The Impact of Single Window System on Customs Administration at Victoria falls Border Post in Zambia

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Cite: Kanyinji, P., Hapunda, V., & Hikacila, C. C. (2020). The Impact of Single Window System on Customs Administration at Victoria falls Border Post in Zambia. *The University Journal, 2(1),* 23-36.

Abstract

Zambia Revenue Authority Act Number 23 of 1994 mandates Customs to manage export and import formalities for international trade. In Zambia, there has been poor customs administration due to numerous pieces of legislations which conflict in their implementations. In the recent past the Zambian government has strived to improve Boader formalities through the introduction of the Single Window System (SWS) which cuts down on a number of formalities but integrates them into a single window with various components including information communication technology (ICT), trade regulation (TR) and trade facilitation (TF). In this study, the researcher used a deducted approach to test the relationship between Single Window System and Customs administration. Data was collected using a survey method and 350 respondents comprising various stakeholders at Victoria Boarder answered a questionnaire. The study showed overall that ICT, TR and TF sit statistically Significant to determining Customs Administration and therefore is a significant predictor of customs administration. However, the coefficient results show that ICT is not a predictor of customs administration and was marred with lots of poor internet connectivity and lack of electricity. The study recommends an improvement of internet facility and improved energy source since the single window system is anchored in ICT. Further, the study recommends that staff must be trained in various aspects of single window administration.

Keywords: Single Window System, Information Communications Technology, Trade Facilitation, Trade Regulation

Introduction

In the world today, most government agencies such as customs located at the border post facilitate international trade (WTO, 2013). In addition to the management of the boarder clearance processes and the security of international cross-border movements of goods and conveyances, Customs administration have to apply coordinated cross-border management principles to foster cooperation and coordination of their respective regulatory activities (Hoekman, 2014). Many border posts such as for Zambia (COI, 2011), show various government agencies enforcing different pieces of legislation. OECD (2013) does not support any poor governance of customs administration comprising numerous policy systems instead

propose the use of single window system. Further, OECD (2013) laments a malfunctioning Customs administrations causing high transaction cost and long clearance time leading to a strong negative impact on the economic development of a country. It has also been stressed that reliance on self-assessment by taxpayers, supported by movement from physical to post-release controls has been a problem in most Customs administration such as for Zambia. In addition, poor incentive and organizational structures which are unconducive to integrity and effectiveness in customs administration lead to several discrepancies (Djanbov, Freund & Pham, 2010). An empirical review on Zambian border posts show eleven different government agencies enforcing different pieces of legislation which continue to conflict affecting customs administration (Nkoma, 2017). Further, there has been inadequate human resources to enhance Customs, inadequate Equipment in ICT with poor connection to Asycuda system, poor infrastructure, multiplicity of Government Agencies with various formalities to fulfill before clearing, and a hectic clearing agents bureaucratic systems leading to delays in clearing processes, settlement of assessments by agents and importers leading to placement of agents on embargo in order to enforce compliance causing the trucks to be marooned at the border.

The problem is lack of clarity in systems and procedures at Victoria Falls Border post despite the introduction of the single window system. There is still multiplicity of different government agencies at the borders enforcing different pieces of legislation (COI, 2011). These multiple legislations are being questioned as to what extent they enhance trade facilitation and regulation in the clearing processes. In addition, there are questions regarding the levels of skills and competencies of employees from the different agencies and the extent to which they contribute to the problem of efficiency and effectiveness at the border post. Therefore, a study has to be done to determine the impact of single window system of customs administration

Rationale of the Study

The Single Windows System is a platform that is being used by most governments to manage customs administration for the submission of information to fulfill regulatory requirements between economic operators and government authorities. Governments and the import/export, shipping, logistics and transport communities have established an exhaustive range of agency and country-specific regulatory and operational requirements for international trade which unfortunately has a limited coordination between these groups, both at the national and the international levels. As a result, traders continue to be faced with a confusing set of stringent, overlapping and onerous reporting requirements, often including redundant, repetitive and outdated or superseded regulations. Recently, the Zambia government introduced the single window system to overcome this complex system of data submission and regulatory control. The operatives of the single include the use of Information technology (ICT), trade laws and trade facilitation among others. It is designed to sit at the national junction of national and international trade data exchange, thereby presenting a single point of access to all other relevant trade systems. The rationale of the study therefore is to employ the single window system to manage the various bottlenecks in Customs administration through the use of ICT, Trade regulation and trade facilitation system which aims at improving customs administration.

The objective of the study was to find out how the use ICT, trade regulation, and trade facilitation improves customs administration. ICT is the main driver of the single window system with its connectivity to Asycuda system the main clearing platform. Trade regulation involves the compliance mechanism that government has put in place through regulatory framework to meet all legal requirement while trade facilitation involves the flow of trade through its clearing processes.

Literature Review

Single Window System

The single window system is a platform of electronic exchange of trade information between participants in the trade process, largely accomplished through a single electronic lodgement. The World Trade Organization has mounted pressure to implement single windows aimed at improving trade expansion, efficiencies and increased revenue collection (World Bank, 2016; World Bank, 2014). Many stakeholder's benefits from the successful single window, as well improving the demands from Government licensing and customs processes and efficient movement of goods through port and terminal operations (Awotwi, 2011). A single window comprises a mixture of the collaborative efforts of all of the stakeholders involved in a nation's international trade activities. It uses the latest ICT techniques; international data and messaging standards together with simplified, harmonized and remodeled information systems for data exchange, in order to replace traditional paper-based information (Awotwi, 2011; Certificação, 2015). It also deploys sophisticated rules and procedures for funding, governance, business and marketing models, planning and project management, and for effective collaboration between all of the parties involved in the single window, at each of its stages (Choi, 2011; Chong, 2011; ESCWA, 2011). The single window has sub-versions of single windows, each dedicated to the principle of "single submission" and reengineered processes, converting paper-based, manual processes to electronic messaging systems and processes. Countries that already been using the single window practices have often gone through the various stages (Ndonga, 2015; Patton, 2015). The ultimate national single window includes all of the information exchanged by traders; Government departments such as customs administration, maritime, air, road, rail and inland waterway transport systems; port and terminal operators; and a range of other participants in the trade process, including freight forwarders, customs brokers, shipping agents, banks and insurance companies (Ndonga, 2015; Patton, 2015).

Trade Facilitation and Single Window

The World Trade Organization (WTO) has been deeply involved in global trade facilitation negotiations since the Doha Round of negotiations began with a Ministerial Conference declaration in 2001 (World Bank, 2016). WTO has been instrumental in trade facilitation arrangements in the single windows systems. The Doha Declaration provides the mandate for negotiations on a range of subjects and in Doha, ministers agreed to adopt around 50 decisions clarifying the obligations of developing country member Governments with respect to issues including agriculture, subsidies, textiles and clothing, technical barriers to trade, trade-related investment measures and rules of origin (World Bank, 2014). The advent of globalization has made the world to continue getting smaller as its national economies have continuously continued to be integrated with their trading partners. Mostly goods and services come from different countries or are manufactured or processed in other countries (Saini, 2014). In some cases, we consume sophisticated manufactured products that are the result of a process of collaborative procurement, manufacturing, assembly and distribution, shared between companies and corporations across several different countries through the global supply chain. The point at which global supply chains physically intersect is normally at a maritime export, an airport or a road border crossing or the trade, transport and logistics junction. The compliance requirements of import and export known as formalities comprise Government approvals, licenses and permits, customs clearance and inspections. ICT known as electronic single window plays a critical role in dictating the import and export formalities and trade, transport and logistics processes (UNECE, 2010). The electronic single window may be made up of separate functional systems or, increasingly, an integrated national single window. The single window processes are complex, and therefore if they require effective deployment of a

national single, significant amount of business process simplification and reengineering and information technology must be adopted as well as with the application of key international standards, rationalization of trade legislation and a significant collaborative effort between the public sector and the private sector (World Bank, 2016; World Bank, 2014). The single window is a virtual national gateway to international trade and its effectiveness facilitates import/export process, leading to national competitive and stakeholder benefits (UNECE, 2010.

Trade Laws, Compliance and Border Control in the Single Window

An increasing number of Government agency (GA) and Permit-Issuing agencies (PIA) are now involved in ensuring compliance with the local enactments and ramifications of trade treaties at every level. These agencies include customs, ministries of finance and treasury, health, quarantine agencies, food safety and consumer protection, transport, trade, immigration, security and often several others (Wilson *et al.* 2003). This complexity of overlapping ministries and their responsibilities and the morass of trade treaties, laws, regulations and agreements serve, in combination, to make trade facilitation more complex, difficult, time-consuming and expensive, which is the exact opposite of the intention. The reduction, or even elimination, of tariffs on trade may seem to be a politically desirable outcome, but the costs of compliance and the additional time and effort often cost more than the intended saving in costs, not to mention the potential for reduced procedural transparency and additional complexity of computer software systems and databases (Wilson *et al.*, 2003). Customs and revenue authorities are often seen as the cause of many, some would say all, of the national trade process problems, which is some way from the truth. Traditional customs authorities are the national choke point for clearance and inspection of goods entering or leaving the country. Their activities are closely legislated; they are often mandated to act on behalf of other agencies in ensuring compliance with trade legislation, which is commonly reinterpreted in a national customs law. They do not only have a duty to inspect and evaluate information provided by traders on official forms which accompany goods entering or leaving the country, they also have a duty to ensure compliance with customs law and that of permit issuing and licensing agencies (Holloway, 2005; Wilson *et al.* 2003; Wilson, et al., 2005). This is performed by means of physical inspections of goods, once again representing other agencies according to their mandate. In addition, they have to collect all customs revenues as determined by law and processing fees for their services, in addition to fines and penalties. The more complex customs law is made by the overlapping trade agreements concerned, the more complex, time consuming, expensive and potentially less transparent is the customs process (Holloway, 2005; Wilson *et al.* 2003; Wilson, et al., 2005).

The measures adopted to protect national trade and industries, and to comply with trade treaties and the host of international agreements, are reflected in the proliferation of licences, and in the number of agencies that issue them and are entitled to carry out inspections. Thousands of specific goods, uniquely codified by the harmonized classification system, are subject to controls, exemptions and exceptions (Kostovski, 2011; Kutirov, 2009; Korinek, & Sourdin, 2011). As mentioned earlier, variety of agreements being signed and implemented, while aimed at reducing the numbers of controls and tariffs, is at the same time introducing complexity and uncertainty. Multiple agencies are involved in issuing licences, permits, and certificates of origin. Some of these agencies may also have provincial operations which further complicate matters (Kostovski, 2011; Kutirov, 2009; Korinek, & Sourdin, 2011). Few of these agencies are fully automated. Most of them operate hybrid ICT and paper-based processes, dependent on multiple original paper copies, multiple signatures, multiple authorizing stamps, even fiscal stamps in some cases. All accept cash payments, with

resultant concerns about lack of transparency. The challenge to single window designers and to ICT practitioners in this field is to identify the processes and to suggest ways to introduce efficiencies. The sub-text is to specify plans to automate these processes in such a way as to ultimately link all formalities and logistics systems into the customs automation systems so as to create a transparent, paperless, cash-less and signature-less formalities system (Kostovski, 2011; Kutirov, 2009; Korinek, & Sourdin, 2011). Logistics is an even more complex issue since it comprises a hybrid mix of public sector and private sector operators and agencies, as will be seen in a later section of this report. The interdependence of technical controls (GA & PIA), customs systems, international trade treaties and national trade policies and regulations, and transport and logistics in trade facilitation is irrefutable (Kostovski, 2011; Kutirov, 2009; Korinek, & Sourdin, 2011). ICT is becoming the glue to facilitate the necessary reengineered, automated processes that lead to transparency, efficiency, reduced time and costs and ultimately to national competitive advantage. However, for this to take place, a collaborative arrangement between all parties to be involved in the particular design and function of a single window needs to be agreed and compliance arrangements put in place (Kostovski, 2011; Kutirov, 2009; Korinek, & Sourdin, 2011).

ICT and Process in the Single Window

There is a golden rule to process reengineering: Do not automate a bad business process. This is excellent, common sense advice. The inference is that non-automated systems have evolved in such a way that to automate the document creation, decision-making and record keeping is merely to automaton older, less efficient means of completing a transaction. Therefore, the reasoning goes, it is better to document existing systems and theoretically remodel, or reengineer, them so as to operate in the most efficient way before designing an automated system to replace the traditional or legacy system. However, in real life, that option may not exist. You do not always have a choice. Nevertheless, it is tempting to recite this mantra (Kostovski, 2011; Korinek, & Sourdin, 2011). One of the key preparations for a single window is to analyze and to reengineer processes, to align them with other systems in order to interconnect or to interoperate, to simplify them – and only then to automate them. In practice, some of the most important systems will already be automated in part, occasionally in full (Kutirov, 2009). The key is to simplify and to automate processes making maximum use of ICT. Thereafter, the process of data modeling, standards mapping, and the final process of reengineering takes place. This is a specialist process and may make use of a combination of electronic data interchange (EDI) techniques, Extensible markup language (XML) routines and/or the use of such common UN/CEFACT mapping tools as United Nations electronic documents (UNeDocs) and the WCO data model and associated mapping tools, among several other commercially available tools (Kutirov, 2009). Plant and animal products may be live or fresh; they may comprise processed products based on plant or animal products. Their departmental regulations may be based upon ministerial instructions or national laws, based in turn upon such treaty obligations as WTO or arrange of regional trade agreements, bilateral trade agreements or FTAs (Wilson, et al., 2005). Each separate agreement has its own set of rules, which may change dynamically. Each may be influenced by other such agreements as the World Health Organization (WHO). For example, bird flu caused the introduction of a series of special regulations to restrict trading in live poultry, eggs, and others. Complicating factors may include mutual recognition agreements (MRA) with selected economies, as part of, or separate from, regional trading or bilateral FTAs. This means that, if an exporting country has stipulated that a product has been inspected and certified as "fit for purpose" in the exporting country, then the terms of the MRA state that, subject to certain such conditions as the number of days since the inspection certificate was

issued, transport and packaging conditions, and no new alerts, among others, then those goods may be accepted without normal incoming inspection and certification (Holloway, 2005; Wilson *et al.* 2003). A certificate of compliance against standards and the MRA may then be issued, which should be satisfactory to customs, and which will then permit the import to be collected for delivery to the importer.

Conceptualization

Arising from literature, Single widow serves the purpose of using the single window for customs administration. The single window comprises the use of ICT, trade facilitation and trade regulation. The conceptualization involves the three (3) independent variables (ICT, TF, and TR) and the dependent variable is customs administration (CAD).

Table 1: Independent and Dependent Variables

Independent variables	Dependent variable
Information technology	Customs administration
Trade facilitation	
Trade regulation	

It is assumed in table 1 that the three independent variables influence the dependent variable. This means that in order to improve customs administration, there must be coordinated effort of the information technology, trade facilitation, and trade regulation. A regression analysis will help to determine how the three (3) independent variables predict significantly the dependent variables and the strength of relation.

Methodology and Design

In the study, a positivist paradigm was used to determine the relationship between the independent and dependent variables and how to enhance customs administration. The unit of analysis in the study are the stakeholders in the single window system and the positivist paradigm was appropriate. Creswell (2011) proposes the use of positivist approach in studies as reality is viewed as external and objective in the ontological and epistemological posture. A descriptive cross-sectional survey which describes the events as they presently occurred was utilized as it relates to other factors in the current conditions (Bryman, 2015; Creswell, 2014). This study adopted a single window system theory which breaks down the research variables to make it easier to collect and analyze data. Primary data collection was done through quantitative methods, and a standardized questionnaire was developed.

Table 2: Probing Single Window System

Single Window System	
To what extent has ICT in the single window system improved customs administration?	To what extent has trade regulation in the single window system improved customs administration?
To what extent has trade regulation in the single system improved customs administration?	To what extent has the introduction of the single system improved customs administration?

Selecting Samples

A simple random sampling was conducted among 600 stakeholders at the Victoria Boarder Post. Random Sampling gave every stakeholder an equal opportunity of being selected. The study considered various stakeholders involved in trade facilitation, trade regulation and well as customs administration.

Data Collection

The collection of primary data was completed in 5 months' time starting with the month of November 2018 to the March 2019. A standardized questionnaire was randomly distributed to stakeholders to be answered through a cross sectional survey. The questionnaire development process proposed by Neelankavil (2015) was adopted to ensure quality and consistency. Neelankavil (2015) proposes a systematic process to follow in questionnaire development through processes of reviewing the research objectives and questions in order to streamline them to information needs and afterwards pretesting the questionnaire. Cronbach's alpha was used to measure reliability which is a rigorous method to check internal consistency of the item. This measure is important before data analysis as it reveals the similarity of items in the instrument that is used to tap the constructs. The data collection progress resulted into 600 questionnaires sent to the respondents who were stakeholders in trade facilitation, trade regulation and information communication technology. A total of 400 questionnaires were collected back from the stakeholders and checked for errors to determine suitability. The refined data was loaded into an Excel software package after which it was transferred into the IBM SPSS software package for analysis

Data Analysis

In analyzing data, a regression analysis was performed to define the relationship between the independent and dependent variable. However, firstly the regression analysis require to engage in the assumption of multivariate regression analysis such as the normal distribution, freedom from extreme values, and having no multiple ties between independent and dependent variable. As for the questionnaire, the items were measured using the "five-point Likert scale from 1 to 5", with options from "strongly disagree" to "strongly agreed. The use of Microsoft Excel to develop a data sheet was successfully done and thereafter data transferred it into the IBM SPSS statistical package. To ensure that errors free data, it was reviewed numerous times for possible errors and omissions. A regression analysis was finally done using SPSS.

The availability of missing data always presents itself as a common problem affecting data analysis and therefore was checked using the frequency analysis. Thereafter, a Univariate normality test was done, then linearity test, freedom from extreme values, and multi-linear relations. To fulfil the prerequisite to carry out a regression analysis, a univariate normality assumption was done for each variable through the use of skewness and kurtosis test. In order to check the unidirectional linearity extreme values, it was checked whether or not the Z scores of the variables were in the ±3 range.

Response Rate

Only 400 out of 600 questionnaires were returned from stakeholders. Fifty (50) out of the 400 returned questionnaires were unsuitable for processing as they were not answered correctly. All such questionnaires were rejected by the researcher. Later, only three hundred and fifty (350) questionnaires were suitable giving us a response rate of 58% (350/600) of the total sample of the identified stakeholders.

Reliability Test

Cronbach's alpha, which is a significant test to enable the estimation of internal consistency in the questionnaire items was used to check the reliability of the instrument (Field, 2009; Hair *et al.*, 2010). The acceptable values of Cronbach's alpha range from 0 to 1 with those coefficients closest to 1.0 revealing the highest internal consistency on the items. However, other scholars show that any value above 0.6 can be accepted as posing satisfactory item reliability (Hair *et al.*, 2010). Table 3 shows the reliability statistics.

Table 3: Cronbach's Alpha for the Items Used in this Study

Reliability Statistics	
Cronbach's Alpha	N of Items
.785	5

Results

Firstly. The descriptive statistics test was done to check for suitability of regression analysis. Some of the tests include a test on missing values and a test on skewness and kurtosis. Table 4 shows that there is no missing data. It is known that missing data may cause serious problems in statistical procedures as it may lead to elimination of cases in SPSS resulting into having not enough data to perform the analysis

Table 4: Frequency Table for Missing Data

Statistics

		Customs Administration	Information technology	Trade Regulation	Trade facilitation
N	Valid	350	350	350	350
	Missing	0	0	0	0

Skewness and Kurtosis

Prior to the multivariate normality test, a procedural univariate normality test was performed on the quantitative variables. This was aimed at performing and identifying the skewness and kurtosis coefficient of the research variables. The skewness test measures the relative size of the two tails while the Kurtosis test measures the amount of probability in the tails. This test is a measure of the combined sizes of the two tails and the resultant value is habitually compared to the kurtosis of the normal distribution, which is equal to 3. The table 5 show results of the analysis. The skewness coefficient results of all variables show within the acceptable range of +/- 1 which means that the variables are not in skewed position. The kurtosis coefficients do not differ from the normal, and therefore distribute normally.

Table 5: Skewness and Kurtosis

Statistics

	Customs Administration	Information technology	Trade Regulation	Trade facilitation
Skewness	-.134	-.017	.047	.055
Std. Error of Skewness	.130	.130	.130	.130
Kurtosis	-1.314	-.792	-1.080	-1.412
Std. Error of Kurtosis	.260	.260	.260	.260

Multiple Relations Coefficients

In the study, it was important to determine any multiple relations between variables. Tests such as simple correlations, variable increase factors (VIFs), tolerance and conditional index (CI) were done. Table 6 shows the multiple relations coefficient.

Table 6: Multiple Relations Coefficients

Model		B	Std. Error	Beta	t	sig	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	.843	.172		4.893	.000					
	Information technology	.026	.047	.022	.560	.576	.206	.030	.021	.905	1.104
	Trade Regulation	.195	.051	.180	3.847	.000	.527	.203	.144	.637	1.569
	Trade facilitation	.573	.044	.592	12.931	.000	.701	.571	.484	.668	1.496
a. Dependent Variable: Customs Administration											

Table 6 shows analysis results on correlations on zero-order, partial and part. The interpretations of the results indicate no correlation coefficient higher than 0.8. This means that there is no multiple relation on the stated variables. In addition, the variance increase factor (VIF) has shown results of less than 10 which is a sign of good results. Scholars argue that if the results are equal or more than 10, a conclusion would be a multiple relation between variables. The results on tolerance values show that they are higher than 0.10 and therefore no multiple relations between variables is decided.

Table 7: Multiple Relations Condition Index Values

Collinearity Diagnostics[a]

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions			
				(Constant)	Information technology	Trade Regulation	Trade facilitation
1	1	3.733	1.000	.01	.01	.01	.01
	2	.135	5.266	.07	.35	.11	.29
	3	.072	7.190	.12	.02	.84	.50
	4	.061	7.845	.80	.62	.04	.20

a. Dependent Variable: Customs Administration

When the multiple relations condition index (CI) test is done and the CI is larger than 30, then it is considered correlations between variables. In table 7, CI values are smaller than 30 which is good. A conclusion therefore is that there were no multiple relations between the variables. A Regression analysis was now suitable to be done after satisfactorily examining the univariate normality test, linearity test, freedom from extreme values, and multi-linear relations.

Multiple Linear Regression

Table 8: Regression Model Summary

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.717[a]	.515	.510	.96422

a. Predictors: (Constant), Trade facilitation, Information technology, Trade Regulation

Table 8 shows the regression model summary. It indicates the degree of the emerging models predicting the dependent variable in the consequence of the standard regression. It also shows the degree of the model explaining the variance in the dependent variable. The model's degree of predicting the dependent variable on one hand was found to be R=.717. On the other hand, the model's degree of variance in the dependent variable was found to be R^2=.515. The coefficients show that the model predicts the dependent variable very well.

Table 9: Analysis of Variance (NOVA)

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	341.171	3	113.724	122.319	.000[b]
	Residual	321.686	346	.930		
	Total	662.857	349			

a. Dependent Variable: Customs Administration
b. Predictors: (Constant), Trade facilitation, Information technology, Trade Regulation

Table 9 clearly shows how three (3) independent variables in the standard model predicting significantly the dependent variable in the regression model. The results show that the three (3) independent variables are significantly predictive of the dependent variable according to ANOVA statistics [F (3, 346) =122.319, p<0.05]

Table 10: Regression Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
1 (Constant)	.843	.172		4.893	.000	.504	1.182
Information technology	.026	.047	.022	.560	.576	-.066	.119
Trade Regulation	.195	.051	.180	3.847	.000	.095	.295
Trade facilitation	.573	.044	.592	12.931	.000	.486	.660

a. Dependent Variable: Customs Administration

The absolute value of β (Beta) in table 10 indicates the order of importance of the independent variables with the highest beta value being relatively important variable. Trade facilitation made the biggest contribution with the value of (β=.592). The next contribution were in their higher sequence trade regulation (β=.180 and information communication technology (.022) respectively.

Discussion

The model's degree of predicting the dependent variable on one hand was found to be R=.717. On the other hand, the model's degree of variance in the dependent variable was found to be R^2=.515**.** The study analysis results show three (3) predictor variables (ICT, TR, TF) which show overall significantly predictive of the dependent variable (CAD). The analysis of the assumptions necessary to carry out a multiple linear regression was very important to be done and the results of the assumption showed fulfillment to carry out a regression analysis. In the study, model's degree of predicting the dependent variable was R=.717 while the model's degree of variance in the dependent variable was R2=51.5. These coefficients can be reported that the model predicts the dependent variable very well. This means that overall, three (3) independent variables are significantly predictive of the dependent variable as shown on the ANOVA statistics [F (3, 346) =122.319, $p<0.05$]**.** In addition, the regression coefficients show that trade facilitation and trade regulation influence customs administration with p-values less than 0.05 while that of ICT is 0.576. This imply that both trade facilitation and trade regulation have a positive effect on customs administration. On the other hand, ICT show that it has no influence on customs administration.

Conclusion

The study concludes that the three (3) predictor variables (ICT, TR, TF) show overall significantly predictive of the dependent variable (customs administration). The model's degree of predicting the dependent variable was R=.717 while the model's degree of variance in the dependent variable was R^2=51.5. The conclusion was therefore that trade facilitation and regulation influence customs administration while information communication technology does not. This means that the single window is not effective in its current state

Recommendations

In order to improve the competitiveness of the Single Window the study recommends that they improve ICT for efficient customs administration, train staff on the use of ICT and the single window itself. This involved the process of improving internet infrastructure which is the main anchorage of the Single Window System

Limitation of the Study

There were some limitations in the study despite the elaborate methodological approach. The structured questionnaires could have generalized the phenomenon in the study and disregarded significant insights. In order to address any such limitations, further research must broaden their scope and capture other essential datasets from government literatures, non-government organizations publication, government publication and the parastatal companies. Further, it is important to refine the single window system supported by further research with a good feedback system from more stakeholders from within the public sector.

Conflict of Interest

The authors declare no conflict of interest.

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