resulting from efficient KRA systems have led to correct filing of returns thereby improving the KRA performance appear to have a slightly stronger impact on increased taxpayer compliance it is illustrated by mean of 4.616 and low variability in the responses with a standard deviation of 1.042. Additionally, efficient KRA systems appear to have a slightly stronger impact on increased taxpayer compliance, as indicated by a mean of 4.732 and lower variability (Std. Dev: 0.949). Lastly, improving customer service and relations also show a high effect on KRA's performance in taxpayer compliance, with a mean of 4.652 and moderate variability (Std. Dev: 1.046). The lowest response was strongly disagree 1.0 while the highest was 5.0 which is strongly agree.

Table 3 Custom duty tax compliance

Statements	Mean	Std.Dev	Minimum	Maximum
The number of returns filed by the taxpayers has a significant impact on the revenue collected	4.634	1.057	1.0	5.0
Increased taxpayer Compliance resulting from efficient KRA systems have led to correct filing of returns thereby improving the	4.616	1.042	1.0	5.0

KRA performance				
Improved customer service and relations increases the performance of KRA on the taxpayer Compliance	4.732	0.949	1.0	5.0
Tax reforms have a positive impact on the performance of KRA in Busia border	4.652	1.046	1.0	5.0
N	112			

Source: Research (2024)

Model Summary

Table 5. revealed that technological reforms.correlate with customs duty tax compliance up to 62.9% (R=0.629) and accounts for a variation of 39.5% (R^2 =0.395). This implies that 60.5% of the change in customs duty tax compliance was caused by other factors which were not included in the study. The findings further reveal that even if the results adjust, the study would still account for 38.8% (AdjustedR^2, 0. 388) variation of customs duty tax compliance.

Table 4: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.629[a]	.395	.388	0.39410
a. Predictors: (Constant), customs duty tax compliance_mean				

Source: Research data (2024)

Regression Coefficients

The coefficient Table 5 shows that the coefficient table the main regression equation is

$Y= 0.299 + 0.566X_1$

Table 7 shows at a constant of 0.299 a unit change in technological reforms causes an increase of 0.566 on customs duty tax compliance. **H_{01}** The null hypothesis was that technological reforms has no significant effect on customs duty tax compliance at Busia border control post, Kenya. The study found that technological reforms has a positive and significant effect on customs duty tax compliance (p=0.000<0.05) the null hypothesis is therefore rejected.

Table 5: Regression Coefficients

Model		Standardized Coefficients		Unstandardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.299	0.094		2.436	.023
	Technological reforms	0.566	0.090	0.558	6.289	.000
Dependent Variable: Customs Duty Tax Compliance						

Source: Research data (2024)

III. Discussion Of The Findings

Technological reforms and custom duty compliance

The objective was to establish the effect of technological reforms on customs tax compliance of Busia border control, Kenya. The beta coefficient showed that there was positive and statistically significant effect of technological reforms on customs tax compliance β=0.566. These results underscore the significance of technological reforms in enhancing customs tax compliance at the Busia border control. The finding were in agreement with Kiring'a et al. (2017) studied the impact of online tax filing on tax compliance among small and medium enterprises (MSE) in Kibwezi Sub-County in Kenya. The study assessed the impact of online tax filing on tax compliance among Medium Scale Enterprises in Kibwezi Sub County, Kenya. A descriptive survey research design was applied on a target population of 1,800 MSEs. Results indicated that online tax filing positively influences tax compliance among Medium Scale Enterprises.

IV. Conclusions

Technological reforms within customs administration also play a pivotal role in enhancing customs tax compliance, as indicated by the study. The positive and statistically significant effect of technological reforms on customs tax compliance is underscored by the beta coefficient analysis. These results are consistent with the broader notion that advancements in technology can significantly improve tax collection processes and reduce tax evasion. The findings reiterate the importance of embracing technological reforms in customs administration to ensure greater compliance and revenue collection.

V. Recommendations

The study recommends that Kenya revenue authority should ensure that their policies are in line with the findings of this research. This includes adjusting tax and trade policies to encourage and support the identified drivers of tax compliance, such as administrative reforms, technology adoption, and infrastructure development.

Suggestions for Further Research

Further research can be done on how socioeconomic and demographic factors influence customs tax compliance. Investigate how factors such as income levels, education, and location impact compliance behavior, and tailor policy recommendations accordingly

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