ISSN (online) 2664-9535 (print) 2664-9527 https://atcr.kra.go.ke

The Effects of Adoption of Customs Electronic Procedures on Trade Facilitation by Clearing and Forwarding Agents in Nairobi, Kenya.

Brillian Adisa Lihanda[1]
Felix Kilonzi[2]

[1] Kenya School of Revenue Administration
[2] Jomo Kenyatta University of Agriculture and Technology/Kenya School of Revenue Administration

Received 18 October 2022
Accepted for publication 24 October2022
Published 26 October 2022

Abstract

The study aimed at determining the impact of the adoption of customs electronic procedures by customs officers in Kenya. The research had three specific objectives which were; to determine the effects of harmonization of customs electronic procedures on Trade facilitation by clearing and forwarding agents in Nairobi, to examine the automation of Customs Electronic procedures on Trade facilitation, to establish how the adoption of Cargo Information System on Customs Electronic procedures by customs officers, affects trade facilitation.. The overall objective of the study was to establish the effects of trade facilitation in Kenya. The research was anchored on the three theories namely; Technological change theory, Technological acceptance theory, and theory of reasoned action. The research employed a descriptive research design and had a target population of 892 officers in the clearing and forwarding firms within Nairobi. This research used structured questionnaires as a primary source of data. A pilot study was carried out on 20 officers that did not form part of the target population to test the reliability and validity of the research instrument. The study used Cronbach's alpha (α) coefficient to test reliability, while the face and content validity were used for checking for validity of the research instrument. The primary data collected was analyzed with the use of SSPS version 28. Data analysis was conducted using descriptive statistics and inferential statistics by use of moderated multiple regression analysis. The study revealed that the harmonization of customs electronic procedures, automation of Customs Electronic procedures, and the adoption of cargo Information systems had a major influence on trade facilitation in Kenya. It was also discovered that harmonization of customs electronic procedures, automation of Customs Electronic procedures, and the adoption of cargo Information System had a variation of 93.5% on facilitation of trade implying that since the automation of the customs procedures by Customs administration has had a significant increase in revenue collection hence effective trade facilitation. This resulted in greater border control hence a significant growth in regional trade. There is a need for tight enforcement measures in the implementation of the new system to enhance growth in revenues by the customs administration. In conclusion, the adoption of electronic customs procedures requires an investment in technology, training, security enhancement, and management of hitches hence the adoption of these systems will facilitate trade growth in the region. Harmonization and adoption of electronic procedures regionally allow data sharing and competitiveness globally. The research recommends that it's important for future researchers to undertake the same or replicate empirical studies in the harmonization of electronic customs procedures on the operational performance in East Africa to validate the findings and conclusions of this study. The study provides future researchers with a useful

ISSN (online) 2664-9535 (print) 2664-9527 https://atcr.kra.go.ke

conceptual and methodological reference to carry out studies in this area of adoption of customs electronic procedures.
Keywords: Customs Electronic Procedures, Trade Facilitation

1. Background

Globally, Information technology (IT) plays a significant role in the management of customs and border administrative activities thereby enhancing trade and business. In line with the business, customs electronic procedures help in reducing the cost of doing business while improving the efficiency of customs administrations. As a consequence, it ensures the standardized application of legislation, transparency, and assessment of clearance procedures. The automation of custom activities reduces the chances of personal contact between custom officers and business practitioners. This has significantly reduced the negative impacts of physical inspections. According to Peterson (2017), electronic systems can reduce customs processing ties for goods crossing at the port, ensure accurate custom charges, and provide information regarding transport operators. Varied research evidence has also cited that electronic custom systems enhance supply capacities and increase global market access Asamoah et al., (2012).

Research has been done by the word Bank to demonstrate that the World Bank tends to support the development of nations to merge quickly. This can only be enhanced through the utilization of the IT systems to ease custom operations. It is believed that African countries that have embraced IT as part of their custom operations have since recorded the highest growth rates in terms of economy. The result should not be amazing because IT integrations do not only increase the level of competition among nations but also increase pressure to raise efficiency and interactions to new advancements.

In Kenya, a study by Isaev (2020) confirmed that there is a significant relationship between representative tax framework and large-scale premise for revenue equalization systems where

IT is applied. Findings from the study further elaborated that the large-scale model of customs operations performs better because the funds are distributed to the right channels. Another scholar investigated the revenue efficiency of the Kenyan tax system instigating financial deficiency; it showed that modernization and performance of C&BCD of KRA in Kenya would require the use of ICT. Similarly, Kenya adopted the use of the Simba system, an application that is used to clear cargo destined to other countries in a faster way without having to queue for the same services. This has benefited and improved the system documentation including presenting the availability of historical transactions through quick delivery of the system. From a publication by Mugambi (2017) ECTS was also introduced to curb the diversion of transit cargo by tracking the containers carrying goods under customs control.

1.1.1 Global perspective

Automated tracking and monitoring dates back when it was used in world war 11 in differentiating the air allied and enemy aircraft by the British (Smith and Konsynski, 2003)with recent technological advancement witnessed in; airport luggage tracking, maritime monitoring, logistic fleet management, electronic cargo monitoring among others. Globally, several countries have implemented automated cargo handling including Hong Kong and Jordan in 2010 and 2008 respectively which show elimination of transit escorts, reduction in time spent in clearing and forwarding, increased cross-border trade, and reduction of revenue leakages (Alfitiani, 2010).

Globally, a lot of initiatives have been taken including work by the WTO, WCO, and ICC on customs as well as reforming customs processes as well as other international scenes, such as APEC and Asia-Europe Conference have played a significant role. For example, in the third ASEM attended by many key players in trade from ten Asian and fifteen European countries in September 2001, the stakeholders agreed that in the year that followed, they would focus on paperless custom processes as it would simplify procedures by creating a favorable environment for goods to flow smoothly within borders. Trade facilitation has been recognized as a key driver in determining the export competitiveness of a country in ensuring countries had the right to guard themselves against illegal trade practices (Harzing, 1999). Various nations across the globe have adopted automated custom procedures to improve their operations in clearing and forwarding consignments. For instance, Germany has adopted the system and has led to reduced trade barriers and as a result, they are now able to influence the free flow of goods in European Union (OECD, 2011).

In China, automated procedures have been classified as one of the best accounting for about 78% efficiency leading to simplified custom and harmonization with other users (Alcedo & Cajala, 2015). In Mexico, the government has adopted automated customs procedures aimed at controlling the

ISSN (online) 2664-9535 (print) 2664-9527 https://atcr.kra.go.ke

revenue collection as well as facilitating trade with neighboring countries (Horvat, 2011). Mexican automated customs system is used to avert permeations of illegitimate goods such as drugs. Further, trade facilitation has been viewed as an additional effort to relax global trade. Reports show that trade facilitation in many medieval European markets such as Benin, Switzerland publicly displays the units and measures used for the sale of goods (Grainger, 2008). With automation of trade, it is believed that it will result in a reduction in lodgment clearance and corruption cases as well as increasing taxes and customs (SchwareandKimberley,1995).

1.1.2 Local perspective

Kenya like many other countries, automated customs procedures has been a priority by different agencies who are involved in international trade. The agencies control goods crossing the borders, determine goods classification and origin as well collect revenues, and control trade policies. The mode in which customs operate greatly affects international trade either destructively or positively (Kafeero, 2007). The operations of clearing and forwarding firms in Kenya are licensed and regulated by KRA and fall under the department of Customs Services.

Firms wishing to operate as clearing and forwarding must comply with the set minimum requirements including, membership to Kenya International Warehousing and Freight Association KIFWA, certificate of good conduct for the directors, recommendation letter from a bank, clearance certificate by Domestic Taxes Department concerning Income Tax and Value Added Tax returns among other requirements.

In Kenya, they are about 892 licensed and registered customs clearing and forwarding agents by 2015 whereas KIFWA is the sole representative of all freight and forwarding companies in Kenya was established in 1996 and was formed due to the need to form one National body to represent the interests of all its members. Clearing and forwarding agents in Kenya are involved in clearing cargoes from the port of Mombasa or containers freight stations customers who are either within Kenya or East and Central Africa. Kenya is the main point of entry In East Africa, the development of infrastructure is the main priority since it will have huge potential development impact (Ndonye, 2014). Though the firms in this industry have been grown significantly in the recent past, as well as facing a lot of challenges including lack of information flow logistics integration, theft, poor customer support worldwide, costly marketing, the effect of automated customs on trade facilitation has not been fully addressed.

1.2 Statement of the problem

For a number of years there had been talks of computerization of customs procedures, but until 2005, the customs clearance was done manually (Rukus and Linden, 2005). There were some major problems that were experienced while using systems like the boffin (bishops gate 4 office freight forwarding system) manual system. There were excessive documents required to enable clearance and forwarding. Systems in Kenya were still largely paper based and generated many documents; often multiple copies, that were to be physically lodged at the customs office and stamped by a succession of officers and agencies. There was also insufficient use of IT, as routine procedures that could be automated were done manually or where there was automation, obsolete IT systems were used (KRA. 2005). Moreover, there was lack of co- ordination among agencies, in that authorities were based at different locations and had different hours of operation leading to additional delays and expense. The internal system in use were inefficient and thus leading to time consuming bureaucratic procedures, delay in decision making and dispute resolution. This led to clients incurring high demurrage/storage charges (Mwangi, 2006). The lack of transparency, unclear and unspecified import and export procedures was also a hindrance. Procedures were usually unclear and inconsistently applied with officers often having significant discretionary powers, creating uncertainty and unpredictability.

Furthermore, the staffing levels were inadequate. There was a shortage of qualified personnel to handle the volume of work generated. This was due to lack of training and IT support, thus reducing staff productivity (OECD, 2003). While the business community, including Clearing and Forwarding Agents remained supportive of the automation and modernization, they were concerned that the implementations of systems like Simba 2005 led to unprecedented delays in clearance of both imports and exports. Since the introduction, there had been several problems experienced by those accessing it causing much frustrations, while in the press, it had appeared that the problems were only those by Clearing and Forwarding Agents. Prior to Kenya Revenue Authority embarking on any of its reform and modernization projects, it was required by the International Monetary Fund and World Bank to do a preliminary research to determine the viability of the projects (IMF, 2003). Thus a recent study was done to determine whether this project would be feasible and the predicted outcome. However, this previous research was sketchy and mainly as a means of evaluating the viability of the project. According to Rukus and Linden (2005), a lot of doubt has been casted as to whether the modernization reforms that involved the introduction of technology through the automation process in KRA have actually been effective. In an article in the Daily Nation newspaper (9th April 2006) over 400 luxurious vehicles were impounded having been registered without duty payment.

This was blamed on the loopholes that existed in the new automated Simba 2005 system. KRA lost over 1 billion shillings in terms of revenue- for both import duty and registration fees. Also in the same month, as reported in the

ISSN (online) 2664-9535 (print) 2664-9527 https://atcr.kra.go.ke

Daily Nation Newspaper (30th April 2006). there was another crackdown of stolen vehicles, which were said to have been imported yet were stolen from developed countries. These vehicles were not only passed through the Simba 2005 system as having been paid duty but also registered. Thus the amount of revenue collected especially after the introduction of the new automated system in the Customs Services Department has reduced and was below target. An article in the Daily Nation (27lh April 2006) said that for the nine months prior to this period that there was a shortfall of 7.4 billion of revenue collected. Considering these circumstances, it was necessary to look into the impact of the introduction of automation as a strategy, and more so at the customs department with particular emphasis on Simba system. This study sought to establish the impact, both positive and negative that automation has had on the customs clearance performance since its inception.

1.3 Research objectives

The overall objective of this study is to establish the effects of the adoption of customs electronic procedures on trade facilitation by clearing and forwarding agents in Nairobi.

1.3.1 Specific objectives

i. To determine the effects of harmonization of customs electronic procedures on trade facilitation by clearing and forwarding agents.

ii. To examine the automation of Customs Electronic procedures on trade facilitation by clearing and forwarding agents.

iii. To establish how the adoption of cargo Information Systems on Customs Electronic procedures by clearing and forwarding agents, has affected trade facilitation.

1.4 Research Questions

i. What is the effect of harmonization of customs electronic customs procedures on trade facilitation by clearing and forwarding agents in Nairobi?

ii. What is the effect of automation of Customs Electronic procedures on trade facilitation by clearing and forwarding agents in Nairobi?

iii. How has the adoption of cargo Information systems on Customs Electronic procedures by clearing and forwarding agents affected trade facilitation?

1.5Scope of the study

There are several clearing and forwarding agents at different points across the country. However, each of these departments operates under a single authority of the Kenya Revenue Authority. With the adoption of customs electronic systems, all the agents are expected to operate under a seamless platform whereby all transactions and operation activities can be accessed within the system. Therefore, this research will be conducted in Nairobi.

1.6 Significance of the Study

The study significance is aimed at providing the necessary information to students both current and potential who have wishes in researching the custom electronic procedures adoption and the effect they have on the facilitation of trade. Based on this, they will engage more intensely in the knowledge they have concerning the study and at the same time recognize areas requiring extra research and work on those specific areas. The study also highlights other areas of significance in which relational studies are needed and provide a clear comparison between the current electronic system and the former manual system. It is with this comparison in previous challenges that will be identified and can be fixed.

Knowledge concerning the customs electronic procedures will be acquired by the policymakers of the government. With this, the essence of the electronic procedure will be appreciated and the implementation of the necessary policies to make the customs electronic system work more efficiently and reliably. In relation to the Kenya Revenue Authority managers, this study will perform as a design as they undertake the international trade standards and procedures implementation. In their daily operation, it will act as their reference tool in the custom entries lodgement.

The study will be of benefit to the Kenya Revenue authority shall utilize it as a platform to the plan on how to improve the efficiencies of their operations. It will also serve as an opportunity to establish policies that would guide the adoption of ICT by the taxman agencies or other private agencies that work with the revenue authority. Apart from adding to the existing body of knowledge, the study will act as a baseline of references for future researchers.

1.7 Limitations of the study

The researcher anticipates experiencing varied limitations concerning this study. First, the issue of COVID-19 has seriously affected the usual way of interaction. Therefore, the physical meeting of the participants towards the distribution of questionnaires was affected. Besides, obtaining data from some of the respondents who fear their confidentiality is also most likely to be met with a lot of challenges. However, the researcher has put in place adequate measures and will try to convince the participants of non-disclosure of their identity. Another limitation expected entails obtaining data from other similar studies as the area of study looks limited research. The area is unique and seems to have not been vastly researched in the past. Another anticipated limitation is the obsolescence of secondary data due to the time-lapse from the dates of publication. Finally, there was the issue of financial constrain as the researcher would have to make a physical movement to the scene of data collection which is not sponsored by the academic institution.

ISSN (online) 2664-9535 (print) 2664-9527 https://atcr.kra.go.ke

2. Literature Review

2.1 Introduction

Literature review refers to the evaluation of the existing literature based on one's subject or the topic being studied, by reviewing literature relevant to the study topic. Advanced literature reviews were sourced from books, journals, working papers, and periodic reports among others.

2.2 Theoretical Review

The concept of adoption has become a significant element when it comes to individual users of products or services. This study seeks to establish the effect of the adoption of electronic customs systems by the clearing and forwarding firms is of significance to the entire institution as obtained from the existing literature (Bargaz et al., 2018). While it is believed that the emergence of an integrated electronic management system has helped in enhancing efficiency to the agency, it is in equal measure that several challenges have also been met. To explore the individual acknowledgment conduct of information technology and ICT systems as used by the taxman agency, numerous models have been put in place by the researchers. These include the Technology Acceptance Model (TAM), Theory of Planned Behavior, and Technological Acceptance theory among others.

2.2.1 Technology Acceptance Model

Technology Acceptance Model was established by Davis in 1988, since then, it has been widely adopted as a mainstream research model to predict the level of acceptance of information systems among individual users. The model indicates that any user who is introduced to new technology will expect two merits from such a system; how it would influence their decision- making process and the efficiency. This can be summed up as the perceived usefulness of the system. According to Davis (1988), the perceived usefulness of a system constitutes is subjective to the likelihood of a specific application framework and the extent to which it enhances life performances. Therefore, the impact of the adoption of the tax management systems is directly linked to the perception of the individuals. It is under this premise that prospective users anticipate that targeted systems will be free of effort. It is further elaborated as an internal belief of the mental effort required in using a system.

As indicated by Schmidt (2008), it is vital to establish a rapport with future requirements regarding the needs of employees as the industry is seeking the latest technologies and efficient working procedures. Besides, it is the mandate of the employment agency to explore professional capability requirements in terms of software and the hardware that serve the interest of the organization. However, the software must be easy to use, constitute a colorful display, soft texture, and have friendly user interfaces (UI). This is the premise of the technology acceptance model.

Another scholar Kim (2010), supports the technology acceptance model explains that it is effective to use technological elements to facilitate both learning and performance at the institution level. In his sentiments, he clarifies that the use of technology can effectively predict the behavioral intention of a client while allowing the use of data to enhance the efficiency of the organization in creating profitability. Varied findings from many publications have shown that customer satisfaction, perceived usefulness, and perceived playfulness are key determinants of technology to continue using the service.

With the rapid rate of technological revolution, digitization of custom electronic procedures is considered as a sure way to enhance efficiency not only for the customs operations but also for the stakeholders who are using such systems. Based on the results of the explanations above, identifying technical skills need for the industry to process customs data is more enhanced with the adoption of electronic procedures at various excise duty points manned by agents. It is for the same reasons that this study defines the degree to which users will agree to adopt a system that is deemed easy to use. Davis (1988) explains that individual application to a system is vital if it is confirmed that the system is efficient to use which is the most imperative determinant of actual system use.

2.2.2 Theory of Planned Behavior

The Theory of Planned Behavior indicates that behavioral intention to engage in an activity is greatly determined by attitude, and perceived behavioral control which is also a subjective norm. According to Ajzen (2020), the Theory of Planned Behavior revolves around the individual factors which enhance the adoption of new technology. From a study that was conducted by Bargaz et al., (2018) to establish the extent to which the local government in Pakistan adopted the use of the excise collection system, it was observed that the majority were unwilling to abandon the old system on the ground that were not of user-friendliness and efficiency. Therefore, it was noted that system adoption is mainly enhanced by adequate training and user awareness that would transform the user behavior towards its adoption.

The major step towards promoting customers' insolences in the software industry is by looking into the power of a particular brand. According to Farquhar (1990), there are three levels of building attracting a customer behavior; these include evaluation, accessibility, and consistency. Talking of planned behavior and evaluation of technological brands for customers, Keller (2008), customers' opinion to purchase can always be achieved when customers are completely made aware of a brand that instills some level of familiarity while holding strong association with the memory. For several years, revenue agencies have always wanted to have an experience of efficiency have always found it difficult to achieve. In essence, a prospective excise agency may be aware of the presence of an electronic operation management system, but completely deficient in information on how to adopt such systems of the implication upon adoption. It is

ISSN (online) 2664-9535 (print) 2664-9527 https://atcr.kra.go.ke

under this premise that the concept of customers' behaviors enables marketers of such institutions to come up with unique brands targeted at the benefit of such institutions(Keller, 1993). On the other hand, customer-based brand equity at institutions of revenue collections is mainly concerned with potential customers some of which are limited because they can mainly be sourced from the state agencies thereby making their behaviors intrinsic. Furthermore, Ricardo alludes compliance in trade is productive so long as each trader and clearing agents comply with local and international trade regulations, it has a relative performance productivity advantage. For instance, Transparency International, (2012) found out that the worst customs stations reported in terms of time spent to clear goods were the at Kenya and Tanzania borders of Namanga, Taveta, Holili, Lungalunga, and Loitoktok as truck drivers would spend an average of 68 hours to clear their goods. This opens up the opportunity for traders and clearing and forwarding agents to give bribes to speed up the process. Therefore, the development of theory is to enhance the efficiency and effectiveness if integrity in customs is enhanced to internal and external stakeholders involved in the clearance of cargo as it will increase trade facilitation and minimization of the cost involved in the trade.

2.2.3 Technological Acceptance Theory

This model was generated by Davis et al in 1989. The technology acceptance theory measures people and organizations' willingness to adopt new technology. As presented by Davis (1989), the model attempts to explain the reasons for acceptance or rejection based on the theory of reasoned action. To do so, the theory explains the essential components of technology diffusion and acceptance of information systems. According to Davis (1989), the model focuses on two fundamental factors that influence the use of new technology, the first is the ease to use of the system, and secondly, how the system is useful to its function as the system is intended. The two theoretical constructs are said to influence and predict attitudes towards the use of technology. According to Davis, Bogozzi, and Warshaw (1989), the perceived usefulness of a system is the extent to which the intended user understands the role of the new technology in their job description and performance. On the other hand, perceived ease of use is the user's expectation of difficulty in the adoption of the new system and the amount of effort need to implement it (Venkatesh and Davis, 2000).

TAM posits that user's technology adoption is dependent on the intended use and the preexisting beliefs and attitudes about the technology. Additionally, the expected ease of use and usefulness of a system can explain the differences between users‟ intentions. Therefore, the theory also incorporates users' attitudes as a third component and determinant of technology acceptance.

Davis et al. (1989) define attitude as a mental and neural state that defines a user's readiness to understand, use, or engage with a concept. The mental state is determined by the experiences associated with the particular issue. In this case, the theory evaluates the role of performance and effort expectancy, facilitating conditions, and social influence, which influence behavior and the use of technology. TAM uses demographic factors, such as age and gender, among other factors, including experience and voluntary of use, to moderate the modeled relationships and determine validity and reliability of the system and the predictability of the dependent variable.

2.3 Conceptual Framework

Conceptual framework constitutes a set of divergent ideas of policies that are designed to support an investigation to a streamlined succeeding arrangement (Wandera, 2011). A conceptual framework is applicable as part of a research to pay the way for the understanding of an issue under inquiry. According to Rowden (2002), a conceptual framework supports and maintains the study on the right track.

Figure 1.1 represents the diagrammatical representation of the relationship between the dependent and independent variables.

See annex Figure 1: Conceptual Framework

Independent Variables

The independent variable in this research is Harmonization of Customs Procedures, Automation of Custom Procedures, and Cargo Information Systems. The dependent variable is Trade facilitation.

2.3.1 Harmonization of customs electronic procedures

This is the automation of all customs procedures including the entire series of activities carried out by the customs department by controlling processes on the exportation and importation of goods. Automation of customs procedures helps to improve the collection of revenues, (Sani, 2009). By application of toll revenue collection, it's based on the electronic payment system. Direct tax reforms at the national government level make up a key component of wider reforms in the fiscal and economic reform sector in Kenya. As evidenced in many countries such as Pakistan and India, the tax reforms were aimed at solving the fiscal imbalances thereby contributing to higher revenue production. According to Riom, and Valero (2020), e-restructuring of the tax system has been identified as a significant element that aids the collection of revenues and development of the economy in the long run.

2.3.2 Automation of customs procedures

Electronic Customs declarations, document processing, and goods clearance bring substantial time savings and predictability to all aspects of cross-border trade and limit the room for maneuvers by traders and Customs officials alike to circumvent the system. The collection of taxes and duties is enhanced, as is the statistical database for fiscal and economic policy purposes. And finally, as part of the process of the automation of Customs, working relationships between

ISSN (online) 2664-9535 (print) 2664-9527 https://atcr.kra.go.ke

Customs and the private sector improve. More specifically, benefits include Faster electronic lodgment of Customs declarations, using Direct Trader Input (DTI) or other online connections; Reduced Customs clearance times and less physical examination of shipments owing to the use of risk management applications; an Increased collection of duties and taxes and less fraud due to the uniform application of laws and regulations, the automated calculation of duties and taxes.

It is for the same reasons that World Trade Organizations (WTO) have implemented measures to encourage the adoption of integrated revenue collection systems (Komarov, 2017). Considering that the cost of the transactions associated with complying with trade regulations and procedures are higher for smaller firms, electronic procedure customs have drastically reduced and eliminated unnecessary overhead costs that come with manual systems. With the utilization of the electronic custom procedures, supervisors are better placed to monitor the distribution of workflow thereby achieving greater efficiency in terms of customs management.

2.3.3 Cargo Information System

Different technologies have been used over the past three decades, but the emergence of information and communications technologies (ICTs) in the management of customs operations have proven to be the best in enhancing productivity in a more transformative. The ICTs propagation has played a great role in day-to-day activities both evident in social and economic sectors (Peterson, 2017). The focus of electronic custom systems particularly based on regional integration has proven to be a haven for the success of regional enterprises. It is under this premise that the bilateral and regional trade agreements (RTAs) governing world trade have also advocated for the implementation of electronic custom systems.

As online transactions tend to increase, it suggests that more trade goods will be traded, particularly in small quantities as customs processing of products is done seamlessly. As individual companies continue to do exports and imports of goods in significant huge quantities, the benefits of this particular trade form will diminish as compared to the growth assured by e-commerce in the global sector (Wiedmann&Lenzen, 2018). The system of trading that has inclusive encouraged MSMEs participation will be more lucrative with the adoption of electronic custom systems.

2.3.4 Trade Facilitation

These are the processes and controls for moving products across domestic boundaries and how this can be enhanced to decrease related cost burdens and maximize effectiveness while safeguarding legitimate regulatory goals (Grainger, 2016). Kenya's commitment to WTO principles is a key component of its financial policies. It offers all its importers and exporters with Most Favored Nation (MFN) treatment. Furthermore, Kenya is a member of EAC, IGAD, ACP/EU COMESA, EAC, and OAU pursuing preferential trade agreements as a way of increasing trade flows. Some sections of the legislation have been altered by the country to conform to WTO treaties, including anti-dumping, countervailing, and intellectual property. The 2002 development plan discussed the trade policy implementation, the ongoing decrease and eventual elimination of tariffs, and the government's role in controlling and regulating growth in the private industry (Nyugha, 2019).

The Customs department in Kenya depends on the tariff as recognized and considered the significance of trade facilitation as a primary trade policy tool. The study will analyze Trade Facilitation Systems in Kenya as an important element of its trade policy, particularly with important progress in the multiple trade treaties. Kenya is implementing all trade facilitation treaties of the WTO. These treaties include; the Agreement on Customs Assessment Rule of origin, Pre-Shipment Inspection, Procedures for Import Licensing, Trade and phytosanitary measures, and Technical Barriers for Sanitary (Singh, 2017). Consequently, as a member of the World Customs Organization (WCO) and is involved in various negotiations for accession to internationally applicable customs contracts including the convention and harmonized System, which forms the foundation for the classification of tariff on products traded on the global market. WCO membership helps develop best practices around the world through training custom officers, benchmarking, and networking with other global trade members and organizations, including; International chamber of commerce, UNCTAD, and WTO (Singh, 2017).

Kenya has embarked on a reform and modernization project of the Customs Services Department (CRM). The main aim of this project is to transform customs into modern customs administration systems which are in line with best practices and standards accepted worldwide as outlined in WCO Revised Kyoto and WTO agreements. Trade facilitation continues to be a major challenge in Kenya despite the signing of multiple multilateral trade contracts. The current inadequacy of a legal and regulatory structure, institutional, human ability, bad ports, road facilities, rail and trade documentation process inefficiency continue to affect the company community through delays in item motion and clearance at multiple entries and departure points (Chege, 2018). This led to elevated transaction costs connected with the entire technique, which decreases Kenyan products' competitiveness in the global market. With this implementation, importers can clear their cargo on time hence reducing congestion at the ports.

Trade Facilitation deals primarily with the motion of products from loading to offloading points, it is similarly involved and may lose track of certain products terms. Second, import or export clearance times may differ depending on the products being delivered and related variables that may cause delays, either this may or may not decrease transaction costs.

ISSN (online) 2664-9535 (print) 2664-9527 https://atcr.kra.go.ke

This will be a challenge and a gap will be resolved by the proposed study.

2.4 Empirical Framework

2.4.1 Harmonization of custom procedures and trade facilitation

According to Riom, and Valero (2020), e-restructuring of the tax system has been identified as a significant element that aids the collection of revenues and development of the economy in the long run. In this regard, the restructuring of the tax system at the national level is considered a central process of economic reform. Direct tax reforms at the national government level make up a key component of wider reforms in the fiscal and economic reform sector in Kenya. As evidenced in many countries such as Pakistan and India, the tax reforms were aimed at solving the fiscal imbalances thereby contributing to higher revenue production. A study by Seelkopf et al., (2019) identified that the rise of VAT across the world has is one of the most important tax developments of all time. This type of tax is considered to be of significance as compared to other types of taxes because it reduces escalating opportunities for zero-rating exports and is most difficult to evade. With the adoption of customs electronic system, it is very much possible that the VAT and the general sales tax (GST) synchronizes the units thereby aiding the maximization of revenues.

Ofurum, Amaefule, LOkonyaand Amaefule (2018) showed the impact of E-taxation on Nigeria's revenue and economic growth: A pre-post analysis. International Journal of Finance and Accounting, 7(2), 19-26. Another study examined the revenue productivity implications of South Africa after the introduction electronic tax management system. From the study, it was observed that the tax buoyancy doubled after the adoption of the electronic tax management system. Using another study with the same period, it was noted that the overall elasticity after the introduction of the electronic had increased from 0.76 with the buoyancy of 1.06. These results attributed to the government granting exemptions to individuals and the organizations processing their tax elated activities through electronic systems. A study by Ofurum et al., (2018) estimated the revenue growth of Ghana after the introduction of customs electronic procedures, it was concluded that tax bases had grown rapidly leading to a higher GDP in the same year as compared to the other previous year before the evaluation. Accordingly, Wadesango et al., (2018) support the idea that administrative cost also goes down with the use of electronic tax management system as data collection and transmission process allows the agency to administer low-cost operations including freight carriers and financial intermediaries to play a role in the collection and remittance of taxes.Therefore, electronic tax systems harmonize solutions orchestrated by the diversity of requirements across countries generates costs and uncertainties.

2.4.2 Automation of Custom Procedures and Trade Facilitation.

Increased emphasis on a wider application of IT among tax agencies has promoted trade as reflected in many nations. It is for the same reasons that World Trade Organizations (WTO) has implemented measures to encourage the adoption of integrated revenue collection systems (Komarov, 2017). Considering that the cost of the transactions associated with complying with trade regulations and procedures are higher for smaller firms, electronic procedure customs have drastically reduced and eliminated unnecessary overhead costs that come with manual systems.

With the utilization of the electronic custom procedures, supervisors are better placed to monitor the distribution of workflow thereby achieving greater efficiency in terms of customs management. Besides, changes in tariff rates and other fees can be quickly implemented within the system thereby promoting accuracy across all quarters. In his sentiments, Narayanaswami et al., (2019) argue that collection points associated with integrated custom systems are characterized with collection points of fewer cashiers as long queues are eliminated. As a consequence, the cashiers have to select the entry and collect payment without having to fix a large number of transaction details.

The potential benefit of electronic customs procedures includes paperless processing of reliable information, reduction of costs and delays along with the supply chain. This reduces unprecedented chances of insecurity in conducting cross-border business. Research evidence obtained from Riom (2020) indicates that the adoption and proper use of IT could save the tax man agency billions of money on annual basis. The reality is not far from over as most traders and administrators that use integrated tax systems find it efficient to process their transactions at a reduced timeframe. In addition, it encourages productive use of IT thereby increasing efficiency, effectiveness, and transparency of revenue collections by expediting Customs clearance procedures. However, the appropriate measure must be put in place to ensure the effective utilization of automated systems. This will enhance transparency and help to reduce the chances of corruption among the Customs officials.

2.4.3 Cargo Information Systems and Facilitation of Trade

Different technologies have been used over the past three decades, but the emergence of information and communications technologies (ICTs) in the management of customs operations have proven to be the best in enhancing productivity in a more transformative. The ICTs propagation has played a great role in day-to-day activities both evident in social and economic sectors (Peterson, 2017). It has played a great part in enhancing social progress, playing a significant role in economic growth as well as improving people's living standards. Incessant advancement has been fuelled by these

ISSN (online) 2664-9535 (print) 2664-9527 https://atcr.kra.go.ke

developments and in nowadays global economy ICTs industry has been made highly potential.

Since the global trade landscape continues to evolve, the markets dynamics and the trade rules have played a substantial role in the shaping of the incessant developing global landscape of trade at international levels through an integrated custom system. As a consequence, the geographic shift regarding the international trade from the evolved to the evolving world. The focus of electronic custom systems particularly based on regional integration has proven to be a safe haven for the success of regional enterprises. It is under this premise that the bilateral and regional trade agreements (RTAs) governing world trade have also advocated for the implementation of electronic custom systems.

In the measure of the effect of the enablement of specific trade processes on the trade and economy the Organisation for Economic Co-operation and Development (OECD) has used electronic Custom procedures. As per the report in 2015 by the OECD TFIs, it clearly showed that the countries in which ECP was better placed to lessen the cost of trade by 1.4 % to about 3.9% additional to those that only do what the TFA minimally requires (Wiedmann & Lenzen, 2018). The significance of trade enablement continues to improve not only with the incursion of minor consignments and the e-commerce rising but also in structural changes regarding global trade. The growth of e-commerce globally was evident with it rising from $1.1 billion by 2013 to up to $2.4 billion as of the year 2017. As online transactions tend to increase, it suggests that more trade goods will be traded, particularly in small quantities as customs processing of products is done seamlessly.

As individual companies continue to do exports and imports of goods in significant huge quantities, the benefits of this particular trade form will diminish as compared to the growth assured by e-commerce in the global sector (Wiedmann & Lenzen, 2018). The system of trading that has inclusive encouraged MSMEs participation will be more lucrative with the adoption of electronic custom systems. In the quest of developing these systems, border agencies require more efficient and trade facilitation solutions at low cost to handle cross-border traffic rise. To achieve efficiency, transparency, predictability, and border procedures at low cost from the ICTs provision the TFA has to include several measures.

2.4.4 Trade Facilitation

Several studies have shown that a better climate for trade facilitation rises quantities of imports and exports. Gani,(2017), evaluated the relationship between export and import time, logistics facilities, and international trade and discovered that time delays resulted in reduced amounts of trade and reduced the likelihood of companies entering export markets for time-sensitive products. Various systems aimed at reforming Customs processes have been implemented to improve trade. These reduce the time taken to clear goods as they would have already been verified by the time they arrive. The systems implemented by the Kenya Revenue Authority have enabled clearing and forwarding firms and importers to participate in trade due to the reduction of transaction cost of goods (Martin, & Kinoti, 2017). The congestion which was being witnessed at the ports has significantly reduced. This has been enhanced through the automation of customs systems.

The systems include electronic cargo tracking systems which help to curb tax evasion and improve efficient management of transit goods in the region. The system has also enhanced the safety of transit cargo as it allows seamless tracking to the destination. The ICMS system which is an automated system helps to dispense the needs of traders to avoid a physical visit to KRA and a Single window system whose primary purpose is to harmonize and simplify processes associated with cross-border movement of goods with aim of facilitating trade across border points.

2.5 Critique of the Existing Literature

Following the review of literature related to the study of the impact of the adoption of customs electronic procedures by customs officers in Nairobi, the study seeks to establish that electronic custom operations are of significant benefit to the organization. It was established that all the theories of ICT adoption that function on a global scale mainly projects to support staff on a wider scale as compared to the clients.

2.6 Summary

Many articles were incorporated to discuss the relationship between the adoption of electronic customs procedures and the realization of efficiency of custom activities by the customs agents. In essence, a publication by Riom (2020) indicates that the adoption and proper use of IT could save the tax man agency billions of money on annual basis. The reality is not far from over as most traders and administrators thatuse integrated tax systems find it efficient to process their transactions at a reduced timeframe. Another study conducted by Ofurum, Amaefule, Lokonya, and Amaefule (2018) examined the revenue productivity implications of South Africa after the introduction of an electronic tax management system. From the study, it was observed that the tax buoyancy doubled after the adoption of the electronic tax management system. Going by the trend, most of the articles and journals that supported this study were cognisant of the benefits of ICT to the taxman agency.

2.8 Research Gaps

According to Ndinda (2008) who carried out a reasearch on the growth of clearing and forwarding business, she concluded that although the business had been affected by 2007 post-election violence, firms operating in the subsector experienced growth in terms of employees, assets and profitability for the year 2007/2008. Another study carried out by Akinyi (2007) concluded that human resource development, computerization and mechanization, and the institution of performance

ISSN (online) 2664-9535 (print) 2664-9527 https://atcr.kra.go.ke

contracts were some of the change management practices aimed at improving collection of custom duty and reforming the clearing and forwarding business. However, none of these studies addressed the effects of customs electronic procedures on trade facilitation by clearing and forwarding agents in Nairobi,Kenya.It is from this view that the researcher obtained the research gap.

3. Methodology

3.1 Introduction

Research methodology is the systematic theoretical analysis process of the various methods applied in the field of study for collecting information and data to help in making the decision. This section dealt with the designs and methods of the study by highlighting various procedures and methods that were used to carry out the study and justification of a qualitative method of research. In addition, it also described the research design, target populations, sampling designs, technique used to select a sample, sample size, data collection, and a brief description of the data collection procedure (Mugenda & Mugenda, 2003).

3.2 Research Design

This is a plan that answers the question of the problem by providing a solution (Cooper & Schindler, 2010). The descriptive research design was adopted in this research. According to Jolley (2012), descriptive survey design comprises observation studies, correlation research, developmental designs, and survey research. Descriptive survey as described by Kothari (2004) is a method that embraces observation and description of the behavior of a subject without influencing how it operates

3.3 Target Population

A population is defined as a set of objects or people with similar features (Mugenda & Mugenda, 2003). The researchers targeted customs officers and registered clearing and forwarding agents within Nairobi. The total number of people selected in this study was 892 firms licensed clearing agencies according to KIFWA. The target population is illustrated in the table below.

See annex Table 3.1: Target Population

The study will be conducted in Nairobi in the clearing and forwarding firms where most of the operations are being coordinated. This category will be of importance since the researcher believes that they have the essential information to carry out this study.

3.4 Sampling Frame

A sampling frame comprises a list of people from which the researcher uses to obtain information about the study (Maxwell, 2012). There are claims that a sample is the list of population depictions from which the population is generalized (O'Mahony, 2017). The sample will consist of respondents from the study area. In this case, random sampling was used to acquire an appropriate unit of analysis representative. In this research, a total of 15 percent of the 892, equivalent to 134 clearing and forwarding agents in Nairobi.

3.5 Sample and Sampling Technique

Sample size refers to the number of participants or observations included in a study (Gentles,2015). The sample size is usually represented by the n' symbol. Sample size within a population ought to be identified because it helps a researcher in identifying the precision of the estimates and give the researcher power of the study to draw conclusions (Tang, 2018). The study used stratified random sampling to determine the sample size. Stratified sampling suited this study because it provided a great precision and guard against an unrepresentative sample (Kim, 2010). The target population of the study was divided into uniform strata where each stratum was evaluated independently.

See annex Table 3.2: Sample size

In this study, both primary data and 3.6 Research Instruments secondary sources will be used. Primary data are the items initial to the issue being studied. The structured questionnaire will be used since is the instrument for collecting the primary data (Cohen, 2013). The questionnaire serves four fundamental aims: to gather the relevant information, to make information comparable and analytical, to minimize bias in formulating and answering questions, and to make questions engaging and diverse. The structured questionnaire used the Likert scale. Likert scale is an interval scale that specifically utilizes five anchors, with strong disagreement, neutrality, strong agreement disagreement, and agreement. A Likert scale measures attitudes and behaviors using Sekaran's (2015) response decisions ranging from one extreme to another. The non-probability sampling technique was used and enabled the researcher to use subjective decisions in comparison with random sampling probabilistic techniques Creswell & Daly (2015). The primary reason for selecting non-probability sampling is due to restricted access to the target population as system consumers. The participants were regarded voluntary basis once the questionnaire has been made accessible to them to fill out. Respondents will also be notified of the research's ethical rules and consent to the questionnaire (Zikmund, 2010).

3.6 Data Collection Procedure

Approval of the research was obtained from the department of customs studies in the Kenya school of revenue administration, the researcher then came up with a data collection schedule and visit the sections of the customs department to get consent to administer the instruments.

The questionnaire was divided into three sections. The first portion of the questionnaire contained multiple populations' demographic issues, i.e. age bracket for participants, period of work in that department, academic skills to assess the background of multiple participants (Kothari, 2014). The second part of the questionnaire was organized to test the respondents' knowledge to trade facilitation on the different

ISSN (online) 2664-9535 (print) 2664-9527 https://atcr.kra.go.ke

schemes used in the customs department. The third section will have questions proving the anticipated advantages that the customer had before implementing multiple techniques.

3.7 Pilot Testing

A pilot test is a survey done before the actual survey is done (Kombo & Tromp, 2009). A pilot study assists in the determination of the reliability of the research questionnaire and ensures its validity (Cooper & Schilder, 2011). Pilot test should entail 10% of the sample population (Kothari, 2004). This equals 10 respondents participated in the pilot study conducted in Nairobi, who did not participate in the final study.

3.7.1 Validity of the instruments

Validity of data collection instruments was done to ensure that the tools are up to the standard level and can collect the data as required. The data collection instruments must be validated before research is done (Shuttle, 2009). During the validation process, the data collection instruments were reviewed for clarity check, suitability, and the language as well as the expression that they portray. Content validity was done on the data collection instruments. Content validity helps to ensure the quality of the data collection tools and that of the data collected from the study.

3.7.2 Reliability of the instrument

Reliability of an instrument is the probability of investigative tools to measure specified characteristics and to deliver the same results. According to Collis and Hussey (2003), three methods are universally accepted in testing reliability. These include – split-halves, tests re- test, and internal consistency methods. This study will employ split-halves and internal consistency approaches to work out the reliability of the data. The Split-halves approach seeks to relate the two halves of the responses to each other and identify the similarities. The establishment of augmented matches between the two halves and respective questions indicates greater dependability. Zikmund (2003) stated that when there is a lot of raw data the "split- halves" methodology is best, as it is a judicious and critical technique for testing dependability. Cronbach's Alpha will be used for testing internal consistency. Cronbach's Alpha refers to a measure of the internal consistency; how closely objects or a set of objects are related as a group. According to (Warmbrod, 2001) a “high” assessment of alpha is regularly used to confirm dependability. Cronbach Alpha has established control of 0.7, which is regarded as acceptable for reliability. The presence of reliability is validated when the computation results in values above the established control of 0.7, whereas the values below reveal an absence of reliability of the research instrument.

3.8 Data Analysis and Presentation

This study utilized descriptive statistics for data analysis. Standard deviation, mean, frequency, and percentage were the descriptive statistical tools employed in the analysis. Descriptive statistics are useful for describing data the way it is and presenting data in a summarized way for more meaningful insights and interpretations of the data. Inferential statistical analysis, Pearson Product Moment Correlation, and multiple regression were also conducted. The purpose of the inferential analysis is to examine associations and relationships between study variables. Regression analysis is used to explain the effect of the independent variables on the dependent variable. Correlation analysis measures the direction and strength of association between variables (Sreevidya & Sunitha, 2011).

The regression analysis model took the format below:

$$Y = \beta 0 + \beta 1\ X1 + \beta 2\ X2 + \beta 3\ X3 + \varepsilon$$

Where Y denotes the dependent variable

$\beta 0$ denotes the unknown parameters which may represent a scalar or a vector

$\beta 1$, $\beta 2$, $\beta 3$, denote sensitivity of Y to the independent variables X1, X2and X3respectively

X denotes the independent variables

X1 Denotes Harmonization of Custom Procedures

X2 denotes Cargo Information Systems

X3 denotes Automation of Custom Procedures

ε denotes an error term

Different terminologies are used in distinct areas of implementation instead of dependent and independent variables. A model of regression refers Y to X and β. According to (Sekaran, 2015), an error term is a variable that produces a statistical or mathematical model when the model does not fully reflect the real connection between the dependent and independent variables. Also known as the residual, disturbance.

3.9 Diagnostic Tests

These are tests that determine the effect of the research design challenges leading to diagnostic accuracy (Lijmer et al.,1999). Two diagnostic tests, normality and multicollinearity tests were carried out before analyzing data to validate the findings. The normality used Shapiro-Wilk test to check for normality while VIF was done to test for multicollinearity

3.9.1 Normality Test

This test is usually carried out using the Shapiro-Wilk test where it finds the degree of normality by sensing the presence

ISSN (online) 2664-9535 (print) 2664-9527 https://atcr.kra.go.ke

of skewness and kurtosis. In this case, data is assumed to be normally distributed if the P-value is greater than 0.05. Normality usually assumes that the normality of the distributed mean is normal.

3.9.2 Linearity Test

This test is of importance in regression analysis and correlation analysis. Linearity implies the level to which a change in the dependent variable varies with a change in the independent variable. In this research, the linearity was tested using the Pearson correlation of analysis.

4. Findings and discussion

4.1 Introduction

The research findings collected from the field were analyzed so as to explore on its interpretation by presentation of these results. The data collected was analyzed using the inferential and descriptive statistics.

4.2 Response Rate

Out of the census population of 134 clearing and forwarding agents identified for the study, 96 responded representing a 71.64% response rate. The study gathered information from employees in the clearing and forwarding firms as defined by the target population. According to Mugenda & Mugenda, (2008), a response rate of 50% is adequate for the analysis of data and reporting, 60% is better while 70% and above is excellent.

See annex Figure 4.1: Response Rate

4.3 Demographic Analysis

Demographic data analysis of the respondents included the level of education, years of experience, and age of the respondents.

4.3.1 Age of the Respondents

Findings in Table 4.3, indicate that based on distribution with regards to ages, a higher percentage of the respondents (41.66%) were aged between 29 – 38 years, 21.88% between 39– 48 years, 19.79% were aged between 18 – 28 years and 16.67% were 49 years and above. Based on this information, the majority of employees in these departments are young people who can adopt the new procedures being used easily. Hence this information helped us to know or to determine how efficiently the employees can use the new system easily without many constraints to delay trade processes.

See annex figure 4.2:Respondends age

4.3.2 Respondents' Years of Service

The study found that 21% of the respondents had operated for 5 – 10 years, 12% of the respondents had operated for more than 10 years, 42% of the respondents had operated for 1 – 5 years, and 25%of the respondents had operated for less than one year years.

See annex figure 4.3:Respondents years of service

4.3.3 Academic Qualifications

The study also sought to determine the respondents' academic qualifications. The findings in Table 4.5, indicates that the majority of the respondents, 49 (37.40%) had bachelor's degree, 13 (9.92%) had diploma, 38 (29.01%) had postgraduate diplomas, 21 (16.04%) had masters' degrees and the remaining 10 (7.63%) had Doctorate. This can be analyzed that majority of the respondent had Bachelor's degree qualifications in the department of customs and clearing and forwarding signifying that they had knowledge-based on the training to use various technologies used in that department thus enabling them to boost the process of clearance of cargo for traders and improve revenue performance. The findings concurred with Babbie (2013) who indicated that educated respondents were in a position of understanding what they were required to answer in a given area of study.

See annex figure 4.4:Table of Academic Qualification

4.4 Descriptive Statistics

4.4.1 Effect of harmonization of Customs Electronic Procedures

The stakeholders are known to be satisfied with Trade facilitation through the harmonization of electronic customs procedures. The survey, therefore, sought to find their views about the harmonization of these electronic customs processes by clearing agents in Nairobi. The combined stakeholders are shown in the table below;

See annex Table 1.1:Harmonization of customs electronic procedures

To investigate the effect of Harmonization of electronic customs procedures on Trade facilitation by clearing and forwarding agents in Nairobi, using a Likert scale questionnaire with ordinal for the respondents to answer the statements with either strongly disagreeing to strongly agreeing. Table 4.1 illustrates the Effect of Adopting Customs Electronic Procedures. Harmonization of customs electronic procedures hastens the cargo clearance process at the Kenya border point with a (mean=3.71, Sd=0.893). harmonization of customs electronic procedures reduced the cost of doing business and facilitate trade in Kenya with (mean=3.89, sd=0.916). Collection of duties or taxes has become easier or faster as a result of the harmonization of customs electronic procedures adopted by the Kenya Revenue Authority with a (mean=3.50, sd=0.649) while harmonization of customs electronic procedures reduce the cost of doing business to the traders (import and export) had a (mean=3.43, sd=0.778).

See annex Table 4.2: Automation of Customs Procedures

4.4.2 The effects of Automation of Customs Procedures

The stakeholders in this survey are known to be satisfied with the collection of revenue when the customs procedures are automated. The survey, therefore, sought to find their views about the adoption of electronic customs processes by clearing and forwarding agents in Nairobi.

The combined stakeholders are shown in the table above; Table 4.2 provides the analysis of the Automation of Customs procedures in Trade facilitation. Most respondents agreed that adoption of the automated customs electronic procedures by customs department enable the data to be captured on the

ISSN (online) 2664-9535 (print) 2664-9527 https://atcr.kra.go.ke

system to be shared on the real-time basis resulting to reduce dumping, tax evasion, cargo theft and diversion with a (Mean = 3.79, sd=0.541), The adoption of automation of Customs Electronic procedures on Trade facilitation in customs department has eliminate the paperwork involved in the old ways of doing business at the border post and this made clearance to be much faster for traders (import and export) with a (Mean=4.25, sd=0.598), The quality of service to traders due to increase of service delivery as a result of adoption of the automated Customs Electronic procedures on Trade facilitation with a (Mean=4.083, sd=0.496), Traders are now more willing to do the business with customs due to the efficiency created by the Customs Electronic procedures which makes the trade to become easier without delaying their clients with (mean=4.46, sd=0.845).

4.4.3 Effects of Cargo Information System

The stakeholders are known to be satisfied with Trade facilitation when the cargo information system is efficient. The survey, therefore, sought to find their views about the adoption of electronic customs procedures by clearing and forwarding agents in Nairobi.

The combined stakeholders are shown table 4.3;

See annex Table 4.3 : Cargo Information System

Table 4.3 provides the analysis of the efficiency of the Cargo Information System in relation to the adoption of electronic customs procedures by clearing and forwarding agents in Nairobi. Most respondents agreed that the adoption of a cargo Information System hasten the cargo clearance process at the Kenya border point (Mean = 3.33, sd=0.879adoption of cargo Information System reduces the cost of doing business and facilitates trade it in Kenya (Mean=3.72, sd=0.736). The respondents also agreed that collection of documents, duties, or taxes become easier or faster as a result of the adoption of the cargo Information System adopted with (Mean=3.59, sd=0.734). The respondents, however, agreed that there was a reduction of dangerous cargo that is being diverted to the local market in Kenya (Mean=3.34, sd=0.662). The adoption of a cargo Information System adoption reduces the cost of doing business to the traders' import and export (Mean=2.74, sd=0.920).

4.4.4 Trade Facilitation

The respondents are known to be satisfied that Trade facilitation has been sufficient with the adoption of electronic customs procedures. The survey, therefore, sought to find their views about the adoption of electronic customs procedures by clearing and forwarding agents in Nairobi.

See annex Table 4.4: Trade facilitation.

Table 4.4 provides the analysis of the efficiency in Trade facilitation concerning the adoption of electronic customs procedures in Customs administration. Most respondents agreed lodgment and processing of the Imports declaration form has improved significantly. (Mean=3.33, sd=0.879), Lodging and processing of Customs declaration have been made easier and transparent. (Mean=3.72, sd=0.736). The respondents also agreed that compliance with Customs procedures has improved significantly. (Mean=3.59, sd=0.734). The respondents however agreed that there is greater coordination of the verification process between Customs and PGAs. (Mean=3.34, sd=0.662). The respondents Time taken to declare goods to Customs has reduced significantly (Mean=2.74, sd=0.920).

4.5 Inferential statistics analysis results

4.5.1 Correlation

The study used Pearson correlation to measure the degree of association between the variables under consideration. The Pearson correlation coefficient range from -1 (negative correlation) to 1 (positive correlation). Pearson coefficient of <0.3 indicates a weak correlation, >0.3<0.5 indicates a moderate correlation and >0.5 indicates a strong correlation.

See annex Table 4.5: Pearson Correlations summary

From the findings, shows that there was a weak positive significant correlation between harmonization of electronic customs procedures and trade facilitation (r=0.177, P=0.003). Correlation results also indicate a strong positive and significant correlation (r=0.440, P=0.000) between Automation of electronic customs procedures and trade facilitation. Finally, the correlation results showed that there is a weak positive significant correlation (r=0.093,P=0.025) between cargo information system and trade facilitation in clearing and forwarding firms. The finding indicates a statistically significant linear dependence of Trade facilitation on all the three independent variables. This implies that a unit worth of increase in any of the four independent variables will have an effect on Trade facilitation based on the strength of the correlation coefficient.

4.5.2 Multiple regression model

Regression analysis was carried out focusing on Adopting Customs Electronic Procedures, Automation of Customs Procedures, and Cargo information system. To test the relationship, the independent variables, have on Trade facilitation, the study used the following multiple regression analysis.

Table 4.6 : Multiple regression model summary

The 3 independent variables that were studied explain 93.5% of the Trade facilitation as represented by the R2. This means that other factors not under this study contribute to 6.5% of Trade facilitation in KRA and need to be considered to improve trade. The Multiple Correlation Coefficient, R=0.967 indicates a good level of prediction.

4.5.3 Analysis of Variance ANOVA

The ANOVA analysis involved analyzing the total mean scores (overall index score) for each variable using SPSSS means score analysis as shown in table 4.9. The table below shows the output of the ANOVA analysis. It shows whether there is a statistically significant difference between our group

ISSN (online) 2664-9535 (print) 2664-9527 https://atcr.kra.go.ke

means. The results of the analysis in table 4.9 showed that the significance value is 0.00 (i.e., p = .00), which is below 0.05. And, therefore, there is a statistically significant difference between the groups in each category. Based on a confidence level of 95%, the analysis indicated relatively high reliability of the results obtained. The ANOVA results, therefore, indicate that the regression model was significant at F (representing a test of the null hypothesis) = 43.844, p = 0.000 as shown below.

See annex Table 4.7 : Analysis of Variance ANOVA

From the ANOVA Table 4.10 above, $p<0.05$ hence the independent variables statistically significantly predict the dependent variable and therefore the regression model is a good fit for the data.

See annex Table 4.8: Coefficient of determination Coefficients

The regression model that was used to predict Trade facilitation from harmonization of Customs Electronic Procedures, Automation of Customs Procedures and Cargo information system is as follows;

$Y = \beta 0 + \beta 1X1 + \beta 2X2 + \beta 3X3 + ę$

Where:

Y = Trade facilitation β0 = Constant Term β1= Beta coefficients

X1= Harmonization of Customs Electronic Procedures. X2= Automation of Customs Procedures.

X3= Cargo information system

This is summarized as follows: Y = 0.28 + (0.626* X1) + (0.228 * X2) + (0.571* X3) + 0.227. In summary, therefore, the study concluded that the model was chosen to fit in predicting the effects of the adoption of customs electronic procedures on Trade facilitation by clearing and forwarding agents in Nairobi i.e. the effect of independent variables Harmonization of Customs Electronic Procedures, Automation of Customs Procedures and Cargo information system on the dependent variable Trade facilitation.

4.6 Interpretation of the findings

The analysis established that there is a significant relationship between the independent variable and dependent. This was evident from the analysis done using SPSS for Correlation, Multiple regression and Analysis of variance. On Correlation, the analysis used Bi-variate Pearson correlations which involved one independent variable indicator against one variable for the dependent variable. The test confirmed that there is a statistically significant linear relationship with a 0.01 significance level between Trade facilitation with Harmonization of Customs Electronic Procedures, Automation of Customs Procedures, and Cargo information systems. This implies that increased efficiency in the management of Harmonization of Customs Electronic Procedures, Automation of Customs Procedures, and Cargo information system leads to an increase Trade facilitation in clearance and forwarding agents in Nairobi. Analysis of Variance ANOVA also showed there is a statistically significant difference between group means, with a significance value is 0.00(i.e., p = .00), which is below 0.05. And, therefore, there is a statistically significant difference in the means of each variable group in each category.

4.7 Discussion of findings

4.7.1 Harmonization of Customs Electronic Procedures and Trade facilitation

The first objective of the study sought to investigate the effect of Harmonization of Customs Electronic Procedures on Trade facilitation by clearing and forwarding agents in Nairobi. This was established by determining Pearson correlations of refined data. The results showed that there was a weak positive significant correlation between Harmonization of Customs Electronic Procedures and trade facilitation ($r = 0.177$, $P<0.05$). Regression analysis conducted proved that there was a positively significant effect of Harmonization of Customs Electronic Procedures on trade facilitation as indicated by the values $\beta 1 = 0.019$, $t = 2.489$, $p<0.05$. The study concludes that an increase in adoption of Harmonization of Customs Electronic Procedures by one unit would lead to increase in trade facilitation by 0.019 units. The finding of this study concur with Mikuriya (2001) who noted that with the implementation of the system in Japan, time taken to file shipping documents has reduced significantly leading to reduced clearance time. The study also revealed what Muyenjwa D.D. (2004) observed in his study that the use of technology gives the customs better targets and productivity.

4.7.2 Automation of Customs Procedures and Trade facilitation.

The second objective was to establish the effect of Automation of Customs Procedures on Trade facilitation by clearing and forwarding agents in Nairobi. Pearson correlation was conducted and the findings indicated that there was a weak significant correlation between Automation of Customs Procedures and trade facilitation ($r=0.440$, $P<0.05$). Regression analysis was also conducted and the results showed a positively significant effect of Automation of Customs Procedures on trade facilitation as indicated by the values $\beta 2 = 0.138$, $t = 2.225$, $p<0.05$. The study concludes that an increase in Automation of Customs Procedures by one unit would lead to increase in trade facilitation by 0.138 units. The finding of this study concurs with UN/CEFACT (2004), which identified that the system implementers stand to gain benefits ranging from improved revenue yields, Improved trader compliance, enable the use of sophisticated "risk management" techniques for control and enforcement purposes.

ISSN (online) 2664-9535 (print) 2664-9527 https://atcr.kra.go.ke

4.7.3 Cargo information system and Trade facilitation.

The study sought to establish the effect of Cargo information system on trade facilitation by clearing and forwarding agents in Nairobi. Pearson correlation was conducted and the findings indicated that there was a weak positive significant correlation ($r = 0.093$, $P<0.05$). Regression analysis was also conducted and the results proved that there was positively significant effect of Cargo information system on trade facilitation as indicated by the values $\beta 3 = 0.114$, $t = 2.492$, $p<0.05$. The study concludes that an increase in Cargo information system by one unit would lead to increase in trade facilitation by 0.114 units. The findings concur with Muyenjwa

D.D. (2004) who observed in his study that the use of technology gives the customs better targets and productivity.

5. Findings and discussions

5.1. Introduction

This chapter gives a brief overview of the findings based on the objectives of the study. It also gives the conclusion of the study, recommendations, and suggestions of areas of further research studies.

5.2 Summary of the findings

The study found out that, harmonization of customs electronic procedures, automation of Customs Electronic procedures, adoption of cargo Information System on Customs Electronic procedures have a great effect on trade facilitation. In this study, it was also discovered that the reforms were embraced by customs especially in the wake of the authority not meeting its revenue targets.

5.2.1 Harmonization of customs electronic procedures

This research also aimed at determining the effects of Harmonization of customs electronic procedures on trade facilitation by clearing and forwarding agents. It was indicated that Harmonization of customs electronic procedures had hastened the cargo clearance process at the Kenya border point, also harmonization of these procedures had reduced the cost of doing business and facilitated trade in Kenya and that collection of duties or taxes have become easier or faster as a result of the harmonization of customs electronic procedures adopted by Kenya revenue authority. Nevertheless, the research established that the harmonization of customs electronic procedures reduced the cost of doing business to the traders.

5.2.2 Automation of Customs Electronic procedures

The second objective was to determine the effect of Automation of Customs Electronic Procedures on trade facilitation on clearing and forwarding agents. From the findings, we can conclude that adoption of the automated customs electronic procedures by the customs department enabled the data to be captured on the system to be shared on a real-time basis resulting to reduce dumping, tax evasion, cargo theft, and diversion and that the automation of Electronic procedures on Trade facilitation in customs department has eliminated the paperwork involved in the old ways of doing business at the border post and this makes clearance to be much faster for traders. Furthermore, the research established that Traders are now more willing to do business with customs due to the efficiency created by the Customs Electronic procedures which make the trade to become easier without delaying their clients

5.2.3 Adoption of cargo Information System on Customs Electronic procedures

It was important to determine the effects Adoption of a cargo Information System on Customs Electronic procedures on trade facilitation on clearing and forwarding agents. The research discovered that the adoption of cargo Information System adopted has hastened the cargo clearance process at the Kenya border point and that the adoption of cargo Information System reduces the cost of doing business and facilitate trade, the collection of documents, duties, or taxes become easier or faster as a result of the adoption of cargo Information System adopted by Kenya Revenue Authority. Furthermore, there is a reduction of dangerous cargo that is being diverted to the local market in Kenya.

5.3 Conclusions

The purpose of this study was to determine the effects of the adoption of Customs Electronic Procedures on Trade facilitation by clearing and forwarding agents in Nairobi. The study was guided by three specific objectives: First was to determine the effect of harmonization of customs electronic procedures on Trade facilitation by clearing and forwarding agents in Nairobi. The second was to determine the effect of automation of Customs Electronic procedures on trade facilitation and the third was to determine the effect of adoption of cargo Information System on trade facilitation. Based on research finding it can be concluded that harmonization of customs electronic procedures, automation of Customs Electronic procedures, adoption of cargo Information System on Customs Electronic Procudures, have effects on facilitation of trade as follows:

5.2.1 Harmonization of customs electronic procedures

The study found out that the harmonization of customs electronic procedures had a significant positive influence on trade facilitation. The overall mean score of response regarding harmonization of customs electronic procedures and trade facilitation indicated that the majority of the respondents agreed that harmonization of customs electronic procedures affects trade facilitation in Kenya. Correlation results indicated that there was a positive and significant relationship between the harmonization of customs electronic procedures and customs trade facilitation. It was therefore concluded that harmonization of customs electronic procedures has a significant positive effect on the facilitation of trade.

5.2.2 Automation of Customs Electronic procedures

The study found out that automation of Customs Electronic procedures had a significant positive influence on trade

ISSN (online) 2664-9535 (print) 2664-9527 https://atcr.kra.go.ke

facilitation. The overall mean score of responses regarding automation of Customs Electronic procedures indicated that the majority of the respondents agreed that automation of Customs Electronic procedures affects the facilitation of trade in Kenya. The reliability analysis results showed that all the coefficients of the constructs were positive and significant.

5.2.3 Adoption of cargo Information System on Customs Electronic procedures

The study found out that the adoption of a cargo Information System on Customs Electronic Procedures had a significant positive influence on trade facilitation. The overall mean score of response regarding cargo Information systems indicated that the majority of the respondents agreed that the adoption of cargo Information systems on Customs Electronic Procedures affects the facilitation of trade in Kenya. Correlation results indicated that there was a positive and significant relationship between the adoption of cargo Information systems on Customs Electronic Procedures and trade facilitation. It was therefore concluded that the adoption of cargo Information systems on Customs Electronic Procedures has a significant positive effect on trade facilitation.

5.4 Recommendations

The study revealed a statistically substantial link between harmonization of customs electronic procedures, automation of Customs Electronic procedures, adoption of cargo Information System on Customs Electronic Procedures on trade facilitation in Kenya. From the findings,

5.4.1 Harmonization of customs electronic procedures

I recommend that all customs procedures should be harmonized and simplified and should be made understandable to traders, customs officers, and cargo owners. KRA should also invest more in the harmonization of customs processes since it has reduced clearance time at the border post hence reducing the cost of doing business. I also recommend frequent training to traders on the harmonized procedures since this will minimize loss of revenue to customs administration by eliminating cargo diversion.

5.4.2 Automation of Customs Electronic procedures

I recommend that KRA should emphasize more on stakeholder training on the new automated customs procedures implemented. This will help the stockholders involved in trade such as traders, clearing agents, customs officers to gain more knowledge of the new procedures since technology is changing rapidly. KRA has the mandate to enhance self-declarations of goods which affects compliance. This will make the customs department raise more revenue through the awareness of the automated procedures implemented.

5.4.3 Adoption of cargo Information System

I recommend that Cargo Information Systems should be adopted by the customs department since it great effect on cargo accountability at the ports and the transit routes and that it ought to be subsidized to allow greater inclusion of all stakeholders and that more emphasis should be put on the use of IT in encouraging trade by all stakeholders and that customs department should prepare adequately for the introduction of fresh IT technologies.

5.5 Areas for Future Research

Research on the effect of customs electronic processes on revenue performance needs to be conducted. This research identified the advantages of implementing Vis a Vis customs electronic process as the manual lodging scheme in place before harmonization of customs electronic procedures on trade facilitation in Kenya. Nevertheless, as the research focused only on three specific objectives harmonization of customs electronic procedures, automation of Customs Electronic procedures, adoption of cargo Information systems, other research can be carried out on the effects of harmonizing customs electronic procedures on revenue performance.

6.References

[1.] Ajzen, I. (2020). The theory of planned behavior: Frequently asked questions. Human Behavior and Emerging Technologies, 2(4), 314-324.

[2.] Asamoah, D., Agyei-Owusu, B., Andoh-Baidoo, F. K., &Ayaburi, E. (2021). Inter- organizational systems use and supply chain performance: Mediating role of supply chain management capabilities. International journal of information management, 58, 102195.

[3.] Bargaz, A., Lyamlouli, K., Chtouki, M., Zeroual, Y., &Dhiba, D. (2018).Soil microbial resources for improving fertilizers efficiency in an integrated plant nutrient management system. Frontiers in microbiology, 9, 1606.

[4.] Civelek, M. E., Çemberci, M., Uca, N., Çelebi, Ü, &Özalp, A. (2017). Challenges of Paperless Trade Redesign of the Foreign Trade Processes and Bundling Functions of Traditional Documents. International Business Research, 10(2).

[5.] Cooper, D. R., Schindler, P. S., & Sun, J. (2006). Business research methods (Vol. 9, pp. 1- 744). New York: Mcgraw-hill.

[6.] Davis, R. (1988). Student acceptance of virtual laboratory and practical work: An extension of the technology acceptance model. Computers & Education, 135, 1-14.

[7.] Isaev, A. (2020, April). The Economic Effects of Interregional Redistribution of Resources: the Case of Khabarovsk Territory. In IOP Conference Series: Earth and Environmental Science (Vol. 459, No. 6, p. 062017). IOP Publishing.

[8.] Kochari, A. R. (2019). Conducting Web-based experiments for numerical cognition research. Journal of cognition, 2(1).

[9.] Komarov, O. (2017). Customs control and risk management system on the example of the Ukrainian customs.

[10.] Kumar, H. (2019). A Cross-sectional Study on Learning Preferences for Research Methodology among Medical Students. The Journal of the Association of Physicians of India, 67(12), 18-21.

[11.] Mugambi, N. (2017). Effect of Cargo Tracking System On Cross-Border Trade Between Kenya and Uganda (Doctoral dissertation, University of Nairobi).

[12.] Mugenda, N. G., &Mugenda, V. K. (2013). The impact of inventory management practices on the financial performance of sugar manufacturing firms in Kenya. International Journal of Business, Humanities, and Technology, 3(5), 75-85.

[13.] Narayanaswami, C., Nooyi, R., Govindaswamy, S. R., &Viswanathan, R. (2019). Blockchain anchored supply chain automation. IBM Journal of Research and Development, 63(2/3), 7-1.

[14.] Peterson, J. (2017). An overview of customs reforms to facilitate trade. J. Int'l Com. & Econ., 1.

[15.] Peterson, J. (2017). An overview of customs reforms to facilitate trade. J. Int'l Com. & Econ., 1.

[16.] Riom, C., & Valero, A. (2020). The Business Response to Covid-19: the CEP-CBI survey on technology adoption. Centre for Economic Performance, London School of Economics and Political Science.

[17.] Seelkopf, L., Bubek, M., Eihmanis, E., Ganderson, J., Limberg, J., Mnaili, Y., ...&Genschel,

[18.] P. (2019). The rise of modern taxation: A new comprehensive dataset of tax introductions worldwide. The Review of International Organizations, 1-25.

[19.] Wadesango, N., Mutema, A., Mhaka, C., &Wadesango, V. O. (2018). Tax Compliance of Small and Medium Enterprises Through The Self-Assessment System: Issues and Challenges. Academy of Accounting and Financial Studies Journal, 22(3), 1-15.

[20.] Wang, S., & Kern, J. (2021).Digitalization Solutions in the Competitive CEP Industry– Experiences from a Global Player in China. The Digital Transformation of Logistics: Demystifying Impacts of the Fourth Industrial Revolution, 97-112.

[21.] Wiedmann, T., &Lenzen, M. (2018).Environmental and social footprints of international trade. Nature Geoscience, 11(5), 314-321.

[22.] Xiao, M. (2020). Factors influencing eSports viewership: An approach based on the theory of reasoned action. Communication & Sport, 8(1), 92-122.

ISSN (online) 2664-9535 (print) 2664-9527 https://atcr.kra.go.ke

Annex

Figure 1: Conceptual Framework

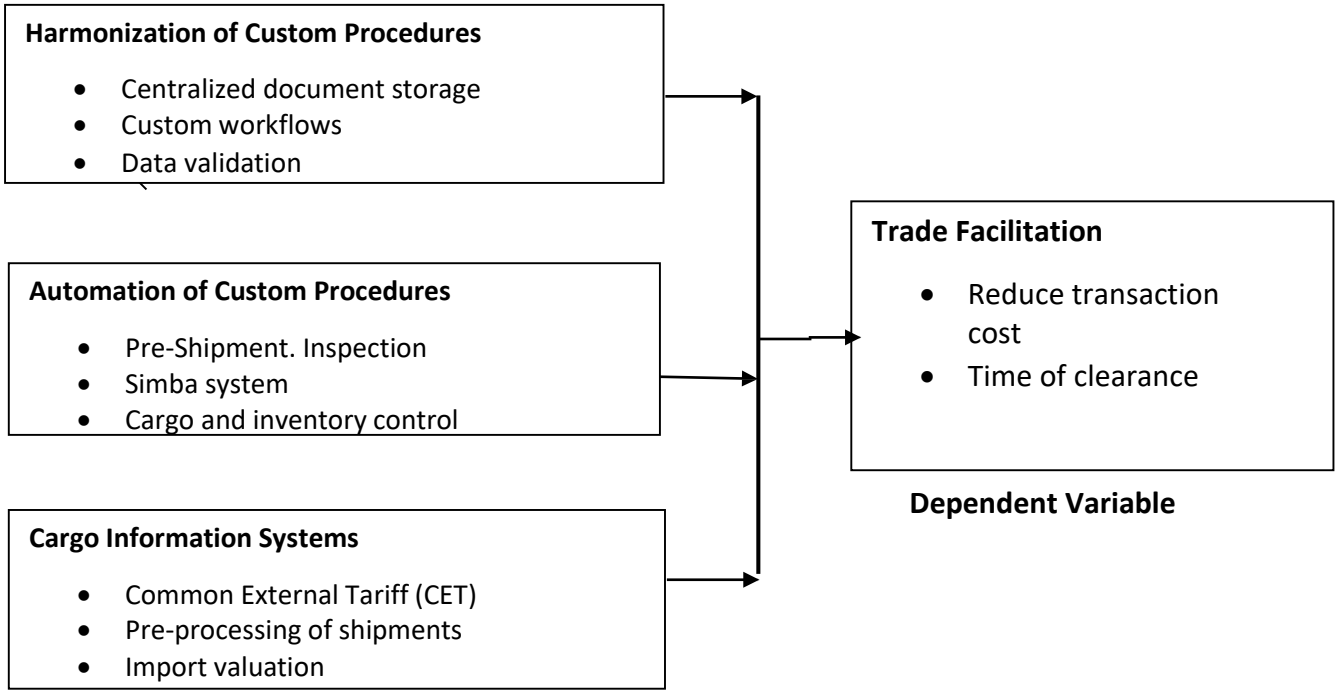

Table 3.1: Target Population

Target group	Total population
Clearing and forwarding agents	892
Total	892

ISSN (online) 2664-9535 (print) 2664-9527 https://atcr.kra.go.ke

Table 3.2: Sample size

Target Respondents	Target population	Percentage sample	Sample size
Customs officers	892	15%	134
Total	**892**	**15%**	**134**

Figure 4.1: Response Rate

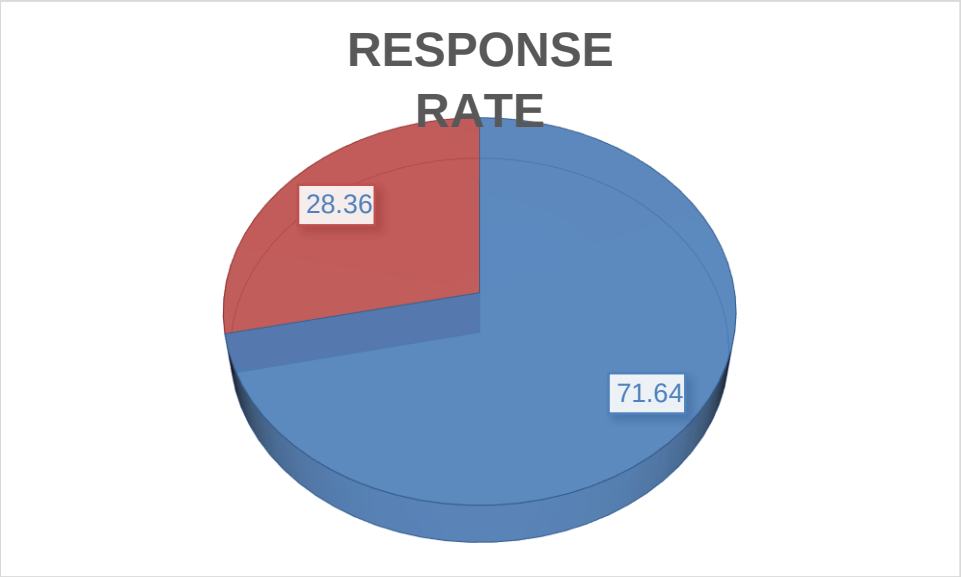

Figure 4.2 Respondents age

ISSN (online) 2664-9535 (print) 2664-9527 https://atcr.kra.go.ke

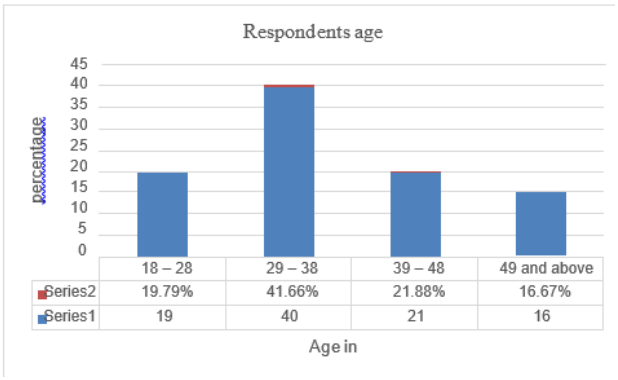

Figure 4.3 Respondents years of service

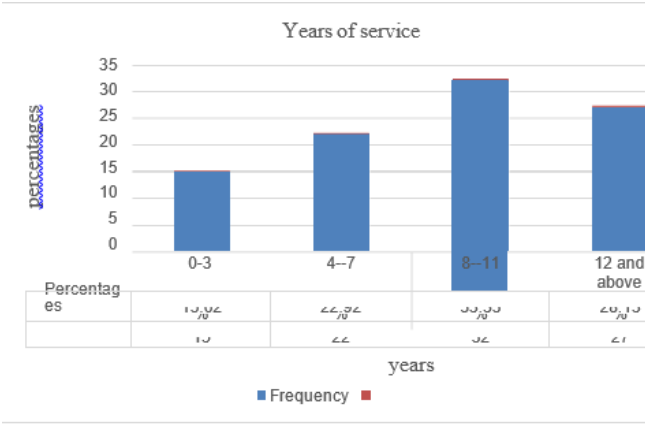

Table 4.4:Table of Academic Qualification

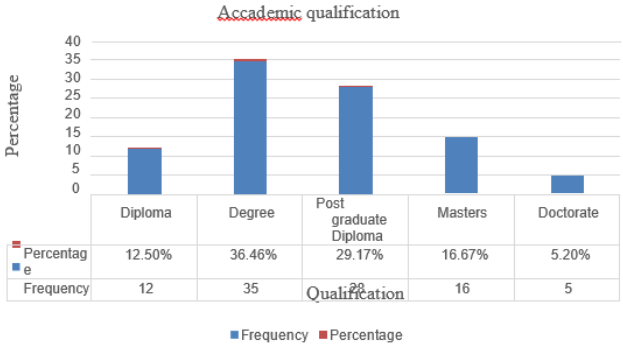

Table 1.1:Harmonization of customs electronic procedures

Statement	Mean	Std. Deviation	% Score	Interpreta
Does the harmonization of customs electronic procedures hasten the cargo clearance process at the Kenya border point?	3.71	.893	52	Agree
Does the harmonization of customs electronic procedures reduce the cost of doing business and facilitate trade in Kenya.	3.89	.916	59	Agree
Does the collection of duties or taxes have become easier or faster as a result of the harmonization of customs electronic procedures adopted by the Kenya revenue authority?	3.50	.649	57	Agree
Does the harmonization of customs electronic procedures reduce the cost of doing business to the traders	3.43	.778	57	Agree
Overall	**3.61**	**0.809**	**56.25**	**Agree**

Table 4.2: Automation of Customs Procedures

Statement	Mean	Std. Deviation	% Score	Interpretation
The adoption of automated customs electronic procedures by the customs department enables the data to be captured on the system to be shared on a real-time basis resulting in reduced dumping, tax evasion, cargo theft, and diversion.	3.79	.541	73	Agree
The adoption of automation of Customs Electronic procedures on Trade facilitation in the customs department has eliminated the paperwork involved in the old ways of doing business at the border post and this makes clearance to be much faster for traders (import and export).	4.25	.598	67	Agree
The quality of service to traders due to increase of service delivery as a result of the adoption of the automated Customs Electronic procedures on Trade facilitation.	4.083	.496	78	Agree
Traders are now more willing to do business with customs due to the efficiency created by the Customs Electronic procedures which make the trade to become easier	4.46	.845	65	Agree
Overall	**4.145**	**0.619**	**70.75**	**Agree**

Table 4.3 : Cargo Information System

Statement	Mean	Std. Deviation	% Score	Interpretation
Does the adoption of a cargo Information System adopt hasten the cargo clearance process at the Kenya border point?	3.33	.879	52	Agree
Does the adoption of a cargo Information System reduce the cost of doing business and facilitate trade in Kenya.	3.72	.736	63	Agree
Does the collection of documents, duties, or taxes become easier or faster as a result of the adoption of the cargo Information System adopted by clearing agents in Nairobi?	3.59	.734	56	Agree
There is a reduction of dangerous cargo that are being diverted to the local market in Kenya	3.34	.662	52	Agree
Does the adoption of cargo Information System adoption	2.74	.920	58	Agree
Overall	**3.344**	**0.786**	**56.2**	**Agree**

Table 4.4: Trade facilitation.

Variable Measured	Mean	Std. Deviation	% Score	Interpretatic
Lodgment and processing of Imports declaration form have improved significantly.	3.33	.879	52	Agree
Lodging and processing of Customs declaration have been made easier and transparent.	3.72	.736	63	Agree
Compliance with Customs procedures has improved significantly.	3.59	.734	56	Agree
There is greater coordination of the verification process between Customs and PGAs.	3.34	.662	52	Agree
Time taken to declare goods to Customs has been reduced significantly	2.74	.920	58	Agree
Overall index score	**3.344**	**0.7862**	**56.2**	**Agree**

Table 4.5: Pearson Correlations summary

	Trade Facilitation.		Harmonization Customs Electronic Procedures	Automation of Customs Procedures	Cargo information system
Trade Facilitation		Pearson Correlation	1		
		Sig. (2-tailed)			
		N	96		
harmonization Customs Electronic Procedures		Pearson Correlation	.177**	1	
		Sig. (2-tailed)	.003		
		N	96	96	
Automation of Customs Procedures		Pearson Correlation	.440**	.261**	1
		Sig. (2-tailed)	.000	.000	
		N	96	96	96
Cargo information system	1	Pearson Correlation	.093	.171**	.158*
		Sig. (2-tailed)	.025	.005	.009
	96	N	96	96	96

**. Correlation is significant at the 0.01 level (1-tailed).

Table 4.6 :Multiple regression model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.967a	.935	.932	.205

Table 4.7 : Analysis of Variance ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	55.239	3	18.413	43.844	.000b
Residual	3.864	93	.042			
Total	59.102	96				

a. Dependent Variable: Trade facilitation
b. Predictors: (Constant), Harmonization of Customs Electronic Procedures, Automatio of Customs Procedures and Cargo information system

Table 4.8: Coefficient of determination Coefficients

Model		B	Std. Error	Beta	t	Sig
	(Constant)	.028	.227		.124	.901
1	Harmonization of Customs Electronic Procedures	.626	.094	.606	6.673	.000
	Automation of Customs Procedures	.228	.105	.146	2.169	.033
	Cargo information system	.571	.091	.509	6.283	.000

ISSN (online) 2664-9535 (print) 2664-9527 https://atcr.kra.go.ke

ISSN (online) 2664-9535 (print) 2664-9527 https://atcr.kra.go.ke

