
**ADDIS ABABA UNIVERSITY**

**SCHOOL OF COMMERCE DEPARTMENT OF**

**LOGISTICS AND SUPPLY CHAIN MANAGEMENT**

**(GRADUATE PROGRAM)**

# EXAMINING THE EFFECTS OF EXISTING CUSTOMS PROCEDURES ON CARGO RELEASE TIME IN ADDIS ABABA INTERNATIONAL AIRPORT

**By:**

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A Thesis Submitted to the Addis Ababa University, School of commerce: In Partial Fulfilment of the Requirements for the award of Master's Degree in Logistics and Supply Chain Management

Advisor: Busha Temesgen (PhD)

June, 2024

Addis Ababa, Ethiopia

**ADDIS ABABA UNIVERSITY SCHOOL OF COMMERCE**

**GRADUATE STUDIES**

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APPROVED BY THE COMMITTEE OF EXAMINERS:

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Internal Examiner Signature Date

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External Examiner Signature Date

# CERTIFICATE

I have certify that this research work entitled Examining the effects of the existing customs procedure on cargo release time at Addis Ababa international Airport under my supervision. This work is original and has not been presented for a degree in my university and it can be submitted for the partial fulfillment of the requirements for the award of the degree of Masters of Arts (MA) in Logistics and supply chain management.

Busha Temesgen (PHD)

Signature: _____

Date of submission: _____

# DECLARATION

I, the undersigned, declare that this entitled as "Examining the effects of the existing customs procedure on cargo release time", is my original work for the partial fulfillment of MBA and to the best of my acknowledge has not been presented for a degree by any other person and in any other university, and all sources of material used for this thesis / dissertation have been duly acknowledged.

Declared by: Ziyadu Nureta Getaw

Signature: _____

Date: _____

This Thesis has been submitting for examination with my approval as University supervisor.

Name of Advisor: BushaTemesgen (PHD)

Signature: _____

Date:_____

**Acknowledgement**

First of all, I would like to thank the almighty ALLAH for creating me and gave me health, strength and patience to withstand the inconveniencies, which I came across through all the lines of life.

Words cannot express my gratitude to my advisor Dr. Busha Temesgen for his invaluable support by giving valuable comments, feedbacks and guidance. Moreover, I would like to thank my family specially my brother Mr. Dino Nureta, his wife Mrs. Lubaba Hussien for raised & support me with care as parents.

Furthermore, I would like to thank all employees of Addis Ababa Airport Customs branch office management and employees, clearing agents, importers, exporters, friends and all individuals who support me to accomplish this paper and especially the respondents for their cooperation in the process of data collection.

Finally, I would like to forward my heart full gratitude to for Amin plc's General manager Mr. Mohammed Siraj and to my best friend especially for Mr.Tesema Abuye for all of their support and encouragement they had been giving me during my study time.

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## List of Abbreviation and Acronym

| | |
|---|---|
| AAACBO | Addis Ababa Airport Customs Branch Office |
| AEO | Authorized Economic Operator |
| ANOVA | Analysis of Variance |
| ASYCUDA | Automated System Custom Data |
| CBIC | Central Board of Indirect taxes and customs |
| CIF | Cost Insurance Fright |
| COMESA | Common Market for Eastern & Southern Africa |
| CPC | Customs procedure code |
| EFDA | Ethiopian Food and Drug Authority |
| ECA | Ethiopian Communication Authority |
| ERCA | Ethiopian Revenue and customs authority |
| ECVS | Ethiopian customs valuation system |
| ECC | Ethiopian Custom Commission |
| eCMSelectronic Custom Management System | |
| ECVS | Ethiopians Custom Valuation System |
| ERCA | Ethiopia Revenue and Custom Authority |
| ESCAP | Economic and Social Commission for Asia & Pacific |
| eSWelectronic single window | |
| FOB | Free On Board |
| HS | Harmonized System |
| IoTInternet of Things | |
| INSA | Information Networks Security Agency |
| MOF | Ministry Of Finance |
| NTRS | National Time Release Study |
| OECD | Organization for Economic Co-operation and Development |
| PAPP | Price Actually Paid or Payable |
| RKC | Revised Kyoto Convention |

| | |
|---|---|
| SPSS | Statistics Package for Social Science |
| TFA | Trade Facilitation Agreement |
| TRS | Time Release Study |
| TTF | Trade and Transportation Facilitation |
| UN | United Nation |
| UNCTAD | United Nation Conference on Trade and Development |
| UNSD | Unite Nation standard Development |
| VAT | Value Added Tax |
| VDD | Valuation Detail Declaration |
| WB | Word Bank |
| WCO | World Custom Organization |
| WTO | World Trade Organization |

## *ABSTRACT*

*In international trade, customs as gatekeeper and plays a crucial role in implementation of trade ensuring compliance, document accuracy, verification, inspection procedures its processing time in the international airport is an important component of overall cargo release time. However, a great deal of money and time are lost in most sub-Saharan African countries, including Ethiopia, because of lengthy delays at customs. This study attempts to examine the impact of the existing customs Procedure on cargo release time at A.A. Airport. Toachieve the research objective, the study employed both descriptive and explanatory /inferential/ method and used bothqualitative and quantitative research approaches. As a source of survey data, the study used both primary and secondary data sources. On the other hand, to collect the necessary data both semi-structured interview and survey questionnaires as tools of data collection. In addition, annual reports of the branch, some published and unpublished empirical datas and data from eCMS system were used as as the sources of secondary data. The data were collected from 186 senior and above level Customsemployees found in cargo import clearance, warehouse and customer service departments and 100 customs clearing agents who havepermanent office at the cargo window selected purposively in an effort to better comprehend the qualified respondents. To get the right respondent, simple random sampling method was used.To analyze the collected data, both descriptive statitics and regression analysis was carried out with the aid of SPSS version 23. The finding of this study showed that the procedures namely; duty and tax assessment, document verfication, physical examination and risk management system have significant effect on cargo release time. This suggests that the various parties involved in the existing customs procedures should work together to enhance the efficiency and effectiveness of these significant variables, ultimately reducing cargo release time and supporting international trade and supply chain operations. Thisstudy focused only on import clearance procedure with referring cargo release time as dependent variable at A.A. Airport customs branch. Thus, furtherresearch work is needed in this area with including other customs procedures and branches under customs commission.*



***Key words: - Customs, Cargo Release Time, Customs Procedure, eCMS***

# CHAPTER ONE

# INTRODUCTION

This chapter gives the background information for the dependent and independent variables, identifies the gap that need to be filled in, explains the importance of the study, and lays out the operational framework for calculating the effects of current customs procedures on cargo release time.

## 1.1. Background of the Study

The integration of economies among nations and regions is facilitated by international trade. It permits nations to focus on large-scale production of a limited variety of items (Takele, 2017). Efficient customs clearance is essential to having an advantage in the cutthroat business and commercial environment of today. Reactivity and efficiency are critical components of company and trading's bottom line in today fast-paced, dynamic, and competitive environment (Ojekunle, 2022). Countries must reform their customs environments in order to get rid of the inefficiencies they encounter in order to make substantial progress toward commerce among regional economic communities, enhancing trade competitiveness, and engaging in the global trading system (Chibira, 2021).Efficient customs clearance operations are of greater interest to shippers, importers, and various clearing agencies during the various stages of importation. The impact of potential delays is the reason behind this (ibid). To improve a nation's trade performance, logistics performance, particularly customs clearance, must be improved. Ineffective logistics will increase trading costs and reduce the opportunity to maximize global trade (Arvis et al., 2014).The way import and export goods are handled by customs administrations in accordance with national laws is referred to as the customs processes. Under the guiding principles of self-assessment, risk management, transparency, accountability, service orientation, and prevention of illegal practices by promoting self-compliance and the promotion of priority sector and economic development, customs operation involves the administration of customs law in relation to the importation, exportation, movement, or storage of goods as well as the collection of duties and taxes (ERCA, 2017).The whole customs system, including the management and facilitating of items in transit, passenger flow, and imported and exported commodities, is covered by customs processes. In order

to adapt to the evolving in international trade, the modern Customs administration should facilitate trade and exercise effective control while maintaining its core objectives of generating revenue and preserving national security (ERCA, 2017). According to Desta (2018) &Girma (2016), the primary obstacles to trade facilitation in customs procedures include ineffective customs automation implementation, inadequate risk management systems, and skill shortages in human resources.

An information-technology-assisted, transparent, and border authority-interacting modern customs system is one that uses information technology to manage its processes. Out-dated regulations from the past, such as 100% inspection, substantial paperwork, and long-term storage, are eliminated by a more modern customs administration. A method for managing risks will be included in this customs administration. Its main objectives are the prompt release of goods, little paperwork, efficient goods movement, and a narrow focus on a select few commodities for inspection (Alburo, 2010).

The most important environment whose operation has a major influence on the clearance procedure for goods entering and departing any nation's border is customs. The goal of trade facilitation is to ensure that goods travel and is cleared through borders between nations as quickly and cheaply as possible. The easy flow of goods for imports and exports across borders is considerably slowed down by the longer processing times for trade facilitation (Martincus et al., 2013).

Furthermore, the nature of global variables influences international trade movement, which is dynamic and subject to periodic variations (Lihanda and Kilonzi, 2022). These require that academics conduct research every single time. The customs administration will then be able to comprehend the customs processes and how they align with the existing trade flows. As a result, the cargo discharge time can be expedited. For example, onerous customs processes cause long waits at the border crossing. The costs of conducting cross-border business are frequently increased by such delays. It is anticipated that the customs processes in place will make it easier to remove cargo from the customs area.Therefore, the goal of this study is to investigate how the Addis Ababa airport customs branch office's air cargo release time is impacted by the current customs procedures.

## 1.2. Statement of the Problem

Foreign trade of the nation is impacted by the effectiveness of customs administrations. According to Al-Shennawy (2023), traders incur additional expenditures as a result of lengthy customs clearance procedures, intricate procedures, and onerous restrictions. One important factor in the total delivery time is the time required for customs processing at the ports. An important consideration for reaching the bottom line of a corporation is the length of time required to clear goods in the port. Customs examines documents and conducts physical inspections to make sure the information on them matches the items that have arrived at the ports. Every one of these customs processes has a processing time.

The OECD (2005) states that ineffective border procedures are prevalent in many nations, which cause traders to face challenges such as unreliable and delayed delivery, expensive customs clearance, and lost business prospects. Effectively executed trade facilitation initiatives have the potential to lower trade transaction expenses, boost productivity at customs, and enhance trade tax collection. The article deduced from its findings that ineffective customs procedures, which stem from ineffective use of ICT, risk management processes, and inadequate customs interaction with businesses, have an adverse effect on trade facilitation and control.

Additionally, the customs services may or may not encounter inefficiencies based on current customs procedures. This in turn impacts the cargo's delivery schedule. Cargo release times are lengthy unless customs procedures are streamlined and coordinated, and vice versa (Adewale, 2016). Almost all importers have serious concerns about cargo clearance challenges in ports. In this instance, any delays result in expenses that the shippers must pay (Delloitte, 2017).

One of the main administrative obstacles to trade is the long and complicated customs laws and processes, which have not kept up with the growth and complexity of commerce. Although customs processes may not directly obstruct trade in services, this researcher argues that they have an impact on international trade since distribution and transport services are heavily reliant on customs procedures. In other words, the efficiency of international trade is greatly influenced by the harmonization and simplification of customs. Trade operations were impacted by border delays. The free flow of products and

services across borders is reportedly impacted by administrative barriers, which include those resulting from customs and associated administrative procedures (Zhang, 2002).This compels nations to focus on certain pragmatic impediments, such customs processes and other matters.

According to the international trade administration (2024) Customs clearance time has been reduced to approximately two weeks. Based on the reformed customs proclamation No 859/2014, the maximum number of days given to collect goods from airport is 10 days. Furthermore, the World Customs Organization (WCO) and the World Bank advised publishing such a cargo release time period as a performance evaluation tool every time. In addition, the World Customs Organization (WCO) and the World Bank advised each nations to publish such a cargo release time period as a performance evaluation tool every time but thereare a few empirical studies undertaken even atcustoms commission level.

Ethiopia has only one international airport; which is A. A. airport customs must have some empirical studies on cargo release time. This study can provide precise information about current customs procedures as well as the timing for air cargo release. There is a public belief and the branches' quarterly and annual customer charter report stated that, there is delay in customs clearance timeat the branch office.There is also lack of awareness of the branch customers and employees about the existing customs procedures and standard service delivery time. In relation to this research area, there is no scientific investigation has been undertaken in this branch office.

Consequently, it's important to examine the existing customs procedures and the variables that influence the cargo release time. It also important to identify the main obstacles in the customs process which have contribution on cargo dwell time

Therefore, the goal of this study was to investigate how current customs procedures and practices affect the cargo release time from Addis Ababa airport customs branch office.

## 1.3. Research Questions

- ✓ What is the average processing time spent for import air cargo clearance at Addis Ababa International Airport;
- ✓ How the existing duty and tax assessment, document verification, physical examination and Risk management systemprocedures affect the import air cargo release time in this airport customs?
- ✓ To evaluate the effects of customs procedures on clearance time for customs employees and clearing agents through comparative advantages
- ✓ What are the challenges that the applied electronic customs management system (eCMS) faces at Addis Ababa International Airport.

## 1.4. Objectives of the Study

Under this section, the researcher presented both specific and general objectives.

### 1.4.1. General objective

The general objective of the study is examining the effects of current Customs procedures on average cargo release time in Addis Ababa international airportcustoms branch office.

### 1.4.2. Specific objectives

The specific objectives of this study are;

- ✓ To evaluate the overall average time spent for import air cargo at Addis Ababa international airport customs branch office;
- ✓ To examine the existing duty and tax assessment, document verification, physical examination and Risk management system procedures affect the import air cargo release time in this airport customs.
- ✓ To identify the challenges related with applied electronic customs management system (eCMS) at Addis Ababa International Airport;

## 1.5. Significance of the Study

It is necessary to have accurate information about customs procedures and cargo release times through empirical research works in order to examine customs clearance procedures effectively, develop appropriate customs reforms, inform policy decisions for policy

makers and the custom commission guide the application of more efficient customs procedures, increase operational efficiency, and apply transparent customs procedures. Thus, this study can provide information to the relevant parties. It can create clear understanding about the average cargo release time and the current customs procedures at the Addis Ababa international airport customs office. Additionally, the results of this study can serve as a basis for additional research projects undertaken by various academics. In addition, Ethiopia has only one international airport, and through this airport mostly imported goods are time sensitive perishable goods, raw materials for manufacturing , pharmacy and medicines etc. these type of goods must be released with a minimum time. So the finding of the study contributes to the branch to identify the main challenges and reasons of the cargo dwell time and to enhance the clearance procedure.

## 1.6. Scope of the Study

This study is limited to the Addis Ababa Airport Customs Branch Office, which is the sole international airport in Ethiopia among the numerous branches under the Ethiopian Customs Commission. This branch was chosen because of the port's distinctive characteristics and high volume of aviation traffic. It is not restricted to processing a certain set of commodities but handles a wide range of consignments.Accordingly, the study investigatedthe distinctive features of the air cargo services provided by the customs branch office at Bole International Airport. Nevertheless, this research only looks at the import cargo customs clearance procedures for cargo time it takes to release it, despite the branch having numerous windows. It is limited in time to the data gathered at the specified branch office between 2021 and 2023. Furthermore, this research evaluated the current customs procedures only even though there are other factors that affect the cargo release time like poor coordination between regulatory bodies and airport societies.

## 1.7. Limitations of the Study

In addition to budget and time constraints, there might be more explanatory variables that were overlooked but could still have an impact on the dependent variable because this study only uses a limited amount of quantitative and qualitative data. The absence of current and pertinent published material on the subject of customs cargo release times, primarily in the context of Ethiopia, was the other restriction. Nonetheless, in order to

address this issue, the researcher will work to create an appropriate methodology that can reduce the impact of these restrictions. This research focuses on customs procedures as one of the influencing elements among those that determine the cargo release time.

## 1.8. Definition of the key terms

Based on definitions found in WCO frameworks and proclamations of the Ethiopian Customs Commission, the researcher provides definitions for the following terms.

**Customs: -** The Government Service is in charge of enforcing compliance with customs laws, collecting taxes and duties, and enforcing other laws and regulations pertaining to the import, export, transportation, and storage of commodities (WCO).

**Customs procedure: -** All actions taken by the commission and the parties involved in order complying with customs law (ERCA, 2017). Customs procedures comprise tax and duty assessment, verification, physical examination, and risk management for the purposes of this study. Nearly all of these processes are now handled electronically.

**Verification of commodities: -** refers to the process by which customs authorities examine commodities to ensure that they comply with national legislation, standards, and declarations (Gahigi, 2017).

**Release of goods**: - refers to the completion of customs clearing processes from customs control (ibid). It is also a process by which items under customs control are made available for declaration (ERCA, 2017).

**Cargo:-**According to Customs Commission (2014) and Customs Proclamation 859/2014, it is defined as any good imported or exported by any mode of transportation other than stocks of transportation for commercial use and traveller luggage.

**Simplicity:-** in international trade it simplicity refers to the streamlining and simplification of customs procedures and processes. This involves reducing unnecessary complexity, paperwork, and bureaucratic hurdles to make it easier for businesses to comply with customs requirements.

**Standardization**: - is the creation of consistent data formats, documentation standards, and customs procedures. Customs authorities and traders can guarantee compatibility, interoperability, and efficiency in cross-border trade operations by standardizing processes.

**Paperless service:-**in customs it refers to the digitization of documentation, communication, and customs processes. Customs authorities can improve the speed and accuracy of customs clearance operations, decrease paperwork, and increase efficiency by making the switch to computerized systems and electronic data interchange.

**The cargo release time**: - is the amount of time that passes between the cargo's arrival at the customs station and its eventual departure by the carrier in the case of exports, or from the cargo's arrival at the customs station to its out-of-charge for domestic clearance in the case of imports (Pavithra, 2023).

**Risk management**: - refers to a system that classifies various risk bands according to their degree of risk in order to provide fair customs services and control over goods carried into the customs area (ERCA, 2017).

**Customs clearing agent**: - An individual who processes customs clearance within Ethiopian customs territory on behalf of another individual in relation to the import and export of goods (FDRE, 518/2022).

## 1.9. Organization of the Study

There are five chapters in this research. The first chapter covered the introduction section, which included the study's background, problem statement, and objectives, scope of the study and research questions as well as its importance and breadth. A review of the literature is the topic of the second chapter. The research methodology and design that was used to carry out the study are covered in the third chapter. The analysis and interpretation of the gathered data are the main topics of the fourth chapter. The findings, conclusions and suggestions were summed up in the fifth chapter.

# CHAPTER TWO

# RELATED LITERATURE REVIEW

This chapter offers a critical analysis of pertinent research and writings about the effects of the existing customs process in relation to the variables mentioned. The review seeks to offer a thorough grasp of the state of the field's research, important discoveries, approaches, and gaps in the body of knowledge and study's conceptual framework.

## 2.1. Theoretical Literature review

### 2.1.1. Trade facilitation

Minimizing trade-related expenses and shortening the time it takes to process international trade are two benefits of trade facilitation. According to Li and Wilson (2009), trade facilitation's primary goal is to reduce the time and expense of importing and exporting. This will give those countries who streamline their export-import platforms in terms of transportation, customs, clearing, and other relevant authorities a distinct advantage. The effectiveness and variety of exports are positively impacted by trade facilitation (Alberto and Wilson, 2012).

Grainger (2008) defines trade facilitation as the practice of streamlining and streamlining international trade procedures, like customs procedures. The theory states that efficient customs procedures enhance cross-border commodity flow and reduce trade expenses, both of which result in quicker cargo release periods.

Peng (2009), for instance, claims that delays brought on by ineffective trade simplification practices reduce export competitiveness. He further contends that well-facilitated export practices play a major role in reducing exporting time and cost and enable exporters to deliver their goods at a reasonable price within the specified time frame. According to Mc. Linden et al. (2011), bureaucratic and management issues with other government institutions were the cause of two thirds (2/3) of the delays in export or trading activities, with customs officials being responsible for the remaining one third (1/3) of the delays.

Trade facilitation encompasses, according to UNCTAD (2006), measures pertaining to documentation, customs formalities, procedures, use of standards, electronic messages for trade transactions, physical movement of goods, legal frameworks, transport and

communications infrastructures, modern information technology, timely discussion, and distribution of export-import related data to all relevant stakeholders (Andrew, 2007). In this instance, there will be a seamless flow of products import and export if the relevant bodies perform these actions.

The World Customs Organization (WCO) states that developed country customs administrations turned to ICT automation as a way of trade facilitation when trade volume increased and human resource expansions were limited. This allowed the customs authorities to effectively oversee customs procedures while still clearing goods efficiently. Advances in a number of other areas, including standardizing the application of laws, decreasing in-person interactions, monitoring operations to combat corruption, transitioning from paper-based to increasingly paperless customs procedures, eliminating arbitrary human intervention, and enhancing decision accountability. Developing nations began using ICT into their customs procedures as the 21$^{st}$century got underway.

A project to develop a new vision for customs in the contemporary era has been started by the World Customs Organization (WCO). The fundamental tenets of the agreement are that effective customs regulations governing the international movement of persons and products are necessary for international trade to advance economic growth and development. Maintaining its position as a key trade facilitator, Customs promotes increased efficiency by removing complicated processes, redundancies, and delays in global supply chains, all of which immediately reduce costs.

However, despite the fact that many customs authorities constantly seek to align their goals with the WCO's Revised Kyoto Convention (RKC) standards and the WTO's guiding principles, many African nations have barely kept up with the changing business landscape. They are frequently blamed for impeding regional trade with onerous and harmful customs processes that increase transaction costs and cause import and export delays. Global trade may undoubtedly come to an end at many identical border crossings due to the needless burden of inspecting multiple cargos. The consistency of the corresponding trade cycles is also hampered by other unfavourable trade conditions.

As a point of entry for international trade, the customs administration is crucial to the enforcement of trade and economic regulations, and the smooth operation of this

administrative branch affects all aspects of the economy. The importance of customs in promoting productive activity has been further underscored by the nation's reliance on capital goods, raw materials, and import intermediaries on the one hand, and the large percentage of these products in imports on the other. Encouraging the export of goods and services can increase the exports' productive sectors and help the plan accomplish its objectives (Hamidreza and Masumeh, 2017).

### 2.1.2. Role of Custom on trade facilitation

The World Customs Organization (WCO) describes customs as "the government service which has responsibility for the application of other laws and regulations relating, inter alia, to the importation, transit, and exportation of goods as well as the administration of Customs law and the collection of import and export duties and taxes." The Customs Proclamation's provisions governing the import and export of cargo, baggage, and postal articles, the arrival and departure of ships, airplanes, and other modes of transportation, the governance of any goods subject to customs control, including the rights and obligations of those participating in customs formalities, are among the duties performed by ERCA.

Customs administrations are now more widely recognized as "the key border agencies," in charge of all transactions pertaining to problems resulting from the movement of people and products across borders (Luc De Wulf and José B. Sokol, 2005). A few of these tasks are carried out in close coordination with other national organizations. The operational principles of customs cannot always assign equal weight to all functions; decisions and priorities must be made in response to evolving conditions. Since import tariffs are a vital source of budgetary revenue for many developing nations, governments, represented by the Ministry of Finance (MOF), have historically placed a high priority on revenue rising. The duty to safeguard society has been imposed on customs administrations over time.This has been added to the WCO's mandate to reflect the idea that the majority of customs administrations are in charge of preventing the entry of hazardous and unsafe commodities into other countries. Customs administrations are expected to guarantee that all importers pay the official import taxes in order to maintain a level playing field, and import tariffs are a means to safeguard domestic producers.

As the WTO Cancun Agenda and the WCO Revised Kyoto Convention attest, trade facilitation has garnered growing attention in recent years. Governments' growing commitment to pursuing a growth plan focused on the private sector, together with the private sector's rising assertiveness and demands for improved government services, have all contributed to this interest.Traders can save money by lowering inventory and operating capital requirements, and they can meet more demanding "just in time" criteria, which are the main benefits of streamlined customs procedures.

### 2.1.3. The impact of Customs Procedures on cargo release time

In order to identify bottlenecks in the trade flow process and take the appropriate action to improve the efficacy and efficiency of border procedures, the WCO Time Release Study is a strategically important and globally recognized tool for measuring the actual time required for the release and/or clearance of goods, from the time of arrival until the physical release of cargo (WCO).

A thorough method for assessing logistics performance internationally is the Logistics Performance Index (LPI). It evaluates several aspects of logistics, such as the effectiveness of customs procedures, the standard of infrastructure, the promptness of shipments, the level of logistics expertise, the convenience of organizing shipments abroad, and the tracking and tracing capabilities (Gosain S, 2023).

The term "trade facilitation" describes measures used to simplify and expedite trade-related processes globally, like customs clearance. The theory states that efficient customs procedures enhance cross-border trade, reduce trade costs, and expedite cargo release periods (Grainger, 2008). Cooper and Lambert (2000) state that efficient customs procedures are necessary to assure cargo release on time and minimize hold-ups, both of which enhance supply chain performance.

Barka L. (2019) and Ncube M. (2019) report that the results of their study on the impact of customs procedures on trade facilitation in Botswana indicate that complicated customs procedures, a lack of transparency, and a lack of cooperation among stakeholders are the main causes of delays in cargo clearance at the country's border checkpoints.

Time release study was developed by WCO to measure the efficacy of operational procedures carried out by the customs, other regulatory agencies, and private stakeholders in the standard processing of import, export, cross-border, and transit movement of goods. It is one of the effective tools to identify the bottlenecks which may persist in the trade movement and clearance (Dhaka A and Jha A. et al., 2021).

In Zhang M.'s (2024) study, ten factors—including incomplete or incorrect documentation, customs regulations and compliance, tariffs and duties, inspection and security checks, complex volume of shipments, lack of communication, trade sanctions and embargoes, weather and transportation issues, and customs capacity and resources—were examined in relation to delays in international customs clearance. The study also found that maintaining proper documentation with pertinent parties, being aware of customs procedures, and other measures can all help to minimize the time it takes for customs clearance.

#### 2.1.3.1. Simplification and Harmonization of Customs Procedures

Numerous developing nations have unilaterally started to alter the administration and practices of customs. Simplifying processes is the primary goal in order to facilitate trade in imports and exports. The WCO has developed guidelines on good customs procedures to streamline the process. You can find this guidance in the 1999 Revised Kyoto Convention. Standards and best practices for customs procedures and related arrangements are provided by the Annexes and a set of guiding principles that make up this advice. This instruction states that streamlining procedures is necessary for all customs-related entities in order to administer the border efficiently. The goal of coordinated efforts is to make border crossings easier and more efficient. Procedures are examined to remove duplication, pointless phases, unnecessary approval levels, and discretion.To achieve this, legal frameworks, technology, and cooperation with traders and other border officials are frequently employed.

International conventions, norms, and practices must be complied with by domestic procedures. Cross-border cooperation between authorities is encouraged by harmonization. International standards, cross-border information sharing, and reciprocal agreements are utilized to promote cooperation in order to guarantee worldwide uniformity in customs procedures.

#### 2.1.3.2. Paperless Trade Measures

Paperless trade is defined as "trade in goods, including their import, export, transit, and related services, taking place on the basis of electronic communications, including exchange of trade-related data and documents in electronic form," by the Global Survey. Establishing an electronic single window system would enable compliance with the application of most, if not all, of the remaining measures within the Paperless Trade category. An import, export, or transit of commodities through a single entry point can be facilitated by the submission of data needs and/or paperwork by parties engaged in commerce and transportation through a single window. Data and documents can be submitted and transferred electronically when the single window is electronic thanks to information and communications technology (ITC).

#### 2.1.3.3. Transparency in Customs Process

Advice and information should be available to all traders. Businesses need predictability in terms of costs, procedures, and government requirements. Because it makes the "rules of the game" easier for businesses and traders to understand, transparency enhances compliance. Import and export guidelines must to be clear and accessible in trader-friendly languages, including electronic formats. On the one hand, accountability refers to each nation's explicit duty to protect the public and private interests in trade, to uphold laws and procedures that support such interests, and to provide accurate information to all parties involved. On the other hand, transparency refers to the predictability of essential information on customs and border requirements, including rights and obligations, available in advance to all stakeholders.

#### 2.1.3.4. Standardization

Standardized policies, procedures, forms, documentation, and processes should be established by customs administrations to guarantee that goods are handled uniformly at all border crossings. Cross-border harmonization is promoted via process standardization. Many strategies are used to achieve this, such as the development of a single declaration document, the application of standard operating procedures for seizures and searches, and the release of a list of prerequisites for declaration paperwork. This guarantees that every interaction with customs administration will be uniform and predictable. While

standardization ensures the consistency of importers' procedures and documentation, harmonization aligns laws with international norms. We examine the manner in which these two pillars cooperate to advance commerce.

### 2.1.4. Customs Procedures in Ethiopia

According to the EFDRE Customs proclamation No. 859/2014, p. 4, "customs procedure" is defined as "all customs operations which shall be carried out by the persons concerned and by the Authority in order to comply with customs law". There are three type of customs procedure in Ethiopia:

#### 2.1.4.1. Customs Transit

The process of moving goods under customs supervision or control from one customs office to another is referred to as "customs transit." Four forms of customs transit are possible (EFDRE Customs proclamation No. 859/2014, p.6): interior (inland), outward, though, and inward. The conveyance of merchandise "in bond" from the origin or commencement in one member state to the customs office of exit from the transiting country is referred to as "through transit" in the SADC Transit Management System Traders Manual. The movement of goods from an entry Customs office to an exit Customs office inside the jurisdiction is referred to as "outbound transit". The journey from the Customs office of introduction into the Customs territory is referred to as "inward transit".The term "national transit" describes the transportation of goods between inland Customs offices located in the same area or REC.

#### 2.1.4.2. Warehousing

An ancient practice, warehousing now symbolizes the dynamic stage of commercial storage and marketing as well as personnel trained in scientific warehousing methods in the global context of today. Items are shielded from weather conditions including heat, wind, rain, and storms by them. All warehouses are built with this basic goal in mind. Contemporary warehouses fulfil numerous more functions in addition to this. These are the tasks that warehouses complete. Risk-taking, processing, funding, product protection, and storage,

Customs warehousing, according to the RKC, is the act of keeping merchandise under customs supervision in a specific warehouse without having to pay any taxes or fees. Customs warehouses may be either public (for general public use) or private (for exclusive use by certain individuals), as stated in the Customs Proclamation. Facilitating trade, the next customs operation, is the primary goal of the customs warehousing process. Because merchandise placed in a customs warehouse is exempt from liability.

#### 2.1.4.3. Customs clearance

Customs clearance is defined as "the accomplishment of the customs formalities necessary to allow commodities to enter home in order to be exported or placed under another customs procedure" in the Revised Kyoto treaty. Furthermore, according to UNCTAD (2016), "the action by customs to allow goods undergoing clearance to be at the disposal of the person concerned" is known as publication. Within the Customs domain, "release" describes the measure implemented by Customs to permit the placement of items undergoing clearance at the people' disposal. When an item is cleared for export, entry into the country, or placement under a different customs procedure, it means that all necessary customs formalities have been completed.Efficient clearance and discharge of products at borders is the main objective of the proposed measures. Risk management, approved trader schemes, post-clearing audits, and separate release from clearance are a few of these measures. An essential first step is to modernize customs through automation and ICT utilization. For exports, imports, special procedures, and temporary admissions, the RKC establishes standards and suggests best practices in customs.

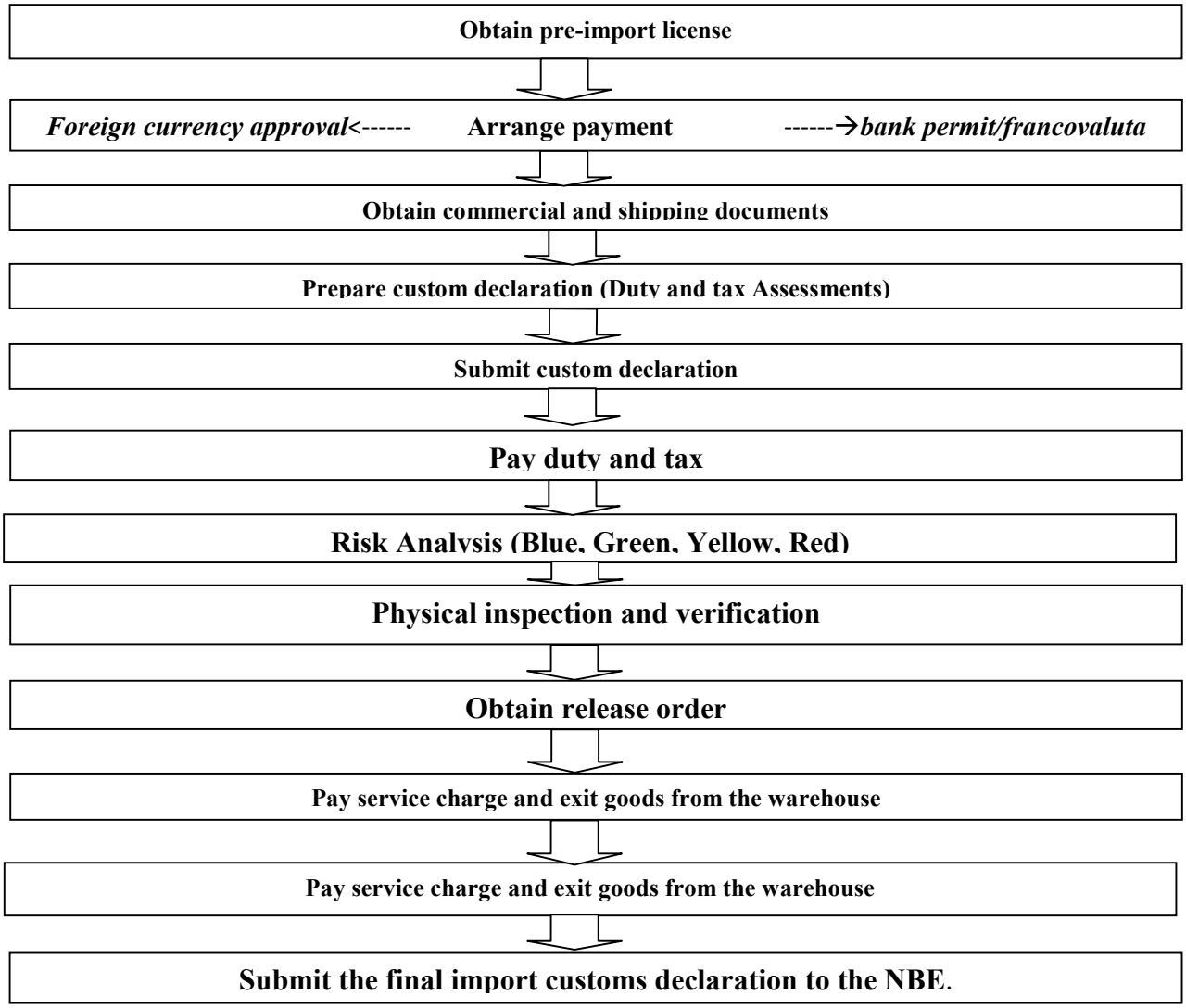
Wilson (2018) determined that the compilation of documentation, declaration of commodities and value, and examination are the three essential components of the cargo clearing operations. According to Juneja. (2019), customs clearance is similar in that it involves preparing and submitting the documentation needed to allow imports or exports into the nation, representing clients during customs examination and assessments, paying duties, and accepting cargo delivery from the after clearance along with documentation.

The figure 2.1 shows the main importation procedure of goods in to Ethiopia. Cargo importation clearance procedure, as defined by ERCA (2017), is the completion of

customs procedures required to permit cargo to enter the customs territory. The import customs procedure for customs declarations consists of:

i. Assessment of duty and tax then submission of the goods declaration by the clearing agent.
ii. Acceptance or rejection of goods declaration by the customs office.
iii. Checking the goods declaration against the documents produced (invoice, packing list, bill of loading, certificate of origin, bank permit, etc.).
iv. "Checking the goods declaration" as defined in the RKC as the action taken by customs to satisfy them that the goods declaration is correctly made out and that the supporting documents submitted fulfil the prescribed conditions (Verification).
v. Based on the risk level of the declaration, physical examination of the goods, if required to satisfy that the origin, country of export, nature, condition, quality, quantity etc. are in accordance with the information furnished in the goods declaration; if required Assessment and collection of duty and taxes, and
vi. Release of goods.
vii. The final/dispatched/ import customs declaration must be given to the NBE by any importer who has a foreign currency permit. In the future, this will be necessary in order to import (or export) items.

**Figure 2.1: Steps of how to import goods in Ethiopia**




Source (ERCA custom guide, 2017).

### 2.1.5. The role of Customs automation on cargo release time

Internet of thing (IoT) improves risk management, clearance operations efficiency, and analytics for customs authorities by gathering and analysing larger amounts of diverse data. IoT can lower manual procedures to boost security and lawful commerce, standardize processes for traders, connect creative solutions already put in place by customs authorities, and improve port efficiency by reducing loading and unloading times (WTO and WCO, 2022).The WCO's Revised Kyoto Convention's best practices for customs

administration, when combined with the use of ICT technology, can significantly lower these expenses and, in doing so, weaken the case for trade restrictions (Lewis, 2011).

According to Farhadi, Ismail, and Fooladi (2012), ICT is acknowledged as the primary factor propelling economic expansion in both developed and developing nations. A large numbers of trade-related other government entities started using ICT as the public grew acclimated to its use. A variety of these systems, such as import certificate application systems, were required to be used by members of the trading community.

The three ways that customs administrations look to improve and expand connectivity are: within the customs administration (such as through electronic devices like cargo tracking devices and customs clearance systems); between the customs ICT system and other national parties' ICT systems (like trade single windows, tax-customs data exchange, and port community systems); and between the customs administration and foreign partners (such as foreign customs administrations, chamber of commerce, quarantine).

The International Trade Centre (ITC) asserts that technology has significantly changed the character of international trade, particularly in light of the growth of e-commerce and the spread of digital technologies. In other words, ICT is crucial to trade and border efficiency.

Delays and expenses may arise from not being able to get precise and trustworthy information about import and export regulations or transportation needs. Conversely, automated customs processes will promote the adoption of ICT more widely, increase transparency in tariff collecting and other procedures, shorten clearing times, and boost production and efficiency. The use of ICTs in customs administration—such as e-port, online trade supervision, e-manual, single window systems, and paperless customs clearing (eCMS) makes customs procedures faster and customs management more effective.

Benefits of automation in customs system:

- ✓ Increased tariff revenue and other types of revenue;
- ✓ More accurate and timely foreign trade statistics by government;
- ✓ Improved transparency;
- ✓ Faster cargo release time; reduce physical inspection and etc.

According to Rhodalyn (2018), the use of a single window system lowers transaction times and the cost associated with clearing products. Similar to this, Sirika and Gizaw (2016) looked into the variables influencing the cost of customs clearance and found that the delay time significantly affects that cost. Once more, Rhodalyn (2018) demonstrated how the adoption of a single window system lowers transaction times and clearance costs.

### 2.1.6. Custom Automation in Ethiopia

#### 2.1.6.1. ASYCUDA in Ethiopia

As stated by Gidisu, (2012) Customs automation is frequently viewed as a tool that facilitates customs procedures in African nations like Ethiopia. However, ineffective use of customs automation is attributed to a number of factors, including unavailable system functionalities, a shortage of skilled and experienced customs officers, a lack of ICT infrastructure, and ineffective telecommunication network connections. Therefore, one of the main causes of the delays, expenses, and inefficiencies of customs procedures in order to facilitate international trade is the inadequate use of automated processes and information technology. The majority of IT systems employ ASYCUDA++ for custom automation, yet it is not suitable for applications of import customs procedures in transit and warehouse, which results in delays and excessive overhead expenses (Lemlem, 2018).

Teweldeberhan (2011) African nations like Ethiopia are unable to use ASYCUDA++ for efficient custom automation telecommunication network connections due to system functionalities not being available and a lack of electrical expertise. Consequently, one of the main causes of delays and expenses is inadequate technology. (Mengistu (2016) since custom automation is the primary goal of the WCO to modernize customs and the WTO to facilitate and standardize trade, custom automation is required in Ethiopia and cannot be chosen. As a result, the Ethiopian government adopted the ASYCUDA v-2 system in 1997. However, the system is ineffective and fails to meet its goals (Lemlem, 2018; Mesfin, 2017; Mengistu, 2016; Teweldeberhan, 2011; Gidisu, 2012), and the commission recommended either utilizing the system more efficiently or making changes. The commission was subsequently changed and replaced the ASYCUDA++ by eCMS.The customs management system was first introduced in Ethiopian in 2017 and functioned in a few Ethiopian customs office branches, including the Addis Ababa Airport branch, at the

beginning of 2018. By the middle of 2018, it was operational in all remaining branches. It was powerful Single Window Engine is implemented around the e-document concept by Trade World Manager, a new solution.

According to ERCA, this indicates that the system's interface and design were created with the goal of managing real-world documents in a way that is simple, adaptable, safe, and organized. It is also the most recent full-featured customs automation system that controls the whole customs procedure, handles all paper works, digital procedures in completely paperless environments and has particular pre-clearance modules.

### 2.2. Empirical studies on customs procedures and their effects on cargo release time

According to Hoffman et al. (Undated), cargo is classified according to customs regime and declaration plans, which allows customs, traders, and the port terminal operator to quantify their respective contributions to cargo time delays through parallel customs and ports operations. It was discovered that whereas terminal operator procedures are the main cause of delays in transit cargo, customs procedures account for the majority of delays in import cargo.The other study conducted by Dhakal and Jha (2020), how long it took to clear freight transport through customs at Birgunj customs areas, they discovered that freight vehicles were spending more time in the custom yard than in the actual processing unit. This indicates that there is a delay in between processes rather than in the actual processing unit, and the main causes of this are the owner's failure to clear the goods on time, which is caused by a lack of agents and an unseen syndicate within the freight transportation system.

According to Widdowson (2007), the following factors are the main contributors to delays in the clearance of goods from customs at international borders: the border regulating agencies' excessive document requirements; the minimal use of information technology combined with a low level of automation; the regulatory bodies of border management's unclear and nonspecific requirements for imports and exports; the ineffective customs procedure combined with an excessive amount of physical and documentary control; and the lack of cooperation and modernization among customs and other governmental agencies involved in the regulation of international goods.

Uzaman and Yosuf (2015), in its study regarding the challenges of border crossing trades identified the problem associated with training affects the operation of the customs. Training helps the customs officers and clearing agents to keep pace with the frequent change of the globalization and the increasing demands of border crossing traders to easily process internationally traded goods without compromising the goal of trade facilitation and control.

According to the research, the majority of WTO members have already implemented automated customs systems, and over time, financial benefits frequently exceed expenses. Considerable opportunity costs may arise from a failure to automate (OECD, 2017). Similarly, Widdowson et al. (2014) conducted an analysis of customs procedures and performance in several economies participating in the Asia-Pacific Economic Cooperation (APEC). According to his research, risk management techniques, automation, and electronic data interchange reduced cargo release delays and improved customs clearing efficiency.

An investigation conducted in 2011 by Grainger looked into the role customs brokers play in expediting cargo clearance and fostering trade in the Port of Felixstowe, UK. In large part because of the expertise and efficiency of customs brokers, it was discovered that faster cargo release times resulted from a quicker customs clearance process (Grainger, 2011).

The majority of nations still require some paper documentation, even if ICT improvements make it possible to eliminate the need for paper in official border operations. Legal obligations, such producing original documents or getting signatures from those in positions of authority, are frequently the cause of this. It can also have to do with the protocols needed for validation. Despite the requirement for paper copies to be submitted later, several nations accept electronic approval without paper evidence. Businesses and governments won't be able to save as much money if paper document restrictions are kept in place. Even in this case, paperless approval can save time and have major advantages (OECD, 2017).

For nations to increase the growth of e-commerce and enhance their economic performance, paperless customs systems must be developed. Customs departments can use

the international adoption of ICT to establish themselves as leaders in strategic development (Lewis, 2011).

Barka and Ncube (2019) investigated the impact of customs processes on Botswana's trade facilitation. Their research indicates that a number of issues, such as burdensome customs procedures, a lack of transparency, and poor stakeholder coordination, contribute to cargo clearance delays at the country's border checkpoints. The other study conducted by ChibiraG. (2021) is looking at the key components of customs procedures that are necessary for customs clearance based on studies on the logistics performance index conducted by the World Bank and initiatives aimed at making doing business easier. His research indicates that quick and efficient physical inspection, verification, and release time are essential for business and market competitiveness in customs clearance. Likewise, Chibira (2021) also noted that computerized customs management systems have significantly changed international trade, improved trade facilitation, reduced expenses, and increased operational efficiency in customs by automating and streamlining the customs procedure.

Tadesse and Addisu (2020) examined the challenges that faced by Ethiopian Customs Commission in implementing an electronic communication management system (eCMS). They stated that stakeholder resistance to change, inadequate infrastructure, and technological difficulties hindered the system's effective implementation. It's possible that the system made cargo release timings and customs processes more efficient.

According to Dhakal A. and Jha A. et al.'s (2021) analysis of the customs clearance processing time and analysis and factors affecting time for goods in Birgunj Nepal, the factors affecting the customs processing time are unseen syndicate in the freight transportation system, party not clearing the goods in time, and a shortage of licensed custom clearing agents.Sirika and Gizaw (2016) also looked into the variables that affect the cost of customs clearance and found that delay time has a big impact. He demonstrated how the adoption of a single window system lowers transaction times and clearance costs.

According to Vajiram& Ravi (2023), National Time Release Study (NTRS) 2023 conducted on the central board of indirect taxes and customs (CBIC), NTS is a performance is strategic and internationally recognized measurement tool for cargo release

time at the customs station. In addition, according to Chothai B. (2019), the time release study is a systemic and standard method to measure the average time taken to release cargoes from the time of arrival until the physical release of cargo and for each step or intervention in a border procedure.

According to WCO TRS reviewed by Chothai B. (9th Oct. 2019), TRS is specifically referenced in article 7.6 of the WTO trade facilitation agreement (TFA) as a tool for members to measure and publish the average release time of goods. Therefore it is important to measure and publish the average cargo release time in each Ethiopian customs branch offices and have standard national release time is important.

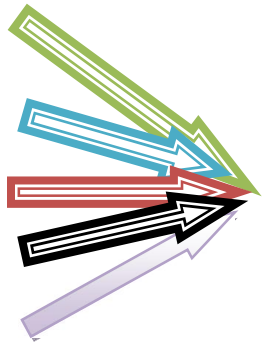
Thus, these empirical studies provide a solid basis for understanding the various elements that may impact the effectiveness of customs operations and their effects on cargo release times.

### 2.3. Conceptual Framework of the Study

The following conceptual framework is built based on existing literatures. The relationship between cargo release time and customs procedures was attempted to be shown in this model. It is revealed under figure 2.3 below.

***Figure: 2.2. Conceptual Framework of the Study***

**Independent Variables** **Dependent Variable**
**(Customs Procedures)** **(Cargo Release Time)**



***Source: Existing Literatures***

*Figure 2.2 above illustrates the conceptual framework that the researcher built in order to better comprehend the chosen research questions and the study's intended specific objectives. The framework was based on theoretical and empirical literature that already existed.*

## 2.4. Literature Gaps

According to World Bank's LPI 2023, while most time is spent in shipping, the biggest delays occur at seaports, airports, and multimodal facilities. Policies (for example; improving customs clearance processes and investing in infrastructure, adopting digital technologies) targeting these facilities can help improve reliability. Moreover, the commission for Africa in its 2005 report stated that, most developing countries in Africa including Ethiopia suffer from the highest average customs delays and cargo release delays in the world; Twelve days on average however Estoniaand Lithuania require only one day for customs clearance and Ethiopia averages 30 days as cited in the(Buyonge and Kireeva, 2008) world customs Journal Article. However, the journal article did not provide a detailed analysis of the specific customs procedures and their impact on cargo release time. For instance in the Ethiopian case, it did not indicatedwhat are the main factors or specific customs clearance activities that affect customs import clearance and this in turn the cargo release time. Even though, the nature of customs procedure can be changed through time, the study didn't clearly state the customs procedures and the system used by the customs administration at the time of the study, additionally, there is no recent empirical research related to factors affecting the cargo release time in Ethiopian context specially, the case of A.A.Airport customs branch office. By addressing this research gap, it is important to examine the main factors that affects the average cargo release time, the challenges of the existing customs management system and recommendations to streamline the cargo release time in stated customs branch. If the cargo processing time is long this indicates the customs authority is not equipped with competitivehuman and technological resources and is inefficient customs procedures, rules and regulation in customs process for clearance thisin turn, challenges the nation to compete in the international trade as well as increases the trade costs. Therefore, the purpose of this study was to examine import clearance procedure on cargo release time at A.A. airport customs branch office with activities of duty and tax assessment, document verification, physical examination, Risk management system, and electronic customs clearance and cargo release time as a dependent variable.

# CHAPTER THREE

# RESEARCH DESIGN AND METHODOLOGY

This section of the study covered issues with the research design, research methodology, data collection sources and techniques, validity and reliability, ethical considerations, and data analysis strategies used to answer the study's research questions and achieve its goals.

## 3.1. Research Design

According to Kothari (2004), a research design is the procedure that directs investigators in the gathering, evaluating, and interpretation of data. Descriptive research designs, for instance, are used in investigations that aim to characterize the traits of a certain person or group. The goal of this study is to determine how the current customs processes affect the time it takes for cargo to be released from the Addis Ababa international airport. The chosen study questions aim to define the impact of the current customs procedures on the cargo release time at a specific location. Therefore, explanatory research design is more appropriate and was used to answer these fundamental research issues.

## 3.2. Research Approach

Studies may utilize a hybrid strategy, a quantitative or qualitative research approach, or both, based on the empirical works that have already been published. A quantitative research approach uses inquiry strategies like surveys and experiments, and it gathers data with pre-made, standardized instruments that can produce useful statistical data. With a qualitative research approach, the researcher frequently bases knowledge claims on the various interpretations of individual experiences, meanings that are socially and historically constructed, involvement in issues, collaboration, or change-oriented approaches, all with the goal of creating a theory or pattern (J. Creswell, 2002). This study used both qualitative and quantitative research methodologies, taking into account the pertinent significance of gathering relevant data and its straightforward analysis.

## 3.3. Population, Sample Design and Sampling Techniques

### 3.3.1. Population

According to Eboh (2009), any object in any field of research or inquiry is considered as population. It is any group that the study has focused its attention to and has been chosen

as the approved subject of research work. This study's population consists of chosen customs clearing agents and cargo window employees from the Addis Ababa airport customs branch.Selective customs clearing agents and employees of the Addis Ababa airport customs branch office who work in the cargo area constitute the study's population.

There are 500 customs employees at the airport cargo window (HR report, 2015). In relation to this, 350 people, however, should be the proper target population for this study.In this case, back office and administrative employees were excluded from this target population. The researcher targeted to customs operation process owners, team leaders and senior customs. Additionally, the study has taken clearing agents who are permanently working at airport cargo as a population. For the purposes of this study,selective100 clearing agents were taken into account purposively. To get extra information, some clearing agents were selected and participated in interview questions.

### 3.3.2. Sample Design and Techniques

According to Kothari (2004), a sample design is a predetermined strategy for selecting a sample from a specific population. In selecting objects for the sample, the researcher employed a particular technique or procedure. Selection of more manageable and smaller units from a predetermined study population is known as sampling (ibid).

The study used a kind of probability sampling known as the simple random sample approach to give the questionnaires to the branch officers. Obtaining representative responders for the study was the justification for using this sampling strategy. This study excludes junior customs employees, back office employees and only takes into account senior or above and experienced employees (such as warehouse senior inspectors, senior assessors, senior examiners, some customer service senior officers, customs team leaders and process owners) in an effort to better comprehend the qualified respondents. In case of population of clearing agents, the study considered 100 clearing agents purposively.

### Sample Size

This study aimed to examine the effect of current customs processes on air cargo release time at the international airport in Addis Ababa. In order to do this analysis, the researcher attempted to select the largest sample size feasible from the entire population. The

researcher also conducted interviews with theprocess owners of the of the branch office, some selected carriers' employeesimport operations.

The Yamane (1967) formula, which is referenced in Jalu's (2014) work, was used in the study to compute the proper sample size.It is:

$n= N/ (1+N (e)^2)$, where n is the sample size, N is the population size, and e is the level of precision. By using this formula at 95% confidence level and 5% level of precision the following sample size is obtained.Therefore, the sample size for customs employees:

**$n=350/1+350(0.05)^2$, then, n=186.**

## 3.4. Datacollection instruments and Methods

In this study the researcher used both primary and secondary sources of data.For primary data the researcher was used semi-structured, self administered questionnaire for both quantitativeand qualitative aspect of the research methods. Further, for the qualitative aspects of the studymethods data was collected from in-depth interview of structured and semi-structured questions of 6interviewees from the branch offices' customs operation deputy manager, commercial import goods, non-commercial and export goods customs clearance process owners, Customer education and support process owner, Ethiopian Airlines and Emirate sky cargo Import cargo operation managers and some selected importers and clearing agents to get detailed and clarified information as they are decisionmakers in their respective organizations.

For gathering secondary data the researcher used the branch office's quarterly and annual reports, the eCMS database and also utilized both published and unpublished empirical works as a secondary source of data.

## 3.5. Method of Data Analysis

Examining how the current customs practice affects the clearance time at the Addis Ababa Airport customs branch office is the primary goal of the study. The study applied both statistical**descriptive and inferential** methods to analyze data from survey methods and

in-depth interview together with documentaryanalysis. Therefore in this study, Quantitative data from the questionnaires was analyzed usingdescriptive and inferential statistics, where as description analysis method was used for datacollection through interview and observation. The tools for data analysis and summary the researcher used both SPSS software version 23 and MS-Excel.The WCO and other international organizations' and national (Customer charter) standards were used to compare the current average cargo release time.

## 3.6. Model Specification

The goal of the study is to determine how current customs processes affect how quickly goods are released from the customs area. Time series data will be used in the study for this, and multiple regressions and correlations will be used as data analysis techniques. Thus, $Y_{it}= \alpha+\beta_1X_{1it} +\beta_2X_{2it} +\beta_3X_{3it}+ \beta_4X_{4it}+\varepsilon_{it}$ , where, Y-cargo release time, α- constant, $\beta_1$, $\beta_2$, $\beta_3$, $\beta_4$…. $\beta_n$ –intercepts and $X_1$, $X_2$, $X_3$…$X_n$ –independent variables and e-error term representing the unexplained variables.A helpful statistical technique for determining the contribution of independent factors to dependent variables is a multiple regression model. A measure of the overall contribution of the explanatory factors to the dependent variable, the coefficient of determination is produced statistically.

## 3.7. Ethical considerations

Important ethical concerns were taken into account in this study, including data protection, privacy, and confidentiality, as well as the employees' and other relevant parties' voluntary participation. The researcher has made an effort to reduce participant risk and discomfort resulting from the aforementioned concerns since the study's inception.The researcher obtained authorization from the branch office management to conduct the research with branch employees and management members prior to conducting the questionnaires and interviews. Also, the clearing agents union was asked to provide the questionnaires.

### 3.8. Validity and Reliability of the Research

#### 3.8.1. Validity

A crucial and practical idea in all types of research methods is validity. Its main goal is to raise the confidence in a study's results by reducing or controlling as many confounding

variables as possible. This increases the accuracy and usefulness of the findings. Interactions between a wide range of extraneous factors that can confound a study and lower the accuracy of its conclusions are controlled for and minimized by four distinct types of validity (internal validity, external validity, construct validity, and statistical conclusion validity)(Marczyk, 2005).

The goal of research is to decrease measurement error at all times. When the variables measure and reflect the notion in an exact and consistent manner, this inaccuracy is decreased. According to Hair et al. (2007), consistency is related to reliability, and accuracy is related to validity. Validity is the degree to which a construct measures what it is meant to measure (Hair et al., 2007).

### 3.8.2. Reliability

The degree of consistency or dependability in a measure of a construct is called reliability. Stated otherwise, does the scale yield essentially consistent results when measuring the same construct repeatedly, given that the underlying phenomenon remains constant? Having someone estimate your weight is an example of an erroneous measurement. The "guessing" method of measurement is unreliable since it is likely that different people would guess differently and that the various measures will be inconsistent. A weight scale might be the most accurate tool for obtaining a more accurate measurement since, barring a real change in your weight between readings; you should always get the same result when you step on it (Battacherjee, 2012).

Survey instruments can be deemed reliable if they produce consistent scores when used repeatedly, as per Hair et al. (2007), as referenced in Nili (2010)'s study. Regarding the consistency of the research findings, reliability is the term used. A trustworthy measurement instrument was used in this study to assess the variables' reliability.

**Table 3.1: Reliability Test**

Item-Total Statistics

| | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Squared Multiple Correlation | Cronbach's Alpha if Item Deleted |
|---|---|---|---|---|---|
| ASSESSMENT | 73.09 | 114.380 | .175 | .847 | .792 |

| | | | | | |
|---|---|---|---|---|---|
| ASSESSMENT | 72.95 | 113.073 | .234 | .948 | .789 |
| ASSESSMENT | 73.00 | 112.525 | .269 | .913 | .788 |
| ASSESSMENT | 72.98 | 107.699 | .461 | .639 | .778 |
| VERFICATION | 73.02 | 108.374 | .463 | .904 | .778 |
| VERFICATION | 73.12 | 109.185 | .404 | .823 | .781 |
| VERFICATION | 72.88 | 111.260 | .326 | .916 | .785 |
| VERFICATION | 72.43 | 110.798 | .364 | .750 | .783 |
| PHYSICAL EXAM | 72.25 | 110.888 | .286 | .765 | .787 |
| PHYSICAL EXAM | 72.30 | 113.436 | .236 | .769 | .789 |
| PHYSICAL EXAM | 73.52 | 113.978 | .201 | .660 | .791 |
| PHYSICAL EXAM | 73.41 | 114.119 | .223 | .675 | .789 |
| RISK MGMT SYSTEM | 73.07 | 113.644 | .209 | .616 | .791 |
| RISK MGMT SYSTEM | 73.30 | 110.911 | .343 | .725 | .784 |
| RISK MGMT SYSTEM | 73.17 | 111.320 | .298 | .800 | .786 |
| RISK MGMT SYSTEM | 72.89 | 109.125 | .424 | .777 | .780 |
| RISK MGMT SYSTEM | 72.83 | 111.745 | .290 | .740 | .787 |
| CHALLENGE of eCMS | 72.98 | 111.924 | .292 | .940 | .787 |
| CHALLENGE of eCMS | 73.11 | 112.900 | .252 | .921 | .788 |
| CHALLENGE of eCMS | 72.91 | 108.355 | .455 | .573 | .778 |
| CHALLENGE of eCMS | 73.19 | 107.828 | .531 | .902 | .775 |
| CHALLENGE of eCMS | 72.86 | 111.119 | .325 | .737 | .785 |
| RELEASE TIME | 72.99 | 110.962 | .345 | .917 | .784 |
| RELEASE TIME | 73.41 | 114.294 | .233 | .383 | .789 |
| RELEASE TIME | 72.52 | 110.103 | .315 | .636 | .786 |
| RELEASE TIME | 72.75 | 111.588 | .299 | .641 | .786 |

Source: SPSS Result, 2024

According to Sekaran (2005), the minimum and acceptable standard of Cronbach'sAlpha number is 0.6. With this reference, the above reliability tests for items are accepted in the study.

## CHAPTER FOUR

## RERSULTS, DATA ANALYSIS AND INTERPRETATION

The main aim of this study was to investigate the effect of existing customs procedures on cargo release time in the case of Addis Ababa Airport Customs Branch Office.This chapter

included the findings from the data analysis that was done. As a result, the examination of the response rates from employees and customs clearing agents, as well as the background data and survey findings regarding the research region, were included in the current chapter.

### 4.1. Response Rate for customs employees and customs clearing agents

This subsection's analysis and presentation of the response rate data from the disseminated and collected questionnaires is shown in table 4.1 below.

**Table: 4.1: Response Rate**

| No | Respondents | Total Distributed | Total Received | Total Deleted | Total Uncollected | Total Usable |
|---|---|---|---|---|---|---|
| 1 | Employees | 186 | 147 | - | 39(21%) | 147 (79%) |
| 2 | Clearing agents | 100 | 81 | - | 19% | 81 (81%) |

***Source: Field Survey Result, 2024***

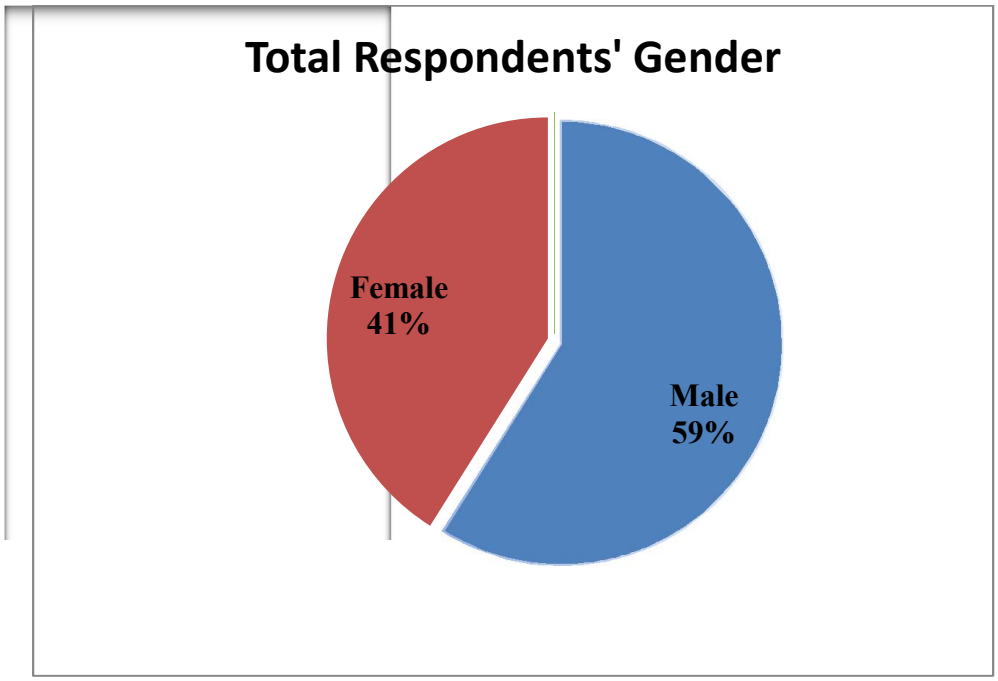
Table 4.1 above shows that from the total distributed 186 questionnaires to the customs employees, 147(79%) of the questionnaires that distributed to branch office customs employees were correctly completed and returned, according to the survey results.The non-response rate, however, is 39 (21%). The table also shown that from the total distributed 100 questionnaires to the clearing agent 81(81%) of them correctly filled as per the questions raised on the questionnaire and collected them, the remaining 19(19%) of the questionnaire not collected. Furthermore, the data obtained by the researcher revealed that the opinions of the respondents on customs processes and their impact on cargo release time were practically identical to each other. As a result, the data analysis for the customs employees acknowledged a response rate of 79% and clearing agents 81%.

### 4.2: Demographic Background Details of Employee and clearing agent respondents

Background data about the employees of the Addis Ababa Airport Customs Branch Office and clearing agents in Addis Ababa Airport cargo window was provided in this section, including their demographics. The gender, age, marital status, educational background, and

employment position of the branch office employees were all analysed in this examination of their demographic background information.

**Chart 4.1: Gender of both Customs employees and clearing agent's respondents**




***Source: Survey Result, 2024***

The sex distribution of the total respondents was displayed in the survey results, as seen in chart 4.1 above. From the total 228 respondents of employee and clearing agents, 41%them was female and 59% male, as the chart illustrates. By chance more male respondents participated in this research study, as this survey's results showed.

**Table 4.2.The profile of the customs employees and customs clearing agents**

| | Customs employees | | Clearing agent | |
|---|---|---|---|---|
| | Frequency | Percentage (%) | Frequency | Percentage (%) |
| **Age range in year** | | | | |
| <25 | 8 | 5% | 7 | 9% |
| 25-34 | 47 | 32% | 23 | 29% |
| 35-44 | 46 | 31% | 13 | 16% |
| 45-54 | 41 | 28% | 20 | 24% |
| >=55 | 5 | 3% | 18 | 22% |
| **Total** | **147** | **100%** | **81** | **100 %** |
| **Gender** | | | | |
| Male | 81 | 55% | 53 | 66% |
| Female | 66 | 45% | 28 | 34% |
| **Total** | **147** | **100** | **81** | **100%** |
| **Educational level** | | | | |
| Certificate | 2 | 1% | 4 | 5% |
| Diploma | 7 | 5% | 11 | 13% |
| BA/BSC Degree | 89 | 61% | 54 | 66% |
| MA/MSC/ degree | 47 | 32% | 10 | 13% |
| Other | 2 | 1% | 2 | 3% |
| **Total** | **147** | **100%** | **81** | **100%** |
| **Experience on the work (in years)** | | | | |
| <1 year | 5 | 3% | 2 | 3% |
| 1-2 year | 36 | 25% | 13 | 16% |
| 3-5 year | 41 | 28% | 17 | 21% |
| 6-10 year | 48 | 33% | 29 | 35% |
| >=11 year | 17 | 11% | 20 | 25% |
| **Total** | **147** | **100%** | **81** | **100%** |
| **Work Position** | | | | |
| General Manager | | | 3 | 4% |
| Deputy Manager | | | 1 | 1% |
| Process Owner | 5 | 3% | --------- | ---------- |
| Team Leader | 10 | 7% | 52 | 65% |
| Senior Expert | 81 | 55% | 19 | 23% |
| Junior Expert | 46 | 32% | 6 | 7% |
| Other | 5 | 3% | ---------- | ---------- |
| **Total** | **147** | **100%** | **81** | **100%** |

***Source: Field Survey Result, 2024***

According to table 4.2 above, the customs employees the age group of 25–34 years old 47 (32%) of the total respondents. Conversely, 8 (5% of the sample) belong to the age group under 25. Similarly, 46 responders (or 31%) were within the 35 to 44 year old age range. In the 45–54 age range, 41 (28%) of the respondents. Furthermore, only 5 (or 3% of respondents) belong to the 55+ age category. The majority of employees, according to the survey results, are found to be at their young age. Workers at this age are highly skilled and energetic in their jobs. In the case of educational background the branch office 7 (or 5 %) of the respondents hold a diploma, the majority of responders 89 (61%) had a bachelor's degree, 47 (32%) have an MA (MSC) degree, 2(1 %) of the responders possess certificate and the remaining 2(1%) holds other type of educational level. A according to the survey result a higher percentage of employees had superior educational backgrounds; and this suggests that workers are capable of handling their work with greater accountability and excellence. Regarding respondents work experience, 48 (33%) of the respondents had worked for the commission for 6-10 years, 41 (28%) for 3-5 years, 36 (25%) for 1-2, and 17 (11%) more than eleven years or more work experiences. In addition, the employees work position and according to the survey 81 (55%) of the respondents are senior officers. Similarly, 46(32%) of the responders are officers, 10(7%) are customs clearance operation team leaders, and 5(3%) are in other level (some junior officers chosen for their exceptional work). The remaining respondents are process owners from customs operations 5 (3%) took part in this study. This implies the branch office has an advantage of knowledgeable and proficient young and energetic employees with good educational background and well experienced employees.

The table 4.2 also illustrated the customs clearing agents profile and it implies that the majority of the customs clearing agent respondents were well experienced and most of them have senior level positions. In addition, most of them are young and have a lot of knowledge about the customs procedures. That’s the reason why the customs clearing agents are important for this study.

The table result suggested that a large number of employees in the branch had more positive experiences with customs job. In this instance, merely possessing advanced degrees from universities is insufficient to deliver high-quality services at work. In order to improve the quality of customs service in the branch, it is therefore preferable to provide

incentives to these branches workers.Therefore, if the branch properly uses and manage the human resources, it can achieve its objectives and mission

## 4.3. Survey Results and Analysis for customs employees

The survey results are examined and presented appropriately under this sub section and the next ones. After then, each section's discussion and interpretation of the copies of the questions that had been disseminated and correctly returned took place. This analysis involved evaluating several aspects of cargo release times, customs procedures, and other associated difficulties. Finally, the study attempted to evaluate the impact of current customs processes on the cargo release time using regression analysis.

Customs procedures are primarily designed to assist the organization in achieving its goals and objectives. This was taken into consideration throughout the discussion and interpretation of the issues surrounding customs processes and their impact on cargo release time. The responses obtained from customs clearing agents and branch office staff via Likert scale measurement was applied suitably for this. The figures in this instance are: 1 for strongly disagree, 2 for disagree, 3 for neutral, 4 for agree, and 5 for highly agree. As a result, the following tables provide an analysis of the employee replies that indicated the degree of agreement.

### 4.3.1. Descriptive Analysis

In this section, the responses for the questions related with existing customs procedures were discussed with descriptive analysis. So under this section, the responses from the employee respondents are discussed and presented as follows. The analysis of the current section focused on questions under customs procedures and cargo time.

For the sake of simplicity of the analysis, the responses of the respondents for the variables indicated below were rated under five point Likert scale with: 1-strongly disagree; 2-disagree; 3-indifferent; 4-agree; 5-strongly agree.

**A. Assessment items analysis**

**Table 4.3: Manifest Information Transfer Time**

**The shipper notifies the cargo manifest information before the arrival of the aircraft.**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | strongly disagree | 8 | 5.4 | 5.4 | 5.4 |
| | disagree | 65 | 44.2 | 44.2 | 49.7 |
| | indifferent | 25 | 17.0 | 17.0 | 66.7 |
| | agree | 44 | 29.9 | 29.9 | 96.6 |
| | strongly agree | 5 | 3.4 | 3.4 | 100.0 |
| | Total | 147 | 100.0 | 100.0 | |

***Source: Field Survey, 2024***

Table 4.3 above demonstrated that customs requires manifest information prior to aircraft arrival in order to facilitate cargo release and carry out enforcement activities. As can be seen from the table, 65 (44%) of the respondents disagreed with the carrier's notice or registration of manifest information, claiming that no manifest information was transferred or registered prior to the aircraft's arrival. Some open-ended responses stated that occasionally, once the importer submits his request to retrieve the goods, certain information from the cargo manifest was registered.Conversely, the carrier has not yet registered the cargo manifest for the export consignment.Similarly, the survey's results indicate that 25 respondents, or 17%, had no opinion on the topic. They were unsure if the carrier's effective manifest information registration procedure was in place at the branch office. However, 44 (or 30%) of the respondents concurred and stated that the manifest information was successfully registered with the customs system. Similarly, 5 (3%), of the respondents, highly agreed and replied that the carrier has registered and transferred the cargo manifest information to the customs system prior to the aircraft's arrival.

The table 4.4 below shows that while 31 (21%) of the respondents agreed that the customs system did not permit changing certain manifest information after it was passed from the carrier, the remaining respondents disagreed. However, most respondents (67) or 46% of the total agreed and acknowledged that the customs system permits some modification of

manifest data after it has been sent from the carrier. Regarding the question, 32 (22%) of the respondents had no opinion. Furthermore, the customs system permits certain modifications (such as dummy manifest generation and cancellation) to manifest information, according to 13 (9%) of respondents.

**Table 4.4: Amendment of Manifest Information**

**The customs system allows some amendment after acceptance of the manifest information**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | strongly disagree | 4 | 2.7 | 2.7 | 2.7 |
| | disagree | 31 | 21.1 | 21.1 | 23.8 |
| | indifferent | 32 | 21.8 | 21.8 | 45.6 |
| | Agree | 67 | 45.6 | 45.6 | 91.2 |
| | Strongly agree | 13 | 8.8 | 8.8 | 100.0 |
| | Total | 147 | 100.0 | 100.0 | |

***Source: Field Survey Result, 2024***

However, once the manifest information has been submitted to customs, it should not be amended, under current international norms. Modifications to manifest information should not be permitted by the airline or the customs system. As a result, the carrier must register the manifest information after examining any differences between the cargo that actually arrived and what was manifested.

**Table 4.5: Online Submission of Customs Documents**

**The customs online procedure allows online submission of the customs declaration and other documents**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Strongly Disagree | 4 | 2.7 | 2.7 | 2.7 |
| | Disagree | 13 | 8.8 | 8.8 | 11.6 |
| | Indifferent | 26 | 17.7 | 17.7 | 29.3 |
| | Agree | 83 | 56.5 | 56.5 | 85.7 |
| | Strongly Agree | 21 | 14.3 | 14.3 | 100.0 |
| | Total | 147 | 100.0 | 100.0 | |

***Source: Field Survey Result, 2024***

As indicated by table 4.5 above, the majority of respondents (57%) gave the statement that the customs system permits the submission of customs paperwork via an internet system a good reaction. It was also strongly agreed upon by 21 (14%) of the respondents that the online system for customs document filing is permitted by the system. But, 13 (8%) of the respondents said that the online system for submitting customs paperwork is not supported by the customs system. 18%, or 26 people, had no opinion on the matter. The percentage of 71% indicates that the online submission of customs documents for the purpose of customs clearance is permitted by the customs system.

**Table 4.6: Amendment and Cancellation Process of Customs Declaration**

**There is amendment and cancellation service before acceptance of the declaration if there is a case.**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Strongly Disagree | 7 | 4.8 | 4.8 | 4.8 |
| | Disagree | 21 | 14.3 | 14.3 | 19.0 |
| | Indifferent | 24 | 16.3 | 16.3 | 35.4 |
| | Agree | 84 | 57.1 | 57.1 | 92.5 |
| | Strongly Agree | 11 | 7.5 | 7.5 | 100.0 |
| | Total | 147 | 100.0 | 100.0 | |

***Source: Field Survey Result, 2024***

According to table 4.6 above, the majority of respondents (57%) agreed with the assertion that customs has a process in place that permits experts to change or cancel a declaration in the event of a case. Additionally, 11 (8%) of the respondents firmly agreed that customs had a process in place that enables specialists to change or cancel the declaration in the event of a dispute. Nevertheless, 21 (14%) of the respondents said that the customs system does not permit the cancellation or modification of the customs declaration. Additionally a total of 7 (5%), or the respondents, strongly disagreed that the declaration could be amended or cancelled after it was submitted. There were 24 (or 16%) responders who had no opinion on the matter. This result (65%) demonstrates that the customs system permits modification and cancellation services prior to approving a request for clearance for a declaration that the clearing agency has submitted. The clearing agent's request must only be made through the online system.

## B. Verification Items Analysis

**Table 4.7: About Customs Valuation System**

**The Valuation method by customs bases the directives and mostly accepts the transaction value.**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Strongly Disagree | 8 | 5.4 | 5.4 | 5.4 |
| | Disagree | 62 | 42.2 | 42.2 | 47.6 |
| | Indifferent | 29 | 19.7 | 19.7 | 67.3 |
| | Agree | 42 | 28.6 | 28.6 | 95.9 |
| | Strongly Agree | 6 | 4.1 | 4.1 | 100.0 |
| | Total | 147 | 100.0 | 100.0 | |

***Source: Field Survey Result, 2024***

According to table 4.7 above, the majority of respondents (42%) disagree with the statement that the customs valuation system mostly accepts the transaction value supplied by the importer and rests its decision on the valuation directive. Furthermore, 8 (5%) of respondents strongly disagreed that the customs valuation system primarily accepts the transaction value and bases its appraisal on the directive. However, 42 (29%) of the respondents agreed that the customs valuation system mostly accepts the transaction value and is based on the valuation directive. Similarly, 6 (4%) of the respondents strongly agreed on the statement that the customs valuation system mostly accepts the transaction value and bases its valuation on the directive. However 29 respondents, or 20%, had no opinion. In general, this negative result (48%) shows that even if the customs valuation system bases valuation directive, because of experiencing under invoicing problem, the office mostly didn't accept the transaction value and most of the time the commission has its own valuation database abbreviated as ECVS database for referring the presented/assessed/ price amount.

**4.8:-Tariff Classification System**

**Checking the classified Tariff based on international standards and tariff classification rules.**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Strongly Disagree | 4 | 2.7 | 2.7 | 2.7 |
| | Disagree | 21 | 14.3 | 14.3 | 17.0 |
| | Indifferent | 25 | 17.0 | 17.0 | 34.0 |
| | Agree | 79 | 53.7 | 53.7 | 87.8 |
| | Strongly Agree | 18 | 12.2 | 12.2 | 100.0 |
| | Total | 147 | 100.0 | 100.0 | |

***Source: Field Survey Result, 2024***

According to table 4.8 above, the majority of respondents (54%) favours effective service delivery and agrees that customs' tariff classification system is based on international standards, harmonized systems, and tariff rules. Additionally, 18(12%) respondents firmly agreed that the tariff categorization system used by customs supports effective service delivery and is based on international standards, harmonized systems, and tariff rules. However, 21 (14%) of the respondents disagreed that the tariff classification method used by the branch is based on harmonized systems, international standards, or tariff regulations that promote effective service delivery.Likewise, 4 (3%), of the respondents, strongly disagreed that the system of customs tariff categorization supports effective service delivery and is based on international standards, harmonized systems, or tariff laws.For this question, 25(17%) of the respondents had no opinion. Overall, this encouraging finding (66%) indicates that the tariff classification system supports effective service delivery by supporting harmonized systems, international standards, and tariff regulations.

However, the majority of respondents (43%) said that other document screening by customs specialists forms the basis of the processes. Additionally, the majority of respondents (62%) stated that only specific cargo is the focus of the cargo verification or customs document. This is determined by how risky the cargo is.

### 4.9: Online Notifications of Customs Information

**There is Online notification of additional payment or other discrepancies (additional requests).**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Strongly Disagree | 8 | 5.4 | 5.4 | 5.4 |
| | Disagree | 22 | 15.0 | 15.0 | 20.4 |
| | Indifferent | 15 | 10.2 | 10.2 | 30.6 |
| | Agree | 67 | 45.6 | 45.6 | 76.2 |
| | Strongly Agree | 35 | 23.8 | 23.8 | 100.0 |
| | Total | 147 | 100.0 | 100.0 | |

***Source: Field Survey Result, 2024***

Table 4.9 above demonstrates that the majority of respondents (69%) gave a positive reaction to the statement that customs provides an online notification procedure for customs information (such as additional payment and other). Additionally, 30 (20%) of the respondents disagree with the statement that there process in place at customs that permits online dissemination of information for customers. On the other side 15 (10%) of the respondents had no opinion on this idea.

As evidenced by this result 102 (69%) of the respondents agreed with the statement that the customs system permits online notifications of any customs information.

### Table 4.10:- Cargo Releasing and Exit Process

**There is automated Customs release process or working on exit.**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Strongly Disagree | 3 | 2.0 | 2.0 | 2.0 |
| | Disagree | 20 | 13.6 | 13.6 | 15.6 |
| | Indifferent | 37 | 25.2 | 25.2 | 40.8 |
| | Agree | 64 | 43.5 | 43.5 | 84.4 |
| | Strongly Disagree | 23 | 15.6 | 15.6 | 100.0 |
| | Total | 147 | 100.0 | 100.0 | |

***Source: Field Survey Result, 2024***

The majority of responders (59%) of the respondents agreed with the statement, as indicated in table 4.10 above. The automation system releases the goods and automates the warehouse exit and customs release processes, as per the answer. There is an automated cargo release procedure at customs, according to 64 (44%) of the respondents. In disagreement with the statement, 14% of the participants were participated. Regarding the statement, 3(2%) of respondents strongly disagreed. Regarding this statement, 37(25%), expressed no opinion. The customs branch's automated cargo release and warehouse exit procedures enable faster cargo release times, as demonstrated by the result (59%).

As the table 4.11 below shows, majority of the respondents (48%) have positive responses to the statement that there is reasonable sampling methods of the cargo examination. According to this response, the customs sampling method for physical examination is not reasonable. However, 35% of the respondents said that there is reasonable sampling system for physical examination.12% of the respondents were strongly disagreed with the statement. Only 8%) of the respondents were indifferent for this question.

**C. Physical examination items analysis**

**Table 4.11:- Physical Examination Procedure**

**There is reasonable Sampling method of the cargo examinations.**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Strongly Disagree | 17 | 11.6 | 11.6 | 11.6 |
| | Disagree | 52 | 35.4 | 35.4 | 46.9 |
| | Indifferent | 12 | 8.2 | 8.2 | 55.1 |
| | Agree | 64 | 43.5 | 43.5 | 98.6 |
| | Strongly Agree | 2 | 1.4 | 1.4 | 100.0 |
| | Total | 147 | 100.0 | 100.0 | |

***Source: Field Survey Result, 2024***

This outcome demonstrates the irrationality of the cargo sampling system used for physical inspection. This implies that nearly all of the objects will be inspected. The cargo release time has been so impacted by this procedure. This notifies the office to follow the directive for the physical examination.

On the other hand, the customs online procedure obliged the customs experts to notify the physical examination time. In this regard, the research collects the data from the office. According to the majority (50%) of the respondents, there is no online notification of examination schedule for the customer. to know the examination, schedule; the customer shall come to the customs office in person. this result was also confirmed by the customer respondents and the clearing agents. Only 21(14%) of the respondents said the customs gave notification about physical examination schedule online.

Regarding physical inspection, 61 (42%) of the respondents disagreed with the claim that customs had knowledgeable and proficient inspectors. Of those surveyed, only 33 (or 22%) believed that customs has knowledgeable and proficient specialists for physical examinations. However, 33 respondents, or 22%, still have no opinion about the statement that was provided.

Based on these findings, the branch office should provide proper training to its goods examination specialists so that they can inspect the goods in an appropriate manner and provide accurate examination decisions in a timely manner.

**Table 4.12:- Notification of Examination Report**

**There is Online notification of Examination report to desk audit officer/Assessor/, importer and the clearing agent.**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Strongly Disagree | 9 | 6.1 | 6.1 | 6.1 |
| | Disagree | 37 | 25.2 | 25.2 | 31.3 |
| | Indifferent | 26 | 17.7 | 17.7 | 49.0 |
| | Agree | 70 | 47.6 | 47.6 | 96.6 |
| | Strongly Agree | 5 | 3.4 | 3.4 | 100.0 |
| | Total | 147 | 100.0 | 100.0 | |

***Source: Field Survey Result, 2024***

As indicated by table 4.12 above, 70 (48%) of the respondents said that following the test, the customs examination experts communicated the results via the online customs process to the customer and the office for further valuation and tariff verifications. Furthermore,

5(3%), or the respondents, strongly agreed the examination officers announce the reports by online.

However, 37 (25%) of the respondents said that the examination experts do not report the results for the customer and the office via the online customs process. Furthermore, 9(6.1%) of the respondents, strongly dispute that the reports generated by the online system had not been announced by the examination specialists. Still, 17(12%) of the respondents expressed no opinion about this statement.

Regarding the physical examination, 74 (50%) of the respondents indicated that there was insufficient communication between the customs office and warehouse owners. Even if there is communication between the two offices by system, it is underutilized. This process mostly affected the cargo release time in this branch office. Only 29(19%) of the respondents were agreed and said there effective communication between the two offices.

**D. Risk management system item analysis**

**Table 4.13:- Risk Level Selection System**

**There is properly implemented risk level selection system at clearance time or request clearance.**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Strongly Disagree | 13 | 8.8 | 8.8 | 8.8 |
| | Disagree | 25 | 17.0 | 17.0 | 25.9 |
| | Indifferent | 28 | 19.0 | 19.0 | 44.9 |
| | Agree | 74 | 50.3 | 50.3 | 95.2 |
| | Strongly Agree | 7 | 4.8 | 4.8 | 100.0 |
| | Total | 147 | 100.0 | 100.0 | |

***Source: Field Survey Result, 2024***

As can be seen from table 4.13 above, 74 (50%) of the respondents said that the risk level selection procedure has been applied correctly by customs. Additionally, 7(5%) of the respondents strongly agreed in their response that the risk level selection procedure has been applied correctly by customs. However, total of 38(26%) of the respondents stating that customs lacks a properly functioning risk level selection mechanism. Nonetheless, 28

respondents (19%) said they had no opinion about this remark. This outcome demonstrates that Customs has correctly implemented the risk level selection system into place.

According to the risk selection criteria related issue, 60 (40%) of the respondents said that the importer or exporter's degree of compliance is what the risk selection criteria grounds are based on. Additionally, 5(3%) of the respondents, strongly agreed that the importer or exporter's degree of compliance is referenced in the risk selection criteria. Even so, 27(18%) of the respondents expressed no opinion about this. However, 32% of the respondents disagreed with the assertion and claimed that the customer's compliance level is not taken into account by the risk selection method.

Regarding the risk management system, 94 (64%) of the respondents, indicated that the request clearance or declaration acceptance process and declaration assignment for the assessors have undertaken by the system (there is no manual intervention in this case). As stated by 15(10%) of the respondents, manual intervention is occasionally used for declaration re-assignment. Still, 26(18%) of the respondents expressed no opinion about this idea.

Therefore, the automated request clearance and declaration assignment of the customs system minimizes the cargo release time.

Furthermore, according to the risk based information flow (Offence Management), 58 (40%) of the respondents, the workplace has an effective information flow for risk profiling, 13(9%), of the participants expressed high agreement and stated that the office's information flow for risk profiling is efficient. 58 (40%) of the respondents disagreed and stating that there is insufficient information flow in the office to support risk profiling. Nonetheless, 33(22%) of the sample, expressed no opinion on this statement.

The branch gives careful consideration to the trader’s compliance profile (offence management) registration on the system since an effective trader's risk profile is crucial and the foundation of the risk management system.

## E. Analysis of Challenges items

**Table 4.14: Online Customs System and Electronic Information Exchange**

**The Online customs system ensures electronic information exchange with the clearing agents and other external users (e.g. transport authority, Banks).**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Strongly Disagree | 12 | 8.2 | 8.2 | 8.2 |
| | Disagree | 39 | 26.5 | 26.5 | 34.7 |
| | Indifferent | 35 | 23.8 | 23.8 | 58.5 |
| | Agree | 56 | 38.1 | 38.1 | 96.6 |
| | Strongly Agree | 5 | 3.4 | 3.4 | 100.0 |
| | Total | 147 | 100.0 | 100.0 | |

***Source: Field Survey Result, 2024***

As the table 4.14aboverevealed, 56(38%) of the respondents replied that the customs online system ensures the electronic information exchange with the clearing agent and transport authority. And also 2(3%) of the respondents replied and strongly agreed that customs online system ensures the electronic information exchange with customs clearing agents and the transport authority. However, 39(27%) of the respondents disagreed and replied that customs online system didn't ensures the electronic information exchange between customs and others stakeholders and the clearing agent. Also 12(8%) of the respondents strongly disagreed and said that customs online system didn't ensures the electronic information exchange between customs and others stakeholders and the clearing agent. However, still 35(24%) of the respondents were neutral in this statement. This result shows as the customs online system allows electronic information between the customs and the others especially transport authority.

The statement related to customs experts are familiar with the eCMSsystem, the majority of respondents, 70(48%) of the respondents said that, the customs specialists lack sufficient knowledge of the eCMS (the customs management system). The statement that experts are familiar with the system is only agreed upon by 33 (22%) of the respondents

Nevertheless, the majority of respondents 54(37%) felt that the customs system works extremely well to provide a quick import clearance procedure. Additionally, 87 (59%) of the respondents stated that there isn't a system interface connecting the single window system with eCMS. The existence of data sharing between the two systems has only been mentioned by 11 (8% of the respondents). Furthermore, 67(46%), said that customs and the carriers did not communicate well by the electronic customs management system.

Consequently, the delay in cargo release will occur due to ineffective customs specialists and ineffective communication between various systems within customs and carrier systems. Therefore, the Customs Commission must focus on employee skill development and completely integrate the Customs system with those of other stakeholders and Customs itself.

**F. Analysis of the cargo release time items**

**Table 4.15:- Customs Service Standard Time**

**Customs service is delivered with minimum standard time.**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Strongly Disagree | 10 | 6.8 | 6.8 | 6.8 |
| | Disagree | 82 | 55.8 | 55.8 | 62.6 |
| | Indifferent | 16 | 10.9 | 10.9 | 73.5 |
| | Agree | 34 | 23.1 | 23.1 | 96.6 |
| | Strongly Agree | 5 | 3.4 | 3.4 | 100.0 |
| | Total | 147 | 100.0 | 100.0 | |

***Source: Field Survey Result, 2024***

As the Table 4.15 above shows that 82 (56%) of the respondents answered negatively to the supplied statement (i.e. customs service is not delivered with minimum standard time). Additionally, 10(7%) of the respondents strongly disagreed with the statement, claiming that no service is provided within the standard time period. Of the respondents, 16(11%) have no opinion on the statement. However, 34(23%) of the respondents concurred, stating that the branch service is the basis for the given standard time. Moreover, 5(3%) of the respondents) strongly agreed that the branch should make an effort to provide its services within the standard time.

This result shows that although each customs process has a set time specified in the customs commission's customer charter, the actual service was not provided in the allotted time. Thus, the branch facilitates the delivery of customs services based on standard time and optimizes the customs procedures.

**Table 4.16:- customer satisfaction level**

**Customer satisfaction and loyalty has increased.**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Strongly Disagree | 5 | 3.4 | 3.4 | 3.4 |
| | Disagree | 36 | 24.5 | 24.5 | 27.9 |
| | Indifferent | 41 | 27.9 | 27.9 | 55.8 |
| | Agree | 48 | 32.7 | 32.7 | 88.4 |
| | Strongly Agree | 17 | 11.6 | 11.6 | 100.0 |
| | Total | 147 | 100.0 | 100.0 | |

***Source: Field Survey Result, 2024***

Table 4.16 above shows that 48 (33%) of the respondents gave the statement a positive reaction. Furthermore, 17(12%) of the respondents highly agreed, stating that the services provided in the specified branch office have satisfied customers. Of the respondents, 41 (28%) have no opinion on the statement. However, 36 (25%) of the respondents disagreed, stating that the branch's customers are not satisfied. Additionally, 5(3%) of the respondents strongly disagreed, claiming that the consumer was not satisfied with the branch service. Most of 65(45%) of the respondents response indicated that the branch's customers (customs employees as an internal customs to the branch) are more satisfied andloyal.

**Table 4.17 Quality Service**

**There is quality service deliverance in the branch.**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Strongly Disagree | 8 | 5.4 | 5.4 | 5.4 |
| | Disagree | 65 | 44.2 | 44.2 | 49.7 |
| | Indifferent | 25 | 17.0 | 17.0 | 66.7 |
| | Agree | 44 | 29.9 | 29.9 | 96.6 |
| | Strongly Agree | 5 | 3.4 | 3.4 | 100.0 |
| | Total | 147 | 100.0 | 100.0 | |

***Source: Field Survey Result, 2024***

The table 4.17 above shows that 65 (44%) of the respondents did not agree with the statement that was provided. Furthermore, 8(5%) of the respondents, strongly disagreed, claiming that the branch office does not provide high-quality service, 25 (17%) them have no opinion. However, 44(30%) of them concurred and stated that the branch office has been providing high-quality services. Furthermore, 5(3%) of the respondents strongly agreed, stating that the branch service is appropriate for the particular client. As evidenced by the overwhelming result, branch office has given the quality service for its customer.

**Table 4.18: Efficiency of the Customs Procedure**

**Efficiency and revenue collection has increased.**

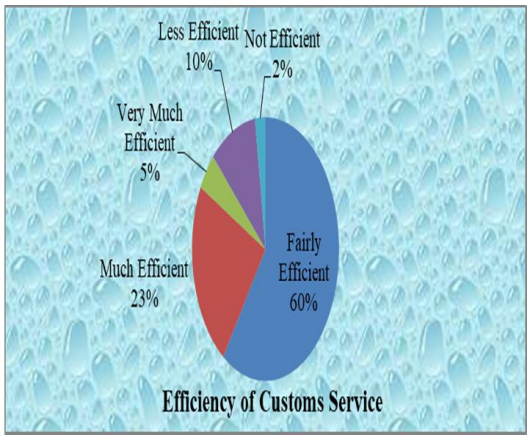
| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Strongly Disagree | 1 | .7 | .7 | .7 |
| | Disagree | 23 | 15.6 | 15.6 | 16.3 |
| | Indifferent | 32 | 21.8 | 21.8 | 38.1 |
| | Agree | 75 | 51.0 | 51.0 | 89.1 |
| | Strongly Agree | 16 | 10.9 | 10.9 | 100.0 |
| | Total | 147 | 100.0 | 100.0 | |

***Source: Field Survey Result, 2024***

Table 4.18 above illustrates that 75 (51%) of the staff said that the current customs procedure improve service efficiency at the specified branch office. 16 (11%) of the respondents likewise strongly agreed that the existing customs process delivered by the branch enhances the efficiency of the branch. However, 23(16%), responded negatively, claiming that the branch office's customs procedures were no longer effective. The respondents also mentioned that the branch office provides efficient service, with 16 (11%) of them explaining this. But 32 respondents, or 22% of them, remain neutral with the current process and the corresponding level of service efficiency. According to this outcome, the branch office's current customs procedures improve service efficiency.Therefore, this result suggested the branch office to keep these procedures and deliver service accordingly.

## Customs service efficiency (Rated by the Respondents)

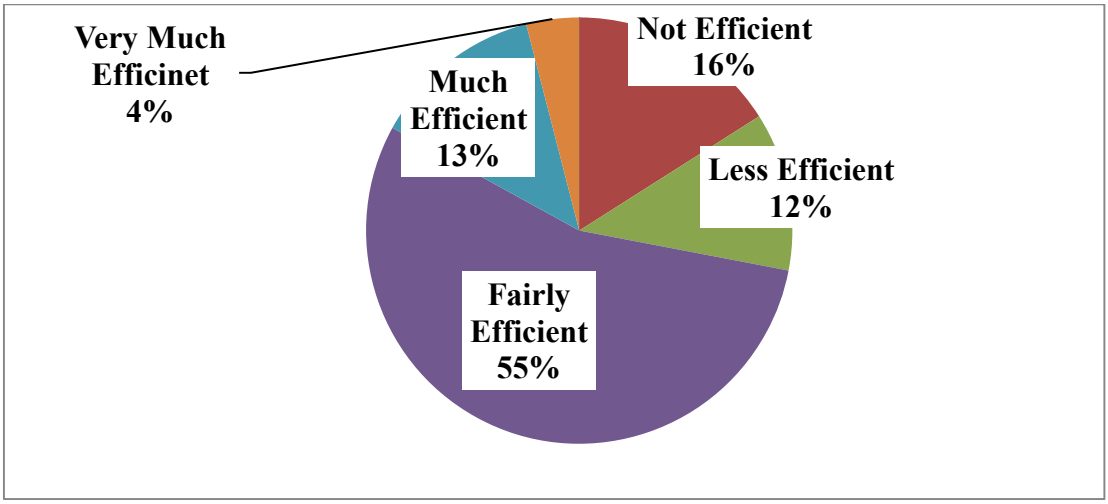
**Chart 4.2: Customs Service Efficiency evaluated by customs employee**




***Source: Field Survey Result, 2024***

As seen figure 4.2 above, from 147 customs employee respondents, 60% of the respondents thought the branch office's service was fairly efficient. Similarly, 23% of the participants expressed that the branch service is significantly more effective. Only 5% of respondents, however, rated the branch service as extremely effective. 11% of the participants reported that the branch office provides either low-quality or efficient service. This suggested that the staff members operating out of the branch office had been providing service with a reasonable level of efficiency.

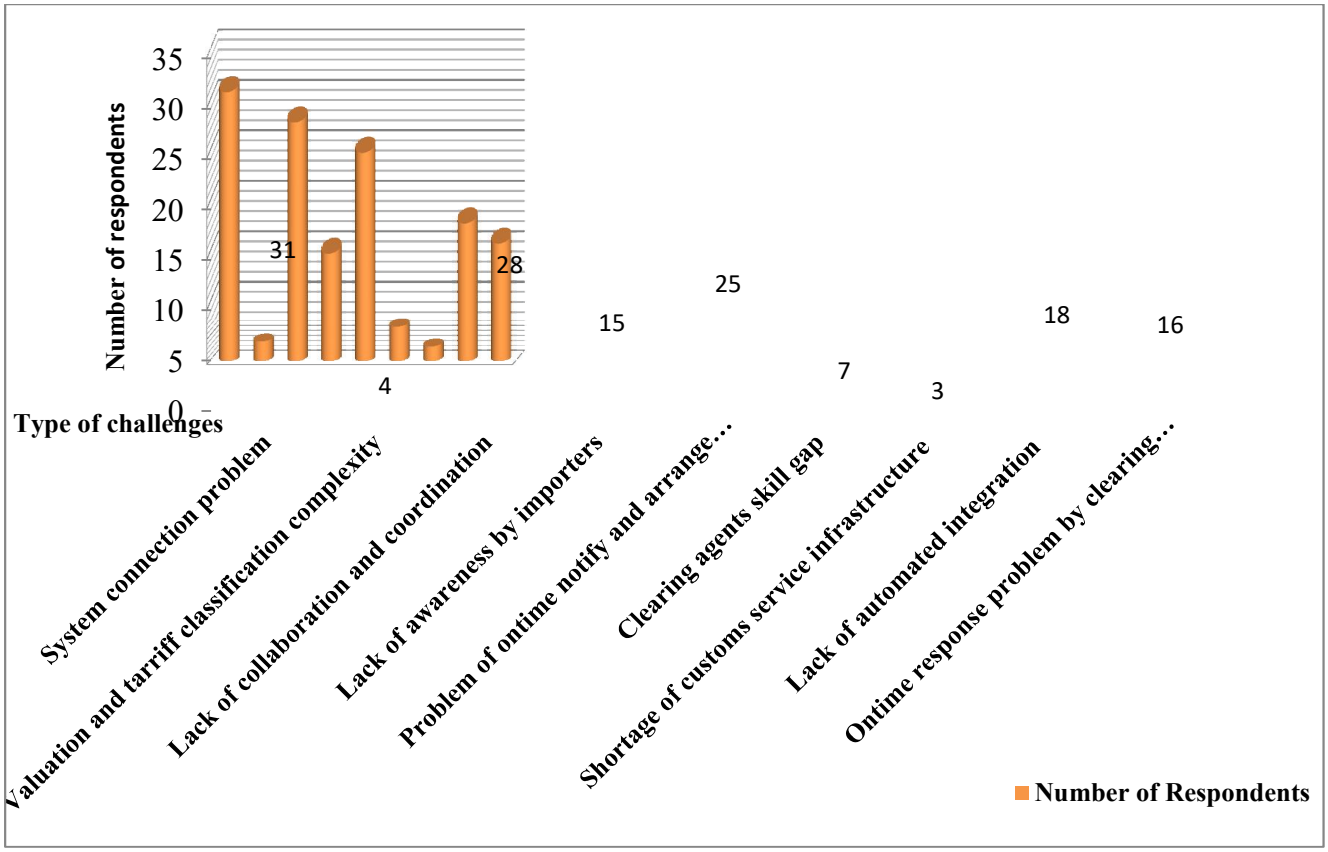
**Chart 4.3: Customs Service Efficiency evaluated by clearing agents**




***Source: Field Survey Result, 2024***

As seen figure 4.3 above, from 81 clearing agent respondents, 55% of the respondents thought the branch office's service was fairly efficient. Similarly, 13% of the participants expressed that the branch service is significantly much effective. Only 4% of respondents, however, rated the branch service as extremely effective. As 12% of the participants reported, the branch has low level of efficiency at its operation.

**Chart 4.4: Challengesof customs clearance prioritized by customs employees**

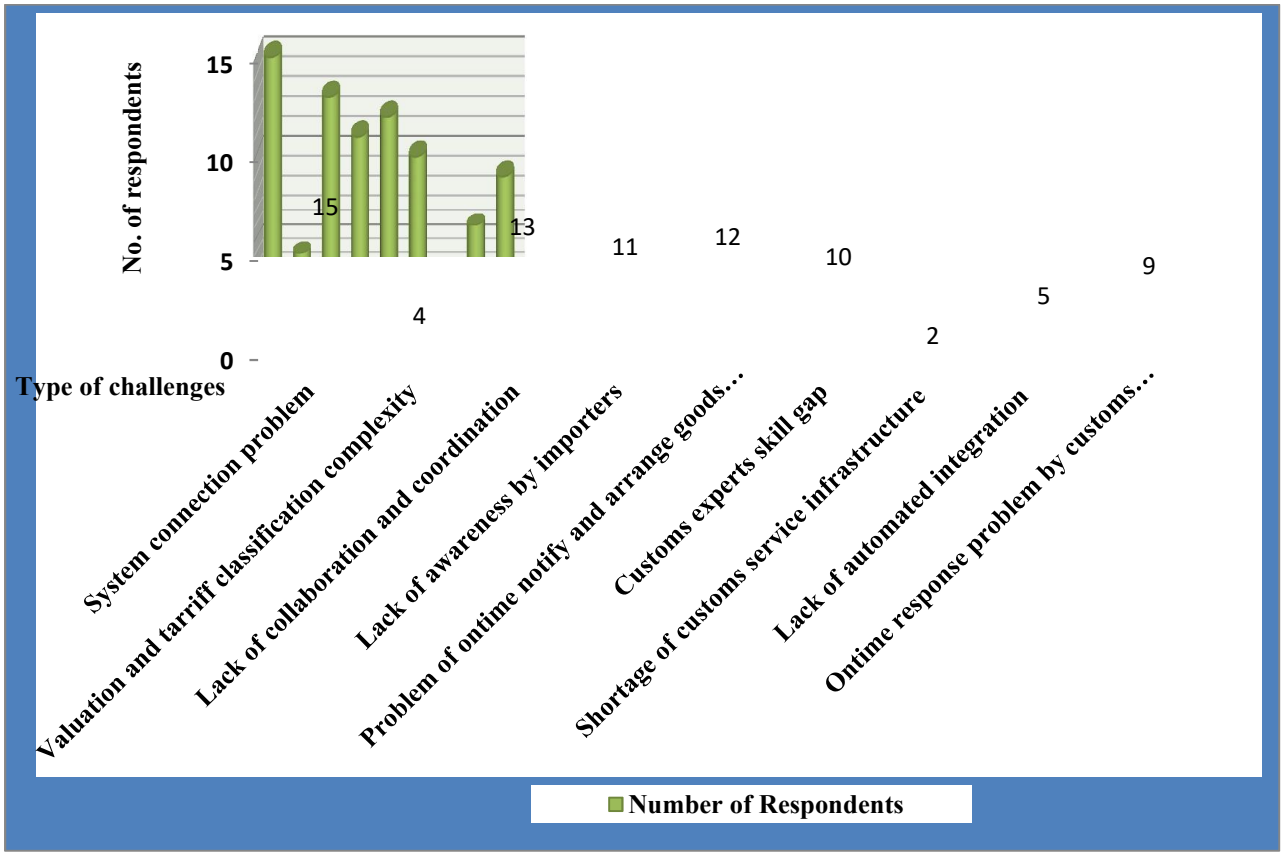



**Source: Survey Result, 2024**

The chart 4.4 above revealed that all respondents defined as all challenges mentioned above have their own negative effect on customs clearance. However, the majority (21%) of the respondents rated, the first and mostly affecting challenge is customs system connection failure. From the total respondents, as 19% of the respondents rated, lack of coordination & collaboration among the sections & stakeholders is the second challenge that affected clearance process. On the other hand, according to the majority respondents, complexity of valuation and tariff classification and shortage of infrastructure is least

challenge that affected the customs clearance. The other remaining challenges have moderate effects on the customs clearance time.According to these results, customs system problem or failure and coordination with its stakeholders are the major challenges that affected the customs cargo release time. This result indicated that customs to focus on system failures problem and coordination with stakeholders and among its departments which have a great role on customs clearance process. It shall also give attention for cooperation with its stakeholders which participate on the customs process.

**Chart 4.5:Challenges in customs clearance prioritized by customs clearing agents**




***Source: Survey Result, 2024***

As revealed in chart 4.5 above, as respondents all challenges mentioned have negative effect on customs clearance time. As majority (18%) of the respondents rated, the first and mostly affecting challenge is customs system connection failure. The second challenge that affects clearance time is lack of coordination and collaboration among the sections and stakeholders. On the other hand, according to these respondents shortage of infrastructure is least challenge

that affected the customs clearance. The other remaining challenges have moderate effects on the customs clearance time.In the same fashion,according to these responses, system problem and coordination with its stakeholders are the major challenges. This suggested that the customs to focus on system quality and coordination with stakeholders and also among its employees and working departments.

The descriptive analysis or mean and standard deviation values related with the existing customs procedures and its effect on the cargo release time were discussed and summarized in the table 4.19 below.

**Table 4.19: Mean and Standard Deviation for customs employees**

**Descriptive Statistics**

| | Mean | Std. Deviation | N |
|---|---|---|---|
| CRT_REG | 3.0561 | .53459 | 147 |
| ASSESS_REG | 3.3435 | .58316 | 147 |
| VER_REG | 3.3719 | .62088 | 147 |
| PHYE_REG | 2.8177 | .57047 | 147 |
| RMS_REG | 3.1769 | .62702 | 147 |
| CHAL_REG | 2.7361 | .58613 | 147 |

***Source: SPSS Result, 2024***

As shown the above table 4.19, The customs procedural variables, or independent variables, such as the challenge of eCMS variable, have a mean value of 2.74, the risk management system has a mean value of 3.17, the physical examination has a mean value of 2.81, the document verification has a mean value of 3.37, and the customs declaration assessment has a mean value of 3.34. Comparing the document verification variable to the other variables, the table indicates that its mean value is higher. Accordingly, even in cases when all independent factors influence the dependent variable, it is crucial to note that the verification variable with the larger mean value has a greater impact on the dwell time or duration time to the release of cargo. These high mean values revealed that the respondents have agreement level with the given variable. On the other hand, the low standard deviation values indicated that the stability of ideas on the given variable.

### 4.3.2. Inferential Analysis

The multiple regression analysis's findings are shown in this sub section. The goal is to observe how customs processes affect the amount of time it takes to release cargo. In order to do this, items relating to the existing customs procedure were transformed (via SPSS) into variables linked to the existing customs procedure and used as the independent variable for the regression analysis in this study. Conversely, the variables pertaining to the cargo release time component were also transformed (by using SPSS) into the dwell time variable for the purposes of this study.

#### 4.3.2.1. Pearson Correlations

A statistical tool used to assess the direction and strength of a relationship between two continuous variables is Pearson's correlation coefficient. Because of its dependence on covariance, it is thought to be the best technique for evaluating relationships. This coefficient shows the direction as well as the strength of the link.

As Pearson, the relationship between two variables is expressed by value within the range -1 to + 1which is called Pearson product moment. In case of a perfect relationship (positive linear relationship) the Pearson correlation value is +1 and -1 in inverse relationship or negative linear relationship between the variables.

Here, Pearson correlation test was conducted to know the degree of relationship between the dependent and independent variables explained in the above sections. To determine the relationship between dependent variable (cargo release time) and each independent variables such as declaration assessment, document verification, risk management system and challenge variable, the Pearson correlation was computed by the software called SPSS.

The correlations can be either positive or negative with its independent variables. The results indicated in the table 4.20 below show the correlation between the customs procedure variables and cargo dwell time. This is because the values of the Pearson correlation are failing within the range between negative one and positive one. In this case, all values are less than one and carry positive signs. This result indicated that there was positive relation between customs procedure and cargo release time or dwell time.

**Table 4.20: Correlations**

**Correlations**

| | | CRT_REG | ASSESS_REG | VER_REG | PHYE_REG | RMS_REG | CHAL_REG |
|---|---|---|---|---|---|---|---|
| Pearson Correlation | CRT_REG | 1.000 | .410 | .220 | .256 | .432 | .121 |
| | ASSESS_REG | .410 | 1.000 | -.160 | -.018 | .672 | .071 |
| | VER_REG | .220 | -.160 | 1.000 | .273 | -.153 | .504 |
| | PHYE_REG | .256 | -.018 | .273 | 1.000 | .088 | .095 |
| | RMS_REG | .432 | .672 | -.153 | .088 | 1.000 | .004 |
| | CHAL_REG | .121 | .071 | .504 | .095 | .004 | 1.000 |
| Sig. (1-tailed) | CRT_REG | . | <.001 | .004 | <.001 | <.001 | .072 |
| | ASSESS_REG | .000 | . | .027 | .413 | .000 | .197 |
| | VER_REG | .004 | .027 | . | .000 | .033 | .000 |
| | PHYE_REG | .001 | .413 | .000 | . | .145 | .126 |
| | RMS_REG | .000 | .000 | .033 | .145 | . | .481 |
| | CHAL_REG | .072 | .197 | .000 | .126 | .481 | . |
| N | CRT_REG | 147 | 147 | 147 | 147 | 147 | 147 |
| | ASSESS_REG | 147 | 147 | 147 | 147 | 147 | 147 |
| | VER_REG | 147 | 147 | 147 | 147 | 147 | 147 |
| | PHYE_REG | 147 | 147 | 147 | 147 | 147 | 147 |
| | RMS_REG | 147 | 147 | 147 | 147 | 147 | 147 |
| | CHAL_REG | 147 | 147 | 147 | 147 | 147 | 147 |

***Source: SPSS Result, 2024***

The table 4.20 above demonstrates the positive and high link, with a correlation coefficient value between 0.1 and 0.4, between characteristics pertaining to current customs procedures and cargo release time. This outcome showed a relationship between the independent factors linked to the current customs processes and the cargo release time.

### 4.3.2.2. Multiple Regression Analysis for customs employees

It is necessary to use statistical methods known as multiple regression analysis to predict how the independent factors will affect the dependent variables. It serves as a tool for forecasting and explaining how independent variables affect dependent variables. Therefore, the link between numerous independent variables and a single dependent variable is tested using multiple regression analysis. In this research, the dependent variable, cargo release time, and the independent variables, which are associated with the current customs procedures, are examined using multiple regression analysis.

As shown in the table 4.21below, R represents the correlation between the observed values and the predicted values of dependent values and the value of R produced by the regression procedure range from 0 to 1.The larger the value of R indicates that there is strong

relationship between the observed and predicted values. Hence, for this particular case the R value is 0.58. On the other hand, R Square is used to find out how well the predictor is able to predict the dependent variable. Accordingly, in our case, the independent variables which related with current customs procedures are able to predict the dependent variable called cargo release time by 33%.

**Table 4.21: Model Summary**

**Model Summary**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Change Statistics | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | R Square Change | F Change | df1 | df2 | Sig. F Change |
| 1 | .576[a] | .332 | .309 | .44451 | .332 | 14.034 | 5 | 141 | <.001 |

a. Predictors: (Constant), CHAL_REG, RMS_REG, PHYE_REG, VER_REG, ASSESS_REG

***Source: SPSS Result, 2024***

As the table 4.21 above shows the adjusted R Square gives more accurate information about the fitness of the model. Here, the adjusted R Square is 0.31indicating that, the predictor can predict 31% ($R^2$) of the variance in the dependent variable. In this case, this result indicated that the mentioned independent variables such as existing duty and tax assessment procedure, customs document verification; customs risk management physical examination procedures have strong impact on the dependent variable called cargo release time.

In relation to adjusted $R^2$ result, some empirical works accept such low adjusted $R^2$ when the explanatory variables are statistically significant with their own interpretations. For instance, the empirical work undertaken by Ozili, P. (2022) suggested to accept the low $R^2$ of 0.1 or 10% with considering on the condition that some or most of the predictors or explanatory variables are statistically significant. On the other side, according Brwon, A. (2021), the adjusted $R^2$ value could be low due to the presence of other contributing factors not accounted for in the model.In this case, except Challenge variable, the other four explanatory variables are statistically significant. Furthermore, the four important tests are correct for the given regression. Considering all these conditions, the above adjusted $R^2$ (31%) is accepted for this study

**Table 4.22: Coefficients of the independent Variables**

**Coefficients[a]**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | | |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | t | Sig. |
| 1 | (Constant) | .329 | .351 | | .938 | .350 |
| | ASSESS_REG | .256 | .087 | .279 | 2.953 | .004 |
| | VER_REG | .253 | .073 | .294 | 3.456 | <.001 |
| | PHYE_REG | .153 | .068 | .163 | 2.246 | .026 |
| | RMS_REG | .235 | .080 | .275 | 2.920 | .004 |
| | CHAL_REG | -.058 | .074 | -.064 | -.783 | .435 |

a. Dependent Variable: CRT_REG

***Source: SPSS Result, 2024***

Table 4.22 above reveals that, with the exception of one independent variable (i.e. challenges of eCMS), the p-values for the model illustrating the correlation between independent and dependent variables are less than 5% (0.00). This outcome demonstrated the statistical importance of the independent variables for the regression model. With the exception of the independent variable (challenges of eCMS), both the independent and dependent variables have positive beta values. The findings demonstrated that the dependent variable, cargo release time, was positively impacted by independent variables such as the current duty and tax assessment procedure, customs document verification procedure, customs risk management systems, and physical examination procedures.

### 4.3.2.3: Assumptions of Multiple Regression Analysis

According to Younis (2016), there are four main assumptions that may affect the statistical procedure which need to be tested for when running the multiple regression analysis. These are linearity between the dependent and independent variables, constant variance of the error terms, the error terms independence and normality of the error term distribution. Therefore, for above multiple regression analysis, the subsequent tests are carried out as follow.

## Variance Inflation Factor Test

The table 4.26 below shows the variance of inflation factor results under the regression analysis. It said that if the variance inflation factor values are between 1 and 10, there is no the problem of multicollinearity (Hair et al., 1995). As it is revealed in the mentioned table, the VIF number is not greater 10 or less than 1. Therefore, the above regression has no multicollinearity problem.

**Table 4.23: Multicollinearity Test**

**Coefficients[a]**

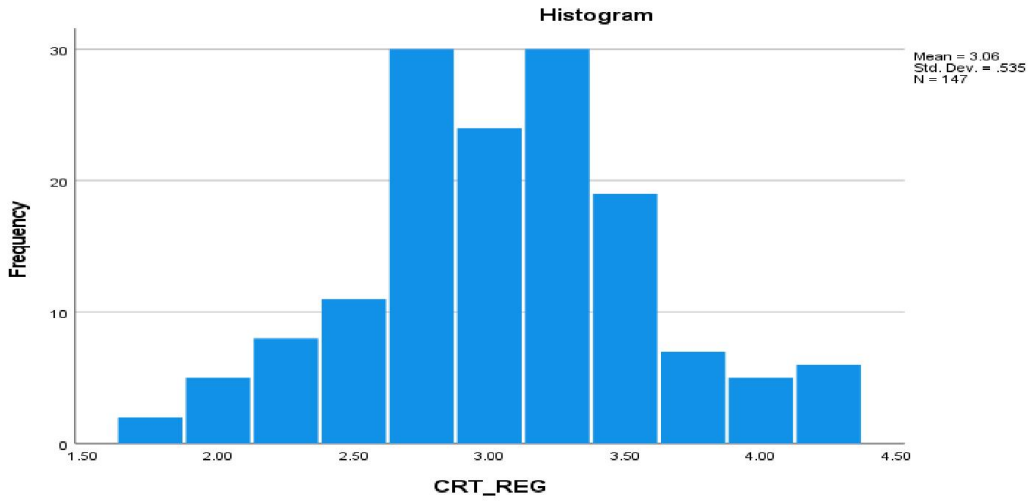
| Model | | Unstandardized Coefficients | | Standardized Coefficients | | | Collinearity Statistics | |
|---|---|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | t | Sig. | Tolerance | VIF |
| 1 | (Constant) | .329 | .351 | | .938 | .350 | | |
| | ASSESS_REG | .256 | .087 | .279 | 2.953 | .004 | .529 | 1.891 |
| | VER_REG | .253 | .073 | .294 | 3.456 | <.001 | .655 | 1.526 |
| | PHYE_REG | .153 | .068 | .163 | 2.246 | .026 | .899 | 1.112 |
| | RMS_REG | .235 | .080 | .275 | 2.920 | .004 | .532 | 1.879 |
| | CHAL_REG | -.058 | .074 | -.064 | -.783 | .435 | .720 | 1.389 |

a. Dependent Variable: CRT_REG

## Normality Test

In this case, when there is the bell shaped curve under multiple regression analysis, there is linearity between the dependent and independent variables. Thus, the residual plot in the histogram in chart 4.6 refers the relationship between the independent variables and the dependent variable. This clearly fulfils the normality assumption of linear regression.

**Chart 4.6:Normality Test**



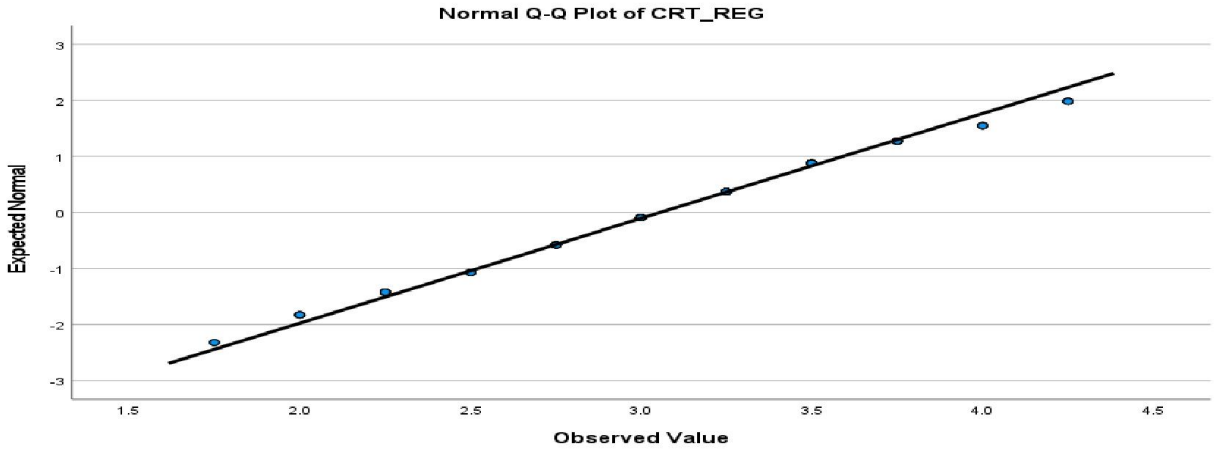

*Source: SPSS Result, 2024*

## Linearity Test

According to Younis (2016), when all the points are clustered around the line, the assumption of linearity can be achieved in the multiple regression analysis. As it was revealed in the chart

4.7,the points were clustered around the diagonal line. This indicated the existence of linearity in the given regression analysis.

**Chart 4.7:Linearity Test**

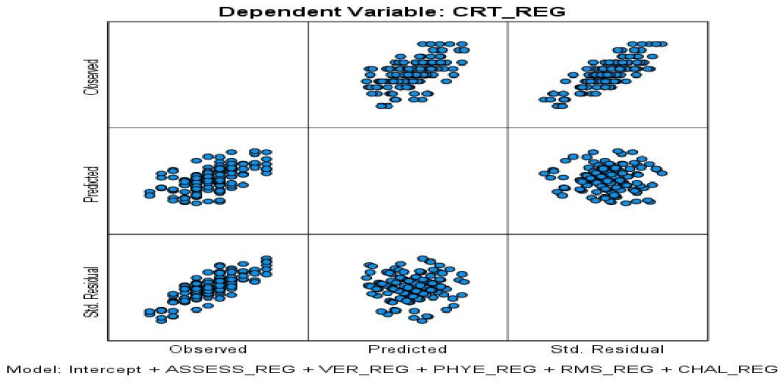



***Source: SPSS Result, 2024***

## Heteroscedasticity

In this case, if there is neither triangle nor diamond shaped but consistent scatterplot, the variance of the error terms is constant and no heteroscedasticity (Younis, 2016).In relation to this, as it shown in thechart 4.8 below, there is no triangle nor diamond shaped scatterplot of the dependent variable. This indicates the absence of heteroscedasticity.

**Chart 4.8: Heteroscedasticity Test**




***Source: SPSS Result, 2024***

## 4.4. Analysis of data collected from clearing agents

### 4.4.1. Regression Analysis for customs clearing Agent

In this section, the responses from the respondents so called customs clearing agent were analysed. The data collected from clearing agent was analysed with inferential data analysing method. In this case, the researcher believed that the results from this inferential analysis are reliable. The means that the regression analysis result could respond questions defined in the research work with referring the clearing agent.

**Correlations for Clearing Agent**

The correlations can be either positive or negative with its independent variables. The results indicated in the table 4.27 below show the correlation between the customs procedure variables and cargo dwell time. This is because the values of the Pearson correlation are failing within the range between negative one and positive one. In this case, all values are less than one and carry positive signs. This result indicated that there was positive relation between customs procedure variables and cargo release time or dwell time for clearing agents in Addis Ababa airport customs branch office.

**Table 4.24: Correlations for clearing agents**

**Correlations**

| | | RELEASE TIME | ASSESSMENT | VERFICATION | PHYSICAL EXAMINATION | RISK MANAGMENT | CHALLENGE |
|---|---|---|---|---|---|---|---|
| Pearson Correlation | RELEASE TIME | 1.000 | .432 | .205 | .128 | .241 | .513 |
| | ASSESSMENT | .432 | 1.000 | -.126 | -.001 | -.017 | -.161 |
| | VERFICATION | .205 | -.126 | 1.000 | .167 | .147 | .114 |
| | PHYSICAL EXAMINATION | .128 | -.001 | .167 | 1.000 | -.068 | .057 |
| | RISK MANAGMENT | .241 | -.017 | .147 | -.068 | 1.000 | .292 |
| | CHALLENGE | .513 | -.161 | .114 | .057 | .292 | 1.000 |
| Sig. (1-tailed) | RELEASE TIME | . | <.001 | .034 | .127 | .015 | <.001 |
| | ASSESSMENT | .000 | . | .131 | .497 | .441 | .075 |
| | VERFICATION | .034 | .131 | . | .068 | .095 | .156 |
| | PHYSICAL EXAMINATION | .127 | .497 | .068 | . | .272 | .307 |
| | RISK MANAGMENT | .015 | .441 | .095 | .272 | . | .004 |
| | CHALLENGE | .000 | .075 | .156 | .307 | .004 | . |
| N | RELEASE TIME | 81 | 81 | 81 | 81 | 81 | 81 |
| | ASSESSMENT | 81 | 81 | 81 | 81 | 81 | 81 |
| | VERFICATION | 81 | 81 | 81 | 81 | 81 | 81 |
| | PHYSICAL EXAMINATION | 81 | 81 | 81 | 81 | 81 | 81 |
| | RISK MANAGMENT | 81 | 81 | 81 | 81 | 81 | 81 |
| | CHALLENGE | 81 | 81 | 81 | 81 | 81 | 81 |

**Source: SPSS Result, 2024**

As shown in the table 4.24above, the correlation between variables related with existing customs procedures and cargo release time is positive and very strong with the correlation coefficient value between 0.1 and 0.4. This result indicated that the independent variables related with existing customs procedures are related with cargo release time.

On the other hand, in relation to model summary, the larger the value of R indicates that there is strong relationship between the observed and predicted values. Hence, for this particular case the R value is 0.76. Accordingly, in this case, the independent variables which related with customs procedures (in case of clearing agent) are able to predict the dependent variable called cargo release time by 56%.

**Table 4.25: Model Summary**

**Model Summary**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Change Statistics | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | R Square Change | F Change | df1 | df2 | Sig. F Change |
| 1 | .765[a] | .585 | .558 | .33100 | .585 | 21.181 | 5 | 75 | <.001 |

a. Predictors: (Constant), CHALLENGE, PHYSICAL EXAMINATION, ASSESSMENT, VERFICATION, RISK MANAGMENT

***Source: SPSS Result, 2024***

As the table 4.25 above shows the adjusted R Square gives more accurate information about the fitness of the model. Here, the adjusted R Square is 0.56 indicating that, the predictor can predict 56 % ($R^2$) of the variance in the dependent variable. In this case, this result indicated that the mentioned independent variables such as existing assessment procedure, customs document verification, examination, challenge variable and customs risk managementhave strong impact on the dependent variable called cargo release time.

**Table 4.26: Coefficients of the independent Variables**

**Coefficients[a]**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | .575 | .257 | | 2.238 | .028 |
| | ASSESSMENT | .297 | .041 | .547 | 7.208 | <.001 |
| | VERFICATION | .100 | .041 | .189 | 2.454 | .016 |
| | PHYSICAL EXAMINATION | .040 | .043 | .070 | .922 | .360 |
| | RISK MANAGMENT | .033 | .041 | .065 | .820 | .415 |
| | CHALLENGE | .329 | .047 | .557 | 7.036 | <.001 |

a. Dependent Variable: RELEASE TIME

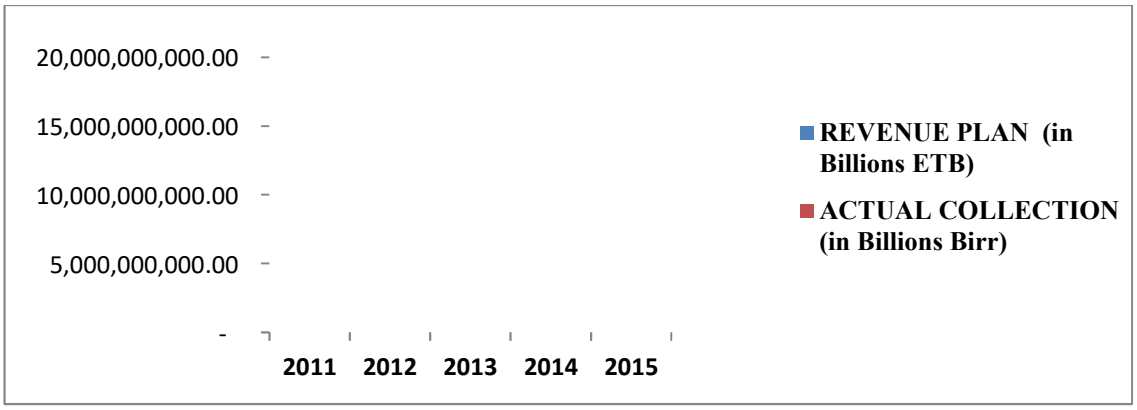
***Source: SPSS Result, 2024***

As it is revealed in the table 4.26 above, except examination and risk management variables the p-values for the model that shows the relationship between independent variables and dependent variables are less than five per cent (0.00). This result indicated the significance of the three independent variables for the regression model statistically. In addition, the Beta values for both independent and dependent variable are positive. These results showed the positive effect of independent variables such as existing assessment procedure (0.001), customs document verification (0.016) and challenge (0.001) on dependent variable called cargo release time. This suggests the mentioned customs branch office to focus on the variables such as assessment procedure, customs document verification andchallenges for clearing agent so that to improve the release time. However, the independent physical examination and risk management variables are significant variables for this model.

### 4.5. Secondary Data Analysis

In this section, the researcher discussed the data related with both average cargo release time and revenue collected by the branch office with in consecutive five years.

**Chart 4.9 : The branchRevenue Collection efficiency for 5 budget years**

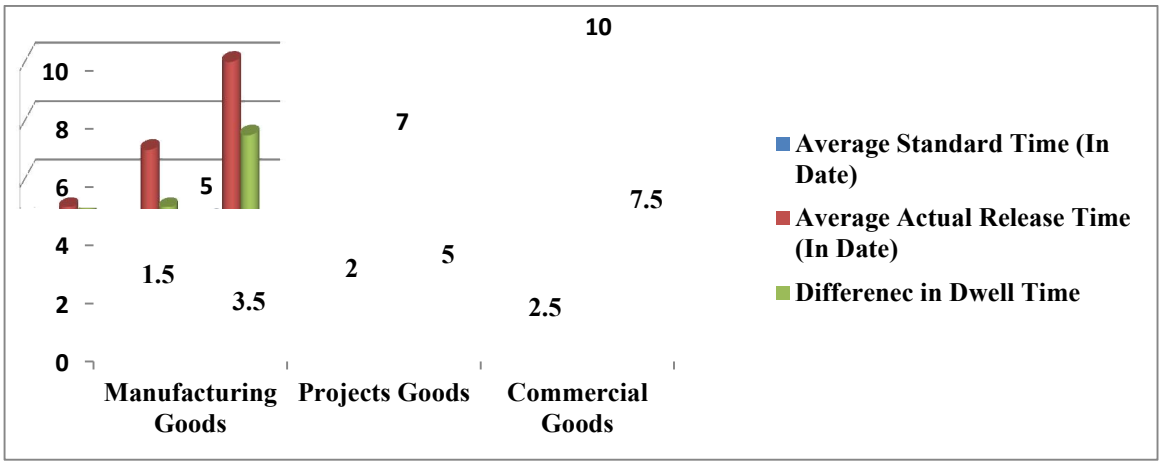



**Source: - Branch Revenue Collection Department, 2024**

As it is revealed in the chart 4.9above, except 2014(E.C) for consecutive four years the given branch office collected the revenue more than its plan of the year. In general, as it is explained in the chart, the branch office is effective in collecting better revenue amount against the plan. This may be because of improving its customs clearance procedures every time and giving fast service for the branch customer.

As it is revealed in the chart 4.10 below, from the sample 130 declarations in Addis Ababa Airport customs branch office illustrated that for all declarations the release time is above the standard time. However, according to the information from respondents, this cargo release time was also affected by not getting import permission on time from concerned other stakeholders and regulatory bodies. In general, there is a gap in delivering service within minimum standard time. This result indicated that the customs minimum standard time was affected by the regulatory bodies' decision and time standard. This in turn affected the cargo release time for import cargo in Addis Ababa airport customs branch.

**Chart 4.10:Average Cargo actual Release Time for some sample customs declarations**




Source: eCMS, 2024

**Table 4.27 Summarized Sample cargo dwell time report From June-December 2023**

| No | Risk Level | Total Number of Sample declarations | Standard Average Release time for <=10 items | Average Dwell time after the declaration submitted and accepted by customs | Aggregate Average Dwell time from the cargo arrival date |
|---|---|---|---|---|---|
| 1 | Red | 32 | 2 days | 20 days | 60 days |
| 2 | Yellow | 95 | 1.5 days | 22 days | 39.5 days |
| 3 | Green/ Blue | 33 | 3:00 hours | 8 days | 48 days |
| **Total** | | **160** | | | |

***Source: eCMS, 2024***

As from the table 4.27 Above illustrated although Ethiopian customs commission has Citizen charter and this charter Average standard time for each type of custom procedure based on the declaration's risk levels, however, as we seen from the table above the average dwell time for the Red risk level declarations takes up to 20 days, for Yellow risk level declarations takes the average dwell time of 22 days and Green/Blue risk level declaration the average time taken about 8 days. This implies the most of the declarations holds after the declaration submitted and accepted by the customs office then forward to the verification officers. The reason for waiting after acceptance can be lack of response by importers, clearing agents of the verification officer for additional information, unskilled customs officer, due to lack of workers can create pressure on some officers, absence of the regulatory body's import permit by the importer, due to duty paying price request to head quarter, due to lack of coordination and collaboration among parties in customs clearance due to complaints and disputes of the duty and tax, due to system failures, etc.

**Table 4.28: Customs Declarations Dispatching Efficiency(Sampled Declarations)**

| Budget year (In E.C.) | No. of declarations (import) | Number of dispatched Declarations | Declaration clearance efficiency % |
|---|---|---|---|
| **2012** | **68,421** | **62,152** | **91** |
| **2013** | **80,123** | **74,759** | **93** |
| **2014** | **92,100** | **82,330** | **89** |
| **2015** | **96,421** | **85,369** | **88** |

**Source: eCMS, 2024**

As table 4.28 above revealedfor the last four consecutive years, there is increase in the importation by air transport. Also the number of dispatched declarations also increased. However, the percentage of dispatched declarations was not constantlyincreasing. It shows variations for mentioned years. The main possible reasons for non-dispatched declarations can be due to some importers/clearing agents didn't provide complete information and documents with in a time. This means that still dwell time depends on the importers who have fulfilled the obligations defined in the laws on time. However, in general there is

some delay in dispatching the declaration for bank and Inland Revenue clearance purpose. Therefore, the branches shall give attention to enhance the declaration clearance efficiencybystreamlining the clearance processes starting from the assessment to exit stage.

## 4.6. Analysis of Open Ended and Interview Questions

In this sub section responses for interview questionnaires were analysed and presented as follows. The branch's customs operation manager and selected couriers' operation managers and some selected importers and exporters as well as customs clearing agents have been selected for this interview.

**Q1. How the existing customs procedure influences the cargo release time? Please specify.**

The interviewees answer, the current customs procedures ensured less release time. However, this can lead to delay in cargo release time if it couldn't be applied properly.The existing customs procedure improves online communication between stakeholders around the airport (like online manifest registration and submission through the carriers' cargo spot system and eCMS). However, if there is system failure, the branch has no plan-B for the customs clearance manually. This in turn unable to release the goods within standard time and incur additional warehouse dwell charges.

**Q2.What is the most common challenges related to customs clearance in this airport? Can you justify them?**

**As t**he interviewees replied the most common challenges were defined as follows:

- Lack of predictability and transparency in customs clearance process, these can lead to customs clearance delay and uncertainty.
- Frequent changes in customs rules and regulations can create confusion and leads to delay on customs clearance.
- Incomplete and inaccurate documents and declaration data submitted by the importer or by his/her clearing agent can lead to delay in clearance process.
- Lack of coordination and collaboration between customs and other stakeholders,
- Most of the customs experts have lack of skills and confidence to make the correct decision at a standard time.

**Q3. Would you specify the main reasons for the challenges described in question No.2 Please explain them?**

As the respondents replied that the main reason for the above specified challenges are some of customs regulations are complex and difficult to understand leads to errors and delay for cargo release, lack of standardization on customs clearance process within other country's airport procedures and other customs branches.

Another reason for the customs clearance challenge mentioned by the respondents are disagreement and weak communication between customs clearance department with different parties involved in the clearance process (like spot examination, intelligence, temporary warehouse team, carriers). This can leads to the delay the goods release time.

**Q4. Do you explain the current collaboration and coordination between parties involved in customs clearance process?**

Some interviewees replied that there is coordination and collaboration between parties involved in the customs clearance process. As the majority replied there is week coordination and collaboration among parties involved in customs clearance process that leads to extend the cargo release time.

**Q5. What are the benefits and challenges the adoption of eCMS and eSW on the branch to reduce the cargo release time?**

According to the respondents the two systems can speed up the cargo release time by online registration of manifest from the airlines system. Both of them are web-based that can enables declaration registration and regulatory organizations import permit without restriction of place and time (7/24 basis). This can lead to reduce the cargo release time. This system has transparency (the systems can provide real-time tracking and visibility of the clearance process and accuracy (the systems can reduces human error in data entry and calculation in dusty and tax assessments). These are very important benefit of the systems and can reduce the cargo release time. However, week network connection and frequent system failure of the two system affects the clearance process which in turn affects the cargo release time. In addition, because the two systems are not networked each other, being forced to use both systems separately (it violates the principle of single window service). This in turn extends the cargo release time.

**Q6. Do you have any suggestion to improve the cargo delivery efficiency with minimum release time?**

The respondents replied, collaboration between the customs clearance team with other departemnts as wells as other stakeholders (Ethiopian airlines, NISS) by information sharing, joint training for their employees, having procedure improvement team at the airport community to iddentify every issues and develop timely solutions jointly.Intregrated technologies between customs and other stakeholders who participate on customs processes and the cutoms should form the public-private partnership which can leads to more efficient, effective and streamilend customs clearance process at the aiport.Lastly, the respondents forwarded that using automation and artificial intelligence for document verificatoion, risk analysis and physical examination by the customs can reduce the cargo release time.

# CHAPTER FIVE

# FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

The aim of this study was to examine the effect of the existing customs procedures on the air cargo release time in Addis Ababa airport customs branch office. In this case, five independent variables such as duty and tax assessment procedure, customs document verification; customs risk management, physical examination procedures, and challenges of eCMSwere identified and analysed based on the collected data from different sources mentioned in chapter three. Therefore, in this chapter some findings, conclusions, recommendations and direction for future research were forwarded.

## 5.1. Summary of the findings

As per the discussion in chapter four, the summary of findings has been drawn below:

The response rate for this is 79%. Most of the respondents were educated and they were first degree holders. They were at around young age bracket. The majority (44%) of the respondents replied, the shipper or courier don't notified the cargo manifest information before the arrival of cargo for Addis Ababa airport customs branch office. The customs management system allowed some amendment of manifest information after the deliverance of cargo manifest information for customs. The Ethiopian customs management system (eCMS) allows the online attachment of customs declaration and other customs documents and other stakeholders' letters. The existing customs valuation system doesn't accept the transaction values directly. This can be done through checking the reference value of the commission. On the other hand, the risk management system and tariff checking follows the international standards. Sometimes sampling for physical examination was not based on the directive. All independent variables have positive correlation with dependent variable called cargo release time. The independent variables such as assessment, verification, risk management and physical examination are statistically significant to the model.

The finding of the study also illustrated that the cargo dwell time is extended because most of parties involved in the customs clearance didn't of coordinate and collaborate each other.

In addition, based on the result from the interview and open ended questions

The eCMS and eSW enhances the customs procedure and reduces the cargo dwell time, but there is frequent system failure at the branch and the branch has no plan-B for the customs clearance process. This in turn increase the dwell time of the cargo incurs additional warehouse charges. To sum up, the actual time taken to release goods is not within the minimum standard time. In general, the existing cargo release is fairly efficient.

**5.2. Conclusions**

In this section, the conclusions which bases the findings detailed in chapter four are summarized as follows. It follows the nature of the independent variables.

- ✓ As the selected respondents explained, the shipper doesn't notify the manifest information before the arrival of the cargo by the cargo manifest information system interfaced between customs and the carriers. If this transfer has been undertaken before the arrival of the cargo, it has an advantage for customs to check or identify the risky and non-risky cargo. However, after transfer the existing customs system allows some amendment and sometimes cancellation. At a time, this data exchange is by online system. Also the system also allows online submission of customs documents. Therefore, the existing customs declaration process has an advantage on speeding the release of cargo from the customs control even if the cargo manifest was not sent before the arrival of the aircraft.
- ✓ Based on the results mentioned in chapter four, the valuation system mostly doesn't accept the transaction values. This means that it doesn't bases the principles mentioned in the world trade organization that support acceptance of transaction value. However, accepting or rejecting the transaction values bases the directives developed by the customs commission. This has its own effect on cargo release time negatively. According to the open ended responses, the valuation data base will not be updated timely.
- ✓ The other important variable that affect the cargo release time is tariff classification system. According to this survey result, the tariff system or checking the classified tariff information bases the international standards and tariff rules. This has positive contribution for cargo release time.
- ✓ The existing procedure for the verification of customs documents is selective. During document verification, only selected customs documents will be checked by the customs

experts. At a time, any information related with document assessment and verification is announced by online system. According to the information obtained from the office, Cargo release and exit processes follow the online system.

- ✓ There is the risk management system that follows the principles mentioned in the world customs organization. It bases compliance behaviour of the customer. It is automatic and prevents any manual intervention.
- ✓ The physical examination process in the given branch office follows the principles mentioned in the laws and focus on only selected cargos or high risk cargos. However, based on the collected data, the sampling mechanism didn't follow the ideas mentioned in the directive. Even if the laws support examination of sample cargo, mostly hundred percent of cargo will be examined by the experts. This affects the cargo release time obviously. On other hand, in relation to physical examination, as the respondents' response, the communication between warehouse operator and customs is very weak.
- ✓ The existing online customs system has positive role on facilitating the cargo release time. However, according to the findings mentioned in chapter four, there is utilization gap among the users such as customs employees and the clearing agent. However, there is no interface between eCMS and single window. This affects the information exchange and the cargo release time.
- ✓ The selected independent variables such as assessment procedure, customs document verification; customs risk management, physical examination procedures have positive relationship with the dependent variable called cargo release time.
- ✓ Based on the regression analysis result, the selected independent variables such assessment procedure, customs document verification; customs risk management, physical examination procedures have positive impact on the customs release time or dwell time. These variables are statistically significant.

### 5.3. Recommendations

Based on the conclusions detailed in above section, the research presents the following recommendations.

- ✓ The customs shall get the cargo manifest information before the arrival of the aircraft. This supports customs to identify the risk level of the cargo and focus on only selected cargoes.
- ✓ The customs valuation system should follow the principles of the international standards and mostly accept the transaction value unless under invoicing is noted.
- ✓ Customs shall respect the reasonable sampling rules and act accordingly. Also customs should notify the examination schedule online and on time by its system.
- ✓ There must have effective communication among carriers, warehouse operators and customs.
- ✓ There must have efficient information flow for risk profiling or offence risk management system.
- ✓ Customs shall train its officers or human power in eCMS utilization.
- ✓ In order to minimize the document verification time, the branch should apply the electronic documents verification techniques.
- ✓ To minimize the long bureaucratic decision making the branch should empower the employee to make correct decision confidentially and minimize the bureaucracy.
- ✓ To stream line and improve the customs clearance procedure and to reduce the cargo release time, the parties which involved in customs clearance should coordinate and collaborate each other for this the branch office must properly implement the powers and responsibilities given by the proclamation and enforce others.
- ✓ In order to eliminate the manual risk channel change the branch office should apply the risk management system according to the principles mentioned in the world customs organization.
- ✓ In order to minimize the frequent customs system failure, the branch and the commission should apply modern network technologies or outsource the service.

- ✓ Based on the regression results declaration assessment, customs document verification; customs risk management, physical examination procedures have positive impact on customs release time. So this result suggests that the customs to give focus on these variables or customs procedures so that to have minimized cargo released time.

### 5.4. Suggestion for future Research

This study examines the effects of the existing customs procedure on cargo release time based on the interview and questionnaires data as well as some secondary data collected sources at Addis Ababa international airport focusing on import customs procedure at cargo window. The examined customs procedures in this study may not be enough to predict the average cargo release time. And also the examined customs procedures in this study only focused on the effects import customs clearance procedure on air shipments only. However, it may vary from one customs branch office to another depending on the nature of the branch offices and mode of transportation of import cargo.

Thus, future research might further evaluate the effect other customs procedures (like Transit customs procedures, warehousing customs procedures on cargo release time or for the future studies it can conduct the studies for other almost all Ethiopian customs branches in comparison. In addition to this, future the studies might be with the effects of all import-export customs procedures on cargo release time to have the average cargo release time at the national level (National Cargo Release Time) that was not covered in this study.

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List of Appendices

**Annex I**
**Addis Ababa University**
**School of Commerce**
**Department of Logistics and supply chain management**

**Questionnaires to be filled by Customs employee**

**Dear Respondents,**

I am a post graduate student of master degree in Logistics and supply chain Management in Addis Ababa University, School of Commerce. Currently, I am undertaking research on the title "**EXAMINING THE EFFECTS OF EXISTING CUSTOMS PROCEDURE ON CARGO RELEASE TIME: THE CASE STUDY OF ADDIS ABABA AIRPORT BRANCH"** for the requirement of completion of master degree the responses you provide are strictly confidential. No reference is made to any individual in the report of the study. Therefore, your genuine and timely responses are quite vital to determine the success of this study. So, I kindly request your contribution in filling the questionnaire honestly and responsibly. Please, respond accurately and no need of writing your name. Thank you for your cooperation!

Sincerely,

N.B. You can use Amharic language if you want to explain your ideas.

For further comments and information you can call me by phone No.: +251-913-08-96-32

**PART I: General Information**

**These are questions used to prescribe individual respondents profile. So dear respondents please put ""√"" your choices in the box provided.**

1.Your Gender: Male ☐ Female ☐

2.Your Age? Below 25 years ☐ 25-34 years ☐

35-44 years ☐ 45-54 years ☐

55 years and above ☐

3. Level of educational achievement? Certificate ☐ Diploma level ☐

Bachelor's Degree ☐ Master's Degree ☐

If other, please specify: -.....

4. How many years of experience do you have in your career field?

Less than 1 year ☐ 1-2Year ☐ 3-5 Years ☐

6-10years ☐ 11 and above years ☐

5. What is your work position?

Process owner ☐ Team Leader ☐

Senior Officer ☐ Officer ☐

If other, please specify: .....

**PART II: Likert Scale Questions**

**A) Customs procedures**

Indicate your level of agreement on the statements below by ticking "√"in the most appropriate box. Use a scale of 1-5 where; 5- Strongly Agree, 4- Agree, 3- Indifferent, 2 -Disagree and 1- Strongly Disagree.

| S/N | Items related to Assessment | 5 | 4 | 3 | 2 | 1 |
|---|---|---|---|---|---|---|
| 1 | The shipper notifies the cargo manifest information before the arrival of the aircraft. | | | | | |
| 2 | The customs system allows some amendment after acceptance of the manifest information | | | | | |
| 3 | The customs online procedure allows online submission of the customs declaration and other documents | | | | | |
| 4 | There is amendment and cancellation service before acceptance of the declaration if there is a case. | | | | | |

**B) Verification**

Indicate your level of agreement on the statements below by ticking "√" in the most appropriate box. Use a scale of 1-5 where; 5- Strongly Agree, 4- Agree, 3- Indifferent, 2 -Disagree and 1- Strongly Disagree

| .S/N | Items related to Verification | 5 | 4 | 3 | 2 | 1 |
|---|---|---|---|---|---|---|
| 1 | The Valuation method by customs bases the directives and mostly accepts the transaction value. | | | | | |
| 2 | Checking the classified Tariff based on international standards and tariff classification rules. | | | | | |
| 3 | There are standard & clear rules to check up the Origin and other supplementary documents. | | | | | |
| 4 | The customs document or cargo/goods/ examination focuses on only selected air cargo. | | | | | |
| 5 | There is Online notification of additional payment or other discrepancies (additional requests). | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 6 | There is automated Customs release process or working on exit. | | | | | |

**C) Physical Examination**

Indicate your level of agreement on the statements below by ticking "√" in the most appropriate box. Use a scale of 1-5 where; 5- Strongly Agree, 4- Agree, 3- Indifferent, 2 -Disagree and 1- Strongly Disagree

| S/N | Items related to physical examination | 5 | 4 | 3 | 2 | 1 |
|---|---|---|---|---|---|---|
| 1 | There is reasonable Sampling method of the cargoexaminations. | | | | | |
| 2 | There is online notifications of examination schedule (time) to temporary warehouse team, warehouse operator and importer. | | | | | |
| 3 | The Goods Examiners are well experienced and experts | | | | | |
| 4 | There is Online notification of Examination report to desk audit officer/Assessor/, importer and the clearing agent. | | | | | |
| 5 | There is effective communication between warehouse operator and customs office. | | | | | |

**D) Risk Management system**

Indicate your level of agreement on the statements below by ticking "√" in the most appropriate box. Use a scale of 1-5 where; 5- Strongly Agree,4- Agree,3- Indifferent,2 -Disagree & 1- Strongly Disagree

| S/N | Items related to Risk managementsystem | 5 | 4 | 3 | 2 | 1 |
|---|---|---|---|---|---|---|
| 1 | There is properly implemented risk level selection systemat clearance time or request clearance. | | | | | |
| 2 | The risk selection condition bases the compliance level. | | | | | |
| 3 | The request clearance process and declaration assignment for concerned officer have been processed without manual intervention at a time. | | | | | |
| 4 | There is efficient information flow for risk profiling (Offence Management system). | | | | | |

**E) Challenges of Customs Electronic Management System (eCMS)**

Indicate your level of agreement on the statements below by ticking "√" in the most appropriate box. Use a scale of 1-5 where; 5- Strongly Agree, 4- Agree, 3- Indifferent, 2 -Disagree and 1- Strongly Disagree.

| S/N | Items related to Challenges of Ecms | 5 | 4 | 3 | 2 | 1 |
|---|---|---|---|---|---|---|
| 1 | The Online customs system ensures electronic information exchange with the clearing agents and other external users(e.g. transport authority, Banks). | | | | | |
| 2 | The Customs officers are very familiar with eCMS software. | | | | | |
| 3 | eCMS is effectively utilized to ensure fast import clearance service. | | | | | |
| 4 | There is Interface between eCMS and single window systems, and others systems used by customs. | | | | | |
| 5 | There is effective communication between carriers and customs through the eCMS system. | | | | | |

**F) Aspects of Cargo Release Time{dwell time)**

Indicate your level of agreement on the statements below by ticking "√" in the most appropriate box. Use a scale of 1-5 where; 5- Strongly agree, 4- Agree, 3- Indifferent, 2 -Disagree and 1- Strongly Disagree.

| No | Items related to Aspects of Cargo Release Time {dwell time) | 5 | 4 | 3 | 2 | 1 |
|---|---|---|---|---|---|---|
| 1 | Customs service is delivered with minimum standard time. | | | | | |
| 2 | Customer satisfaction and loyalty has increased. | | | | | |
| 3 | There is quality service deliverance in the branch. | | | | | |
| 4 | Efficiency and revenue collection has increased. | | | | | |

**Part III) General Open ended questions**

1) How would you rate the efficiency of customs service in Addis Ababa Airport Customs?

a. Very much efficient b. Much efficient

c. Fairly efficient d. Less efficient

e. Not efficient

2) Do you believe the customs Risk management practice facilitate the customs clearance process?

Yes [ ] No [ ]

If you answer is 'No', would you specify the reasons:

_____

_____

_____

3) Do you think there is collaboration between customs with other governmental organizations (e.g. EFDA, INSA, Standard Agency, ECA, Ethiopian airlines/other carriers/, warehouse operators, etc.) to coordinate physical examinations for some restricted goods?

Yes [ ] No []

If you answer is 'No', would you believe their collaboration between them can reduce the customs release time?

Yes [ ] No []

If you answer is 'yes', please, specify how to reduce the customs release time?

_____

_____

4) Would you rank the following customs clearance challenges from the most challenging to least challenging?

| No | Items related to customs clearance challenges | Rank |
|---|---|---|
| 1 | System connection problem | |
| 2 | Valuation and tariff classification complexity | |
| 3 | Lack of collaboration and coordination. | |
| 4 | Importer's awareness gap on customs procedure | |
| 5 | Problem of on time notification and arrangement of goods for physical examination. | |
| 6 | Clearing agents skill gap | |
| 7 | Shortage of infrastructure for customs service | |
| 8 | Lack of automated integration | |
| 9 | On time response problem by clearing agents and importers | |

5) In your opinion the actual average time taken to clear the goods with the current customs clearance in this airport?

Less than 2 days ☐ 2-4 day ☐ 4-6 days ☐ 6-8 days ☐ More than 8 day ☐

6) How do the existing customs procedures facilitate the customs clearance process?

_____
_____
_____

7) What recommendations would you provide to the customs in order to reduce the cargo release time and to enhance customs procedures?

_____
_____
_____

**Thanks!!**

**Annex II**
**ADDIS ABABA UNIVERSITY**
**SCHOOL OF COMMERCE**
**Department of Logistics and supply chain management**

Questionnaire to be filled by customs clearing agents

**Dear Respondents,**

I am a post graduate student of master degree in Logistics and supply chain Management in Addis Ababa University, School of Commerce. Currently, I am undertaking research on the title "**EXAMINING THE EFFECTS OF EXISTING CUSTOMS PROCEDURE ON CARGO RELEASE TIME: THE CASE STUDY OF ADDIS ABABA AIRPORT BRANCH"** for the requirement of completion of master degree the responses you provide are strictly confidential. No reference is made to any individual in the report of the study. Therefore, your genuine and timely responses are quite vital to determine the success of this study. So, I kindly request your contribution in filling the questionnaire honestly and responsibly. Please, respond accurately and no need of writing your name. Thank you for your cooperation!

Sincerely,

N.B. You can use Amharic language if you want to explain your ideas.

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**These are questions used to prescribe individual respondents profile. So dear respondents please put ""√"" your choices in the box provided.**

1. Your Gender: Male ☐ Female ☐

2. Your Age? Below 25 years ☐ 25-34 years ☐

35-44 years ☐ 45-54 years ☐

55 years and above ☐

3. Level of educational achievement? Certificate ☐ Diploma level ☐

Bachelor's Degree Master's Degree ☐ ☐

If other, please specify: -.....

4. How many years of experience do you as a clearing agent?

Less than 1 year ☐ 1-2Year ☐ 3-5 Years ☐

6-10years ☐ 11 and above years ☐

5. What is your work position in your customs clearing company?

General Manager ☐ Deputy Manager ☐

Senior Assessor ☐ Junior Assessor ☐

If other, please specify: .....

**PART II: Likert scale Questions**

**A. Customs procedures**

Indicate your level of agreement on the statements below by ticking "√"in the most appropriate box. Use a scale of 1-5 where; 5- Strongly Agree, 4- Agree, 3- Indifferent, 2 -Disagree and 1- Strongly Disagree.

| S/N | Items related to Assessment | 5 | 4 | 3 | 2 | 1 |
|---|---|---|---|---|---|---|
| 1 | Online submission of the documents through customs automated system works well. | | | | | |
| 2 | If there is any discrepancy on registered/submitted/ customs declaration, customs deliver amendment service online before the acceptance of the declaration. | | | | | |
| 3 | Customs clearing agent pay duty and tax by online | | | | | |
| 4 | There is a procedure that allows online registration of the customs declaration without time and place restriction (with web base) | | | | | |

**B. Verification**

Indicate your level of agreement on the statements below by ticking "√" in the most appropriate box. Use a scale of 1-5 where; 5- Strongly Agree, 4- Agree, 3- Indifferent, 2 -Disagree and 1- Strongly Disagree

| S/N | Items related to Verification | 5 | 4 | 3 | 2 | 1 |
|---|---|---|---|---|---|---|
| 1 | Valuation method by customs bases the directives and mostly accepts the transaction value that minimizes time of cargo release. | | | | | |
| 2 | Checking classified Tariff based on international standards and regulations step by step. | | | | | |
| 3 | Origin document and other supplementary document checking time is calculated towards minimizing the waiting time. | | | | | |
| 4 | Customs document or cargo examination focused on only the selected air cargo that also minimizes the other cargo release time. | | | | | |
| 5 | There is Online notification of additional payment or other | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | discrepancies that reduces the cargo waiting time. | | | | | |
| 6 | The automated customs release process or working on exit note reduces the waiting time. | | | | | |

**C. Physical Examination**

Indicate your level of agreement on the statements below by ticking "√" in the most appropriate box. Use a scale of 1-5 where; 5- Strongly Agree, 4- Agree, 3- Indifferent, 2 -Disagree and 1- Strongly Disagree

| S/N | Items related to physical examination | 5 | 4 | 3 | 2 | 1 |
|---|---|---|---|---|---|---|
| 1 | Reasonable Sampling method of the cargo reduces unnecessary examination works and reduces examination time. | | | | | |
| 2 | Online Notifications of Examination schedule (time) reduces the release time. | | | | | |
| 3 | Physical Examination with experienced customs experts minimizes the examination time. | | | | | |
| 4 | Online notification of Examination report to desk audit officer /assessor/minimizes the waiting time. | | | | | |
| 5 | The effective communication between warehouse operator and customs office reduces the waiting time for examination. | | | | | |

**D. Risk Management system**

Indicate your level of agreement on the statements below by ticking "√" in the most appropriate box. Use a scale of 1-5 where; 5- Strongly Agree, 4- Agree, 3- Indifferent, 2 -Disagree and 1- Strongly Disagree

| S/N | Items related to Risk managementsystem | 5 | 4 | 3 | 2 | 1 |
|---|---|---|---|---|---|---|
| 1 | There is properly implemented risk level selection system at clearance time or request clearance. | | | | | |
| 2 | The risk selection condition bases the compliance level. | | | | | |
| 3 | The Online acceptance of submitted documents and risk selection processed at a time reduces the document waiting time. | | | | | |
| 4 | There is efficient information flow for risk profiling (Offence Management). | | | | | |

**E. Challenges of Customs Electronic Management System (eCMS)**

Indicate your level of agreement on the statements below by ticking "√" in the most appropriate box. Use a scale of 1-5 where; 5- Strongly Agree, 4- Agree, 3- Indifferent, 2 -Disagree and 1- Strongly Disagree.

| S/N | Items related to Challenges of eCMS | 5 | 4 | 3 | 2 | 1 |
|---|---|---|---|---|---|---|
| 1 | Online customs system ensure electronic information exchange with the clearing agents and other external users(e.g. transport authority) | | | | | |
| 2 | Customs clearing agents are very familiar with eCMS software. | | | | | |
| 3 | The eCMS is effective for the clearing agents to ensure fast import clearance service. | | | | | |
| 4 | The Interface between eCMS and single window systems save the traders' waiting time. | | | | | |
| 5 | Effective communication between carriers and customs through system customs management system ensure fast document or information transfer. | | | | | |

**F.Aspects of Cargo Release Time{dwell time)**

Indicate your level of agreement on the statements below by ticking "√" in the most appropriate box. Use a scale 1-5 where; 5-Strongly agree, 4-Agree, 3-Indifferent, 2-Disagree and 1-Strongly Disagree.

| No | Items related to Aspects of Cargo Release Time {dwell time) | 5 | 4 | 3 | 2 | 1 |
|---|---|---|---|---|---|---|
| 1 | Customs service is delivered with minimum standard time. | | | | | |
| 2 | Customer satisfaction and loyalty has increased. | | | | | |
| 3 | There is quality customs service deliverance in the branch. | | | | | |
| 4 | Efficiency and effectiveness has increased. | | | | | |

**Part III) General Open ended questions**

1. How would you rate the efficiency of customs service in Addis Ababa Airport Customs?

   a. Very much efficient  b. Much efficient

   c. Fairly efficient  d. Less efficient

2. What other information would you like to share about how customs procedures affect the cargo release time for traders in Addis Ababa airport customs?

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3. Do you believe the customs Risk management practice facilitate the customs clearance process?

   Yes [ ]  No []

   If you answer is 'No', would you specify the reasons:

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4. Would you rank the following customs clearance challenges from the most challenging to least challenging?

| No | Items related to customs clearance challenges | Rank |
|---|---|---|
| 1 | System connection problem | |
| 2 | Complexity of valuation and tariff classification | |
| 3 | Lack of collaboration and coordination | |
| 4 | Lack of importer's awareness about customs procedure | |
| 5 | Problem related to the notification and arrangement of goods for physical examination problem | |
| 6 | Customs experts skill gap | |
| 7 | Shortage of infrastructure for customs service | |
| 8 | Lack of automated integration | |
| 9 | Lack of on time response by customs office | |

5. In your opinion the actual average time taken to clear the goods with the current customs clearance in this airport?

Less than 2 days ☐ 2-4 day ☐ 4-6 days ☐ 6-8 days ☐ More than 8 day ☐

6. How do the existing customs procedures impact your business operations?

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7. What recommendations would you provide to the customs in order to enhance customs procedures and reduce the cargo release time?

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**Thanks!!**

## Annex III

## Interview Guide Line

1. How the existing customs procedure influences the cargo release time? Please specify.
2. What are the most common challenges related to customs clearance in this airport? Can you justify them?
3. Would you specify the main reasons for the challenges described in question No. 2? Please explain them?
4. Do you explain the current collaboration and coordination between parties involved in customs clearance process?
5. What are the benefits and challenges the adoption of eCMS and eSW on the branch to reduce the cargo release time?
6. Do you have any suggestion to improve the cargo delivery efficiency with minimum release time?