

ASSESSMENT OF THE CHALLENGES OF CUSTOMS IMPORT CLEARANCE PROCEDURES IN THE CASE OF ADDIS ABABA AIRPORT CUSTOMS BRANCH OF ERCA, ETHIOPIA

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Abstract

The objective of the study is to assess the challenges of trade facilitation of customs import clearance procedures at Addis Ababa Airport customs branch of ERCA. The study employed mixed concurrent triangulation method along with descriptive research design in order to better answer the questions of the study. Sample data collected from 72 out of 89 officers and 33 out of 36 clearing agents of the branch. The study used open, closed questionnaires along with structured interview so as to triangulate qualitative data and that of quantitative. The data analyzed through the application of inferential and descriptive statistics along with multiple regression correlation. The result of the study showed that compliance costs to meet the customs requirements correlated positively with the time to process the customs import clearance procedures at the branch. The delay and cost incurred at the branch due to inefficient customs clearance procedures of the branch along with lack of coordination not only among the departments of customs import clearance of the branch but also other regulatory bodies those involved in the clearance of imported goods at the branch of ERCA. Therefore, the branch should employ risk based control rather than excessive examination and assessment of imports.

Key words: Trade Facilitation, Customs Import Clearance Procedures, Export & Import time and cost for trading across borders, Ethiopian Revenue and Customs Authority

JEL Classification: H2, H25

I. INTRODUCTION

Trade facilitation operation is performed at different environments. The efficiency of these environments significantly either retards or hastens the movement of border crossing goods. Countries those attempted to improve the environments where trade facilitation can undertake significantly benefited from the movement of border crossing goods (Wilson, Mann & Otsuki, 2005).

The impact of the environments where the movement of global goods clearance time significantly affected timely getting of the goods from the point of production to their final consumers. Among these environments, customs is the most significant environment whose operation significantly impacts the clearance process of goods entering and leaving the border of any country. Trade facilitation is aimed at ensuring the movement and clearance of the goods that cross the borders among countries within minimum cost and time. The more time to process the facilitation of trade across the borders significantly slows the easy flow of border crossing goods of imports and exports (Martincus, Carballo & Graziano, 2013).

Customs are expected to satisfy the wants of both the government and border crossing traders without compromising the balance between trade facilitation and control through maintain regulations and laws that govern the movement of international goods. Both trade facilitation operation and control has been given optimum attention by the customs to satisfy the expectation of both customs and government by ensuring the compliance of border traded goods with the regulations of regulatory bodies those involved in the movement of border crossing goods and the time to process border goods has to be minimum as much as possible.

World customs organization (WCO, 2011) indicated that the effectiveness of the operational procedures of customs have a great influence in the movement of border crossing goods across the globe. So that customs have to be in position to revise their operational procedures to optimize trade facilitation and control.

According to the WCO (2015), excessive delay is a serious challenge for business that significantly depress them because of the inefficient coordination and cooperation among customs within and between themselves, and other governmental agencies that inspect the same goods more than three and above as a result the shipment wait for a longer time to clear the customs and these delays are associated with attendant cost that can significantly affect the competitive position of the trading community.

Burdensome procedures of trade, regulations related with customs and trade are often mentioned as the major obstacles to both small and medium sized enterprises' exports and imports of developing countries'. This is because large firms of these countries are better organized in financial and technical information about border crossing goods to navigate complex regulatory environment. But, even large firms in Ethiopia have been challenged to import and export goods trade internationally because of the inefficiency customs procedures and complexity of regulations related with customs and trade of goods crossing borders of that country. It takes up to 44 days to comply with all procedures needed to import or export at cost of USA\$2380 and USA\$2960 per container (Business Doing – World Bank, 2016).

The time spent to comply with customs procedures for importers of Ethiopia was 203 hours and the cost associated with processing of customs procedures and regulations was USA\$750 but, it took 160 hours to process customs procedures for those importers of Sub-Saharan countries and these importers spent a cost of USA\$351 to comply all customs procedures and regulations that govern the flow of international goods (World Bank, 2016).

I.1. TRADE PERFORMANCE OF ETHIOPIA

Ethiopia is a land locked country and most of its trading is done through Djibouti (90%) and through Addis Ababa Airport (5%) (Organization for Economic Cooperation and Development – OECD, 2005). According to the World Banks Logistics performance Index, (2012) which measures trade logistic efficiency, ranked Ethiopia out of 155 economies 141st and the score is below the average of sub-Saharan African countries. A recent World Bank study assesses that Ethiopia's key logistics bottlenecks are related to complex border clearance and inland transportation. For example, inspection is frequent and highly susceptible to rent seeking, which is handled by more than one agency that causes delays.

According to the World Bank Doing Business Report (2015), exporting and importing one standard container of goods takes 44 days each in Ethiopia, while the countries in the same region takes 31 days to import and 38 to export days on average. The trading across border indicator refers to a case study scenario of a warehouse in the largest business city of an economy trading with the main import and export partner through the economy's main border crossing (WBDB, 2016).

Table 1. Export-Import time and cost for trading across borders in Ethiopia

No.	Details	Ethiopia	Sub-Saharan
1	Time to Import: Border compliance (hours)	203	160
2	Cost to Import: Border Compliance (USD)	668	643
3	Time to Import: Documentary Compliance (hours)	209	123
4	Cost to Import: Documentary Compliance (USD)	750	351

Source: World Bank, 2016

According to De Wolf and Sokol (2005) customs related trade costs are incurred at the time of operation of activities that the business community is requested to meet legal requirements of customs procedures such as:

- Filing customs declarations;
- Collection of the required document;
- Handling of the required customs procedures;
- Handling of simplified procedures such as accounting system; specification, and measures of internal control;
- Provision of the required data to the customs and the time needed to justify the information requested by the authority.

I.2. STATEMENT OF THE PROBLEM

Poor environment where trade operation can undertake delayed the flow of border goods as a result getting imports and exports to their final consumers challenged for land locked countries. As a result these countries were charged a cost Of 0.8 % due to their shipment delay at transit (Hummels & Schaur, 2001). Like other land locked countries, the movement of border goods in Ethiopia are challenged due to the excessive control of imports and exports as a result extra time is required to arrive the goods to their final destination even though the government

of Ethiopia has undertaken various reforms to improve the efficiency of border control agencies including custom to keep pace with the demands of the growing volume of border trading (World Bank, 2014).

Reports produced by the risk directorate of Ethiopian Revenue and Customs Authority (ERCA, 2007) indicated that very few declarations processed through adoption of simple procedures in its all branches. For example, 6569 out of 65913 of declarations in 2012, 8116 out of 105356 of declarations in 2013, 8543 out of 119913 of declarations in 2014, 14236 out of 214980 of declarations in 2015 and 16148 out of 349425 of declarations in 2016 processed with simple customs procedures at Addis Ababa Airport Customs branch of ERCA. These data indicated that almost few declarations processed through simple procedures for past five successive years at the branch to clear the flow of their border goods. In addition, report produced by World Bank showed that it took excessive time for small and medium enterprises in Ethiopia to comply with the clearance procedures needed to import goods (Business Doing – World Bank, 2015).

World Bank (2016) report indicated that in large cities of Ethiopia small and medium sized enterprises spent a long time when processing their customs procedures due to the inefficiency of the customs procedures of the country. Any of the researches that previously conducted did not yet identify in its study about the challenges of trade facilitation of each of customs import clearance procedures in Ethiopia. Therefore, the study designed to fill this gap about the challenges of trade facilitation associated with of each of customs import clearance procedures and their causes at Addis Ababa Airport Customs branch of Ethiopian Revenue and Customs Authority.

II. LITERATURE REVIEW

Trade facilitation is defined as simplification and harmonization of international trade procedures. The procedures include activities, practices and formalities involved in collecting, presenting, communicating and processing data required for the movement of international goods (Organization for Economic Cooperation and Development, 2005).

Wilson, Mann & Otsuki (2003), trade facilitation is operated in different environments. These environments are customs, regulation, service area and ports. The efficiency of these environments significantly can influence the movement national border crossing goods, the flow of foreign direct investment and the cost incurred by the economy, consumer and the traders of border crossing goods. Economies that are capable at improving the above mentioned environments for the facilitation of trade are significantly advantaged from border crossing trade. According to the study of Wilson, Mann and Otsuki (2005), those economies improved their port environment achieved the benefit of \$107 billion and that had made a significant improvement in infrastructure and electronic business gained \$154 billion. International trade of border crossing goods requires time to getting them in to the final destination because there are moved to the required destination in the physical environment. Time for international trade affects not only the flow volume of the goods but also the involvement of entrepreneurs' in the global supply chain flow (Nordas, 2007). Time to market has its effect on the trade in two ways. First, it determines the decision of the firms whether or not to enter in to the market and secondly, following the entrance it affects the volume of trade.

Hummels (2007) made a clear demarcation between these two effects of time through detailed study of the imports of USA. He asserts that an increase in the shipping time one day reduces that a country will export manufacturers to USA by 1.5%. Customs-related transaction costs are incurred in meeting the requirements of the government to move goods from the control of customs that are more significant for small and medium sized firms which are weak in financial capacity to cope up with the determinants of customs imposed on them Even though, these costs are not significant part of international trade costs they can repress the business activities and it might slow the growth of economy.

According United States Agency for International Development (USAID) Report Customs Clearance Issues by Durgavich (2009), the customs clearing procedures, regulated by recipient country governments, change over time and can be quite complex. Failure by importer to meet local customs clearance procedures, or customs procedures that are themselves prone to breakdowns, may cause long delivery delays, stock shortages, and even stock-outs. In 2006 when conducted the study titled "Customs Clearance Issues Related to the Import of Public Health Programs", USAID found from Tanzania that, from when goods (donations) arrive at seaport to the time they are delivered to MSD it took roughly 27 days and this is only part of the whole clearance process. The total clearing period reached up to 67 days. Corruption risks are high in customs clearance process. One of the major corruption risks is the high rate of duty to be paid. If customs procedures are not clearly defined and are complicated, and when there are no clear terms of reference for customs officers, then the freedom of action of

officers is virtually unlimited. In such circumstances bribes often termed as “facilitation Fee” are often paid for legal actions or for the activities that were expected to be conducted by customs officers as part of their duties.

II.1. PRINCIPLES OF REVISED KYOTO CONVENTION

The Revised Kyoto convention is the main trade facilitation convention that consist fundamental principles to be used by the members’ countries of the World Trade Organization. It was developed by World Customs Organization to standardize customs procedures; practices and controls that govern the movements of international shipments across the globe. The Revised Kyoto Convention provides the simplification and standardization of procedures and practices to be used consistently over time in international trade. It has six broad and crucial guidelines in order to facilitate traded as cited by Widdowson (2005).

The guidelines are: Application of customs procedures and practices in a predictable, transparent consistent manner over the time, provision of appropriate information on procedures, practices, laws and regulation that govern the movements of goods, cooperation with national, private sectors and other customs where it would be deemed as an appropriate, Implementation of relevant international standards ,adoption of modern trade facilitation tools including risk management and significant use of information technology and provision of an easy and accessible both administrative and judicial review against decisions for affected groups.

II.2. CUSTOMS CLEARANCE TIME

The WCO time release study is another instrument for effective border management. It is one of the methods used to review of the clearance procedures by measuring the time taken between the arrival of goods and the intervention of each of activities and procedures. It is used to identify the problems and the corrective actions to increase the responsiveness, efficiency and transparency of customs and other regulatory agencies involved in the border management.

Significant use of automation and selective methods of risk control methods allows customs to deploy their scarce resources appropriately to improve the compliance level of the non-complaints and improves the facilitation of low-risk goods movement into supply chain. Time release study scheme allows for the time measurement of all processes in the clearance procedures, including the intervention time taken by customs and other border controlling agencies and measuring time of the involvement of logistic suppliers. The time required to release goods has also increasingly become the measure by which the international trading community assesses the effectiveness of the customs administration.

II.3. CAUSES OF DELAY

Customs are the backbone of international trade and supply chain and if it is not handled well it could be also significant determinant of import and export of internationally traded goods. Business activities of international trade are affected because of the failure to clear international shipments on short time along with the lowest possible cost.

Widdowson (2007) identified that the following determinants that are the severe causes of delays for international border crossing goods to clear them from customs. These are excessive document requirements by the border regulating agencies; insignificant use of information technology along with less automation consumption; unclear and unspecified requirements for imports and exports by the regulatory bodies of border management; inefficient of customs procedure accompanied by excessive physical and documentary control and lack of cooperation and modernization amongst 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.

III. OBJECTIVES OF THE STUDY

The study attempts to answer the following research questions.

- To examine the time required for customs clearance procedures.
- To identify costs of customs clearance procedures.
- To identify the causes of costs and delays of imports.
- To test the correlation of cost of customs procedures and time spent upon the procedures.
- To identify the existence of standard time to process customs import procedures at the branch of ERCA.

IV. HYPOTHESIS

- H1: There is significance among explanatory variables of cost for importers.
 H2: There is a correlation between cost and time of customs procedures.
 H3: There is significance among the costs of imports of customs procedure for importers.
 H4: There is significance among mean time of import customs procedures for importers.

V. METHODOLOGY

The study employed concurrent triangulation design mixed research method of research to better answer the research questions. It employed also both primary and secondary data sources. In addition, the study used open and closed-end questions along with structured interviews. The study utilized response options such as likert – scale of responses (ranging from strongly agreed that coded as 1 to strongly dis-agreed as coded of 5), opinions of the respondents’ and numeric for those quantitative questions. It used simple random sampling technique of probability method to describe continuous data and purposive non-probability method to obtain the opinions of the respondents’ about the challenges of trade facilitation at the branch. Sample units for measuring the research questions were 72 out of 89 customs clearance officers, 33 out of 36 clearing agents and 4 out of 8 higher officials of the branch. The total population of the universe was 133.

VI. RESULTS AND DISCUSSION

VI.1. VALIDITY TEST

Before development of final questions, questionnaires distributed to a few respondents selected among the officers of customs import clearance sections and clearing agents of Addis Ababa customs branch of ERCA. These questionnaires collected back from these a few respondents not only to avoid unnecessary questionnaires but also to incorporate the relevant questionnaires required for the study.

Finally, data analysis undertaken by omitting unnecessary and irrelevant primary data that they collected for the study. Data collection made properly through classification of questionnaires from the measurements to secure the valid data needed to undertake the study on the time required for the data.

VI.2. RELIABILITY TEST

The study employed Cronbach’s coefficient alpha to test the causes of cost and delay at Addis Ababa customs branch of ERCA. Table 2 below shows the result of the alpha scores for all variables of the causes of cost and delay at Addis Ababa Airport customs branch. The Cronbach’s alpha coefficient was within acceptable range of reliability and its value was 0.737.

Table 2. Reliability Statistics

Cronbach’s alpha	Cronbach’s alpha based on standardized items	No. of items
0.737	0.749	6

Source: Alpha result SPSS output, (2017)

VI.3. STANDARD TIME FOR CUSTOMS PROCEDURES

The more time spent on the processing of customs clearance affected both the customs and the importers. The longer processing time affected importers comparative position in international trade, Therefore, the questionnaires presented to officers and clearing agents selected from the branch and their response indicated in the following table.

Table 3. Standard Time following by ERCA for import clearance procedures

Standard Time	Frequency	Percent
No	82	92.1
Yes	7	7.9
Total	89	100

Source: SPSS Output of Primary Data, (2017)

As shown in the Table 3 above 92.1% of all the respondents said that Addis Ababa Airport customs branch of ERCA did not has standard time to process each of the customs import clearance procedures, but ERCA developed manual about the time to be spent by each of customs procedures across all of its branches in 2013. However, it was not only practical but the officers did not have any information about the manual produced by ERCA which briefly describe about the time to process each of the import customs clearance procedures across all of its branches.

Table 4. Reasons for absence of Standard time to process customs procedures

Reasons for absence	Frequency	Percent
Lack of awareness about importance of time for trade facilitation	13	20.9
Less attention by management to supervise timely processing of procedures	34	54.8
Important but difficult to process through use of standard time	10	16.12
Not easy for monitoring so not useful to process procedures through standard time	5	8.8
Total	62	100

Source: SPSS Output of Primary Data, (2017)

As indicated in the Table 4, 54.8% of all the respondents replied that the top management had given less attention about time spent while processing customs procedures. Among the most popular reasons cited for less attention by both officers and officials were the presentation of false documents to the branch by the importers served at the branch and the less attention given by other regulatory bodies to avail themselves on time when they were in need to undertake customs related services. because of their working place where they came from and operations of customs are far away from work places also had its own share to provide timely service for importers made managements to give less attention to carry out customs procedures on time basis. However, documents of the charter of clients indicted that there was pre-set work norms for processing each of import customs procedures.

VI.4. TIME OF CUSTOMS PROCEDURES

The longer processing time to process each of the customs procedures could challenge border crossing goods. This made them to shoulder high transaction cost and affected their comparative advantages at international trade Therefore, importers have it is important for importers to pay due attention about the effect of time before making their import and export decision (Tsegaye & Endris, 2011).

Table 5. Standard Time for processing assessment of customs clearance procedures

Procedures	N	Mean	Std. Dv.	St. Error	Max.
Assessment	30	6.7333	1.04826	0.19139	8
Examination	30	3.6667	1.06943	0.19525	6
Verification	29	1.443	0.60274	0.11193	3
Total	89	3.9775	2.36320	0.25050	8

Source: SPSS Output of Primary Data, (2017)

From the Table 5, the time for processing assessment was on average 6 days and that of physical examination was 3 days. The above descriptive statistics tested through the following hypothesis.

- H1: There is not any variance among customs procedure
- H2: At least one of them has significance.

Table 6. Homogeneity of Variance among customs procedures and customs authority

Levene Statistics	Df1	Df2	Sig
7.394	2	86	0.001

Source: SPSS Output of Primary Data, (2017)

Table 6 above indicated the p-value is less than 5% and indicated that there was significance among customs procedures at Addis Ababa customs branch of Ethiopian Revenue and Customs Authority and their significance was not by chance. In addition the equality of mean time among procedures such as examinations, verifications and assessments of secured information tested through one way ANOVA at the branch. The following ANOVA table indicated that it was a statistically significant because the value of p (0.001) that is less than 5% as shown at the table below.

Table 7. ANOVA test of time among procedures

Time for procedures	Sum of squares	Df	Men square	F	Sig
Between groups	416.249	2	208.1250	237.997	0.000
Within groups	75.206	86	0.874		
Total	491.455	88			

Source: SPSS Output of Primary Data, (2017)

The pair-wise test checked the pair-wise comparison of average time of processing examinations, assessments and verifications at the branch of Ethiopian Revenue and Customs Authority through the following hypothesis and the result of the p value of the pair-wise test was less 5%. This indicated that there was a significant variation among the customs procedures at the branch.

- H1: There is not any difference of mean time of examinations and that of verifications.
- H2: There is difference between mean processing time of examinations and verifications.
- H1: There is not any difference of mean time of verifications and that of verifications.
- H2: There is difference between mean processing time of verifications and verifications.
- H1: There is not any difference of mean time of examinations and that of assessments.
- H2: There is difference between mean processing time of examinations and that of assessments.

The following table 8 indicated post-hoc test of the uniformity of the customs procedures of imports at the branch.

Table 8. Post-hoc text of the uniformity of the Custom Procedures

Multiple Comparisons Dependent Variable: Time		Mean Difference (I-J)	Std. Error	95% Confidence Interval		
				Sig	Lower bound	Upper bound
Activity (I)	Activity (J)					
Assessment	Examination	3.06667	0.27341	0.000	2.3944	3.7389
	Verification	5.28506	0.22171	0.000	4.7360	5.8342
Examination	Assessment	-3.06667	0.27341	0.000	-3.7389	-2.3944
	Verification	2.21839	0.22506	0.000	1.6608	2.7760
Verification	Assessment	-5.28506	0.22171	0.000	-5.8342	-4.7360
	Examination	-2.2183	0.22506	0.000	-2.7760	-1.6608
Mean difference is significant at the level of 0.05						

Source: SPSS Output of Primary Data, (2017)

To triangulate the above statistical results questionnaires’ collected from the informants that why the procedures did take long time at the branch of ERCA. The following table 8 indicated that the assessment of information consumed the highest than that of examination, but verification took little time among assessment and examination. 62.9 % of all the respondents said that it took long time to undertake the assessment operation at the branch the next to it examination of declarations against actual goods took more time to complete it. However the maximum time to complete customs procedures for goods labeled red, yellow and green all over the branches of ERCA is 81 minutes, 17 minutes and 7 minutes and it has to take 21 minutes to release red labeled goods out of customs and that of yellow and red are 51 and 156 minutes as pre-set time manual developed by Ethiopian Revenue and Customs Authority, 2013).

Table 9. Customs procedures time for customs clearance

Customs procedures take more time	Frequency	Percent
Assessment	56	62.9
Physical examination	33	37.1
Verification	-	-
Total	100	100

Source: SPSS Output of Primary Data, (2017)

To identify what caused the processing time too long interviews conducted with officials, officers and clearing agents of the branch of Ethiopian Revenue and Customs Authority. They said that there were different reasons why imports processed with long time at the branch. The main causes were lack of cooperation within the department itself (customs import clearance section). On top of that the lack of facilities, false document presentation by the importers themselves, lack of technically skilled man power regarding tariff and valuation and the inefficiency of the processing of customs import procedures.

94.6% (87 out of 297) of the respondents indicated the lack of technical skill to handle disputes regarding valuation and tariff classification made imports to take longer time at Addis Ababa customs branch of Ethiopian Revenue and Customs Authority as shown in the following table. False document presented by the importers themselves made the processing of procedures long at the branch which accounted 66.3%.

Table 10. Causes for delaying of Customs clearance process

	Frequency	Missing	Percent
Lack of cooperation among regulatory bodies	61	38	66.3
Technical skill problem to handle clearance procedures	87	2	94.6
Presenting False document by importers	62	27	67.4
Inefficient procedures	58	41	63
Lack of Facilities	29	40	31.5
Total	297	148	322.8

Source: SPSS Output of Primary Data, (2017)

To triangulate the accuracy of the information given by the respondents in the table 10 above, the researcher made structured interview with officials of the, officers of the customs import clearance and the importers served at customs clearance service from the branch at large and the import clearance section of the branch of Ethiopian Revenue and Customs Authority.

Most of the respondents agreed that the branch tested with lack of technically skilled man power to handle the case raised in the branch regarding the tariff classification, identification of the origin from where the goods imported to Ethiopia made the goods to be delayed during processing of customs procedures of the branch.

Officials and clearing agents underscored the problem that the importers exposed to delay and cost at branch particularly and all over the customs branches of ERCA was intricate nature of the customs itself along with lack of integrity from the part of officers made the processing of imports difficult not only for the business served at customs but also for the branch in particular and the branches of customs of ERCA at large.

The clearing agents on their parts loudly talked about the problem of integrity made them to spend extra time and to shoulder unnecessary cost to clear their imports from the branch. They said on their part that the branch did not avail the their shipments in time when they needed it and the branch gave them a little attention to process their goods even though they presented the relevant information regarding their internationally traded goods to customs clearance sections of the branch. Lack of confidence to make decisions from the officers of the branch when there was conflicts regarding valuations, determinations of the origin of the imports and their tariff classifications made them to take long processing time.

Risk directorate department of ERCA described value of ETB 13,467,084 items moved in to Ethiopia through Addis Ababa Airport from July 2016-March 2017, value of ETB10, 802.873.4 items moved at the same branch in 2016, value of ETB 29,563,091.30 in 2015, value of ETB 3,357,254.68 items entered illegally in to Ethiopia at the same branch in 2014 & the value of ETB 1,361,228.12 items smuggled in to Ethiopia at the same branch in 2013. The participants involved in this contraband activity were the service takers of the branch and the reason for their switched into illegal activity rather than legally way of import was the integrity problem of the customs and the other regulatory bodies involved in the processing of their imports (ERCA, 2013).

VI.5. COSTS OF CUSTOMS PROCEDURES

International trade subjected to delay due to costs which incurred to comply customs procedures and other regulations that govern the movement of border crossing goods around the globe.

The survey questionnaires about costs of customs clearance procedures distributed to the clearing agents of the branch. The following table-10 indicated that on average the importers incurred compliance cost of Birr 1981, 1602 and 1308 for assessment, physical examination of goods against declarations and verifications of declarations at face- vet of Addis Ababa Airport customs branch of ERCA. Therefore, importers incurred highest cost on assessment and on physical examination of goods against declarations next to that of assessment.

Table 11. Cost of Customs procedures for customs clearance

Customs Related Costs	N	Mean	Standard Deviation	Standard Error
Assessment	30	1918.6667	190.58410	34.79574
Physical examination	30	1602.0000	235.01492	46.19399
Verifications	29	1308.2759	114.11363	21.19037
Total	89	1613.0337	315.7575812	33.47029

Source: SPSS Output of Primary Data, (2017)

One way ANOVA tested the significances of these above costs through the following hypothesis.

H1: There is not any difference of mean cost of customs import procedures.

H2: There is difference among mean cost of customs import clearance procedures.

The following Levene test showed the result of test of homogeneity of significance of costs of the procedures such assessments, physical examinations and verification of declarations.

Table 12. Variance between cost and customs import clearance procedures

Levene Statistics	Df1	Df2	Sig
3.609	2	86	0.031

Source: SPSS Output of Primary Data, (2017)

One way ANOVA test checked also the significance of the cost assessment, physical examination and verification of goods declarations through the following hypothesis and the result p-value (0.000) is less than 5%. Therefore, the cost of the procedures at the branch was significant.

Table 13. ANOVA test on cost assessment, examination and verification of goods and customs import clearance procedures

Cost (customs procedures)	Sum of Squares	Df	Mean Square	F	Sig
Between groups	5499440.439	2	2749720.220	72.219	0.000
Within groups	3274440.460	86	38074.889		
Total	8773880.899	88			

Source: SPSS Output of Primary Data, (2017)

Pair-wise test result also indicated that there was significance among customs procedures costs (assessment, physical examination and verification). The following table 14 showed the results of the pair-wise test of the costs of customs procedures of Addis Ababa Airport customs branch through the following hypothesis. H0: The mean cost of customs procedures is the same.

H1: The mean cost of customs procedures is significant.

Table 14. Temhane Multiple Comparisons

Procedures (I-J)		Mean difference (I-J)	Standard Error	Sig	95% confidence interval	
					Lower bound	Upper bound
Assessment	Examination	316.66667	57.83276	0.000	174.1546	459.1788
	Verification	610.39080	40.74034	0.000	509.5799	711.2017
Examination	Assessment	-316.66667	57.83276	0.000	-459.1788	-174.1546
	Verification	293.72414	50.82240	0.000	167.1666	420.2816
Verification	Assessment	-610.39080	40.74034	0.000	-711.2017	-509.5799
	Examination	-293.72414	50.82240	0.000	-420.2816	-167.1666
Mean difference is significant at the 0.05 level						
Dependent Variable customs cost						

Source: SPSS Output of Primary Data, (2017)

Qualitative data collected from the informants of the study and they said that the cost of assessment was the highest of the others for importers of Addis Ababa customs branch of ERCA as indicated in the following table 15.

Table 15. Rate for customs procedures cost

Costs of Customs procedures	Ranks			Frequency	Percent
	1	2	3		
Assessment	20	3	4	27	74
Physical examination	15	9	3	27	55
Verification of declarations	14	13	-	27	51.8

Source: SPSS Output of Primary Data, (2017)

World Bank (2016) report about doing business showed the cost of border trade in Ethiopia challenged importers of Ethiopia and it was against the rules of international convention that advocates the minimal cost to facilitate trade.

VI.6. DETERMINANTS OF CUSTOMS RELATED COSTS

Multiple regression correlation tested the correlation of customs costs and the time of processing customs procedures. The hypothesis developed to test their correlation presented as follows.

H1: There is not any correlation between cost and time to process customs procedures.

H2: There is at least correlation between cost of procedures and time to process them.

The following model captured cost of compliance of procedures and time taken to process the procedures. Ordinary least square method estimated the model. The equation of the model is stated as:

$$C = \alpha + \beta 1x1 + \beta 2x2 + \beta 3x3 + \beta 4x4 + \epsilon_i \tag{1}$$

- Where C is compliance cost incurred by importers’ at the branch the study wishes to predict;
- α the intercept of the compliance cost line of multiple regression model;
- $\beta 1, \beta 2, \beta 3, \beta 4,$ are the coefficients of the independent variables $x1, x2, x3, x4$;
- $x1, x2, x3, x4,$ are independent variables among which the first three variables measured quantitatively and the rest are categorical variables measured qualitatively;
- ϵ_i is the error term that it represents the other explanatory variables that can explain the variation on the compliance cost incurred by the importers’ at the branch but missed in the independent variables that have been said in the above.

The prediction equation of the compliance cost incurred by the importers’ at the branch is:

$$\hat{C} = \hat{\alpha} + \beta 1x1 + \beta 2x2 + \beta 3x3 + \beta 4x4 \tag{2}$$

It is important to note that there is a symbol ‘hat’ over the head of each of the variables in the prediction equation of the cost except cost and alpha and error is no longer explicitly shown in the prediction model and assumed to be zero.

Moreover, the compliance cost incurred by the importers’ at the branch measured in Ethiopian Birr, but The time spent by the each of customs import clearance procedures measured in hour they consumed to process customs procedures of imports. Qualitative categorical variables measured in marginal other agency involvement in the regulatory compliance of border trading. The following table showed the model adequacy to explain the variation of the customs related costs of the importers’ of the branch.

Table 16. Model Summaries

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
	0.980 ^a	0.961	0.951	10.87549
a. Predictors: Constant, time spent by customs procedures and lack of cooperation				

Source: SPSS Output of Primary Data, (2017)

Coefficients of determination (Adjusted R-square) indicated the existence of the most variables in the prediction model that it was 95.1%, but the model did not capture 4.9% of variable that it could have effect upon the change of cost incurred to process customs procedures at Addis Ababa Airport customs branch of ERCA.

One way ANOVA test indicated the significance of customs procedures at Addis Ababa customs branch of ERCA and the result indicated the table 16 below and the hypothesis used to test their significance was

H1: Explanatory variables are not correlated.

H2: Explanatory variables correlated.

Table 17. ANOVA

Model	Sum of Squares	Df	Mean Square	F	Sig
Regression	43899.606	4	10974.901	92.790	0.000 ^a
Residual	1774.144	15	118.276		
Total	45673.750	19			
Dependent Variable: Compliance Cost					
Predictors: Constant, time spent by customs procedures					

Source: SPSS Output of Primary Data, (2017)

Following ANOVA, the results of tests of correlations indicated that there was significance among factors included within the model how their variation affected the cost of processing customs import clearance procedures at Addis Ababa customs, branch. The statistical result of the significance of the explanatory variables such as time for verification of documents indicated the absence of correlation with the cost associated with them.

Table 18. Coefficients

Model	Unstandardized coefficients		Standardized coefficients	T	Sig
	B	Standard error	Beta		
Constant	107.329	12.931		8.3	0.000
Lack of cooperation	7.729	3.293	0.130	2.347	0.033
Time of exam	8.346	1.628	0.594	5.126	0.000
Time of assessment	5.447	1.898	0.303	2.869	0.012
Time of verification	2.939	2.766	0.902	1.062	0.305
Dependent variable compliance cost					

Source: SPSS Output of Primary Data, (2017)

H1: There is not any significance among explanatory variables.

H2: There is significance among explanatory variables.

The table above indicated the significance of the explanatory variables. These variables are examination, assessment and verification of documents at Addis Ababa customs branch of ERCA. From the above table the p-value for examination, assessment and the cooperation of regulatory bodies involved in the border crossing goods with customs of Addis Ababa Airport branch is less than 5%. Therefore, there was significance among these explanatory variables upon the cost incurred by the importers of the branch.

Keeping other explanatory variables constant, additional time spent on examination of the goods imported within the branch the cost of compliance would be increased by Birr 8.346. Similarly, keeping the other variables constant, additional time to process assessment of the documents at the branch, cost of importers of the Addis Ababa Customs branch of ERCA would be increased by Birr 5.447. Less cooperation among regulatory bodies involved in the processing of customs procedures with the Addis Ababa customs branch of ERCA, the importers cost of compliance would be increased by Birr 7.7296. The prediction line equation model of the compliance cost of the importers of Addis Ababa customs branch of ERCA is:

$$\hat{C} = 48.97 + 0.93x_1 + 7.717x_2 + 8.733x_3 + 13.67x_4 \quad (3)$$

Ethiopia suffered during processing of customs procedures through the multiple inspections of the same imports and involvement and lack of the cooperation of regulatory bodies involved in the clearing process of imported goods.

VI.7. CAUSES OF DELAY AND COSTS

The following table result indicated that the main cause of delay and that of cost at Addis Ababa Customs branch of ERCA was lack of cooperation among the stakeholders of the branch those involved in the clearing of

imported goods of the importers of the branch. Lack of experts about the clearance procedures caused delay and cost for the importers of the branch of ERCA.

Table 19. Ranks

Causes of delay and cost	Mean Rank
Lack of Expert about clearance procedures	3.91
Inadequate procedure	3.64
Ethical problem associated with officers	2.81
Lack of Cooperation among stakeholders	4.01
Appeal	3.18
False & missing document	3.44

Source: SPSS Output of Primary Data, (2017)

The significance of the causes of delay and cost for the importers of the branch of ERCA because the p-value (0.000) less than 5% because the significance of causes of cost and delay was not by chance and the table below indicated the test statistics of Friedman.

Table 20. Friedman Test on the causes of time delay & Cost

N	88
Chi-Square	34.127
Df	5
Asymptotic sig	0.000

Source: SPSS Output of Primary Data, (2017)

The following table shows the pair-wise comparisons of causes of delay and cost based on the Wilcoxon-Signed rank test & 0.003% level of significance of Boniferonni adjusted alpha to reduce the inflation of level of error of the pair-wise comparisons test with the following proposed hypothesis.

H1: The median difference is zero for pairs of causes of cost and delay

H2: The distributions are different from zero.

Table 21. Wilcoxon Pair-wise Test

Pair-Wise Test Variables	Z-score	Asymptotic value sig (2 - tailed)	H0
Expert-Cooperation	-0.271 ^b	0.786	Do not Reject
Inadequate procedure-Cooperation	-1.024 ^c	0.306	Do not Reject
False and Missing documents-Cooperation	-1.349 ^c	0.177	Do not Reject
Ethics-Cooperation	-3.128 ^c	0.002	Reject
Appeal-Cooperation	-1.891 ^c	0.059	Do not Reject
Inadequate procedure-Expert	-1.525 ^b	0.127	Do not Reject
Missed Document-Expert	-1.466 ^b	0.143	Do not Reject
Ethics-Expert	-2.614 ^b	0.009	Do not Reject
Appeal-Expert	-4.696 ^b	0.000	Do not Reject
Missing document-Inadequate procedure	-0.364 ^b	0.716	Do not Reject
Ethics-Inadequate procedure	-1.553 ^b	0.120	Do not Reject
Appeal-Inadequate procedure	-3.378 ^b	0.001	Reject
Ethics-False document	-0.604 ^b	0.546	Reject
Appeal-False document	-3.307 ^b	0.001	Reject
Appeal-Ethics	-3.337 ^c	0.001	Do not Reject

Source: SPSS Output of Primary Data, (2017)

The asymptotic p-value for ethics – cooperation, appeal – expert, appeal – false document, appeal – ethics are less than the Boniferonni adjusted alpha (0.003). Therefore, the null hypothesis that the mean difference of the distribution is zero is rejected due to significance difference between their scores. That is the level of agreement of the respondents for cooperation and ethics, lack of expertise and appeal, appeal and false document and appeal and ethics was different.

The level of agreement on cooperation was higher of ethics, level of agreement of lack of expertise was higher of appeal, level for false document was higher of appeal and the level of agreement for ethics was higher of appeal because their Z-score is negative.

The officers of the branch during interviews underscored the lack of cooperation within the departments of customs clearance procedures of Addis Ababa Airport customs branch of ERCA that it caused the clearance process long time. Even though it was clear that the enforcement section was critical to safeguard officers of the clearance procedures from malpractices, the section and the officers of the branch relationship was not well as a result the clearance of imported goods at the branch delayed for long time at the branch.

Officials on their part pointed out the problem of coordination between regulatory bodies and the customs which was at infant stage as a result importers at the branch waiting for extra time to process their clearance of goods. Importers on their part said that lack of hand-in-glove work between different sections those involved in the clearance of imports at Addis Ababa Customs branch caused the importers of the branch to incur extra compliance cost and to wait for longer time to clear their goods at the branch. In addition, they faced the problem of regarding the valuation of goods due to lack of technically skilled officer as a result they waited long time and asked extra cost to clear their goods at Addis Ababa customs branch of ERCA.

The following table indicated the output of the declarations processed at the branch for past five years at the branch and exercised not through application of simple customs procedures. Therefore, customs procedures at the branch were not simple to process the imported goods for the past five years.

Table 22. Risk levels of Declarations for successive Five years

Red	Yellow	Green	Blue	Year
56218	26396	6135	434	2012
63.04	29.6	6.88	0.49	Percent
57729	39511	7536	580	2013
54.79	37.5	7.15	0.55	Percent
64501	46869	8004	539	2014
53.79	39.09	6.67	0.45	Percent
61617	67073	14094	142	2015
43.13	46.91	9.86	0.1	Percent
54054	79223	16068	80	2016
36.17	53.02	10.75	0.005	Percent

Source: Report on Risk, Directorate of ERCA, (2017)

VII.CONCLUSIONS

The purpose of this study was to assess challenges of the trade facilitation of customs import clearance procedures at Addis Ababa Airport Customs branch of ERCA that the importers faced at the branch. The following points were the conclusions of the findings drawn from the analysis of the study to maximize the expectation of importers and government from customs without depressing the objectives of trade facilitation and control.

There was not any pre-set standard time to process each of customs import clearance procedures at Addis Ababa Airport customs branch of ERCA. The officers of the branch did not also take care about the manuals that were guide lines to carry out operations of customs. ERCA has a responsibility for the application of its manuals & guidelines developed to undertake customs operations to facilitate trade and to minimize unnecessary compliance costs of importers. However, ERCA did not supervise the practical application of its manuals & guidelines that were crucial to facilitate trade.

The inefficiency of import clearance procedures significantly affect the objectives of trade facilitation. The average time to complete the operation of assessment, physical examination of goods against documents and verification of declaration took 6, 3&1day at Addis Ababa Airport customs branch of ERCA.

The pre-set work manual developed by the authority in 2013 is a guide line how and at what time the branches carry out their operations. The time set to process overall procedures of customs for red, yellow and green labeled goods is 81,17 and 7 minutes at its customs branches across Ethiopia. The finding indicated that there was significance deviation of time to process imports at the branch and that of time set to carry out customs procedures at each branch of the ERCA.

Moreover, the assessment operation consumed on average six days where as that of physical examination against documents took on average three days. Also the cost incurred by the importers of branch for each of customs clearance procedures were significantly different and the average cost to process assessment exceeds that of the others.

The cost and time for the customs procedures significantly correlated. An additional hour spent on assessment operation the importers at the branch subjected to cost of Birr 5.447 and Birr 8.346 to that of physical examination at Addis Ababa Airport customs branch of ERCA. Also the declarations over past five years processed through excessive control rather than the application of simple customs procedures at the branch. This problem happened in the branch due to the application of efficient customs procedures.

The main causes of cost and delay for imported goods were lack of technical skill to handle the operations of tariff classification, valuation and determination of the country from where it imported to Ethiopia. The second problem that challenged the importers at the branch was lack of integrity among the officers of the branch and lack of confidence to make decisions of valuation & tariff classifications. Lack of cooperation within departments of import clearance procedures particularly spontaneous inspection section and that of examination made the imports to delay for more extra time that accompanied by unnecessary cost. In addition other regulatory bodies that inspected the goods of import took lion share of delay and cost.

VIII. RECOMMENDATIONS

Based on the study of the challenges of trade facilitation in customs import clearance procedures at Addis Ababa Airport Customs branch of ERCA, the following recommendations were forwarded as a strategy to how to solve the problems challenged the clearances of import goods.

VIII.1. FOR THE BRANCHES AND ETHIOPIAN REVENUE AND CUSTOMS AUTHORITY

The overall object of trade facilitation is the improvement of the environment for international trade by reducing time required to process each of activities to ease the flow of international. It took over 6 days to process assessment at Addis Ababa Airport customs branch of the ERCA. This in turn significantly has negative influence upon border trading through the branch particularly and the country at large. This was a symptom of the in efficiency of the procedures of customs clearance at that branch. Therefore, it would be better for the branch to undertake a time release study to identify the type of the problem and its cause to take corrective action to improve the time to process the procedures.

Efficient customs procedures are the main tools for easy flow of international goods that cross the borders. According to the Revised Kyoto convention advocates the countries involved within international trade has to simplify the customs procedures as a result both traders and customs benefited from the trade of border crossing goods. But, on the other hand the inefficiency of the customs procedures adversely affects the easy flow of border crossing goods.

The report of risk directorate of ERCA produced indicated the declarations of the import goods at Addis Ababa customs branch for past five years processed through in efficient customs procedures. Because the majority of the declarations of imports passed through inefficient procedures of the customs. This in turn adversely affected the customers of the branch particularly and the country at large. Therefore, it is better for the branch to employ risk based selective system to process the declarations submitted to the branch rather than excessive control.

The technical capacity of the officers of customs significantly affects the flow of border crossing goods not only at the Addis Ababa customs branch of ERCA but also all over the customs branches of ERCA. So the authority has responsibility to build the capacity of its staff in order to enable its staff carry out their duties and keep pace with the growing demands of global trade. Therefore, ERCA should have to train not only its officers but also the clearing agents in order to satisfy the demands of trade facilitation.

ERCA has taken various efforts to satisfy the demands of government and traders through time, among the efforts, publications of proclamations, guiding manuals and regulations. Even though it is a good to produce these regulations, it requires continuous supervisions of the practical application those guidelines and regulations in which customs operations based to satisfy the growing demands of trade facilitations. Therefore, it is better for ERCA to supervise the practical applications of working manuals, guidelines and proclamations across its branches.

VIII.2. FOR GOVERNMENT

The movement of border crossing goods involves various procedures and bodies to process the movement of the import and export goods. One of the main factors that imposed extra cost and time upon processing imports of goods at Addis Ababa customs branch was weak coordination within bodies that involved in the clearance of import goods at the branch. Therefore the government has to assign responsible body to supervise and monitor the overall performance of the cooperation of the stakeholders that involved in the clearance of border crossing goods into and out of Ethiopia.

VIII.3. FOR RESEARCHER

The study did not include all other activities (customs procedures) that the importers requested to clear their internationally traded goods across the branch at particular and regulations of other regulatory bodies that their procedures and regulations significantly affected the activity of trade facilitations. Therefore, it would be better to assess those variables that take long time and costly for international trade to fill the gap of the study.

IX. REFERENCES

1. Business, D. (2015). *Going beyond efficiency*. International Bank for Reconstruction and Development. The World Bank. 12th edition. Washington DC.
2. De Wolf, L., Sokol J.B. (2005). *Customs Modernization Handbook*. World Bank, Washington D.C.
3. Durgavich, J. (2009). *Customs Clearance Issues related to the Import of Goods Related to Public Health Programs*. Arlington, VA: United States Agency for International Development, Deliver Project, Task Order 1.
4. ERCA, (2007). *Business Process Re-engineering Study*. Addis Ababa, Ethiopia (unpublished).
5. ERCA, (2010). *Training on customs procedures and techniques for Trader*. Addis Ababa, Ethiopia (unpublished).
6. ERCA. (2013). *Working Manual Addis Ababa, Ethiopia* (unpublished).
7. Hummels, D. (2007). *Transportation Costs and International Trade in the Second Era of Globalization*. *Journal of Economic Perspectives*, 21(3), 131–154.
8. Hummels, D., Schaur, G. (2001). *Time as a Trade Barrier*. National Bureau of Economic Research, Working Paper, 17758. Retrieved November 19, 2018 from: <https://www.nber.org/papers/w17758>.
9. Martinus, C.V., Carballo, J., Graziano, A. (2013). *Customs as Doorkeepers: What are their effects on the international Trade? Inter-American Development Bank*. Retrieved January 26, 2018 from: https://www.usitc.gov/research_and_analysis/documents/Customs_as-Doorkeepers-What_Are_Their_Effects_on_International_Trade.pdf.
10. Nordas, H. (2007). *Time as a trade barrier: Implications for low-income countries*. *OECD Economic Studies*, 2006(1). Retrieved January 14, 2018 from OECD iLibrary: https://www.oecd-ilibrary.org/economics/time-as-a-trade-barrier-implications-for-low-income-countries_eco_studies-v2006-art4-en.
11. OECD, (2003). *Quantitative Assessment of the Benefits of Trade Facilitation*, Working paper of The Trade committee, OECD. Retrieved January 14, 2018 from OECD iLibrary: https://www.oecd-ilibrary.org/trade/overcoming-border-bottlenecks/quantitative-assessment-of-the-benefits-of-trade-facilitation_9789264056954-2-en.
12. OECD, (2005). *The Cost and Benefits of Trade Facilitation*. Policy Brief. Retrieved December 8, 2017 from: http://www.unece.org/fileadmin/DAM/trade/forums/forum02/presentations/session_ii/akleitz.pdf.
13. Tsegaye, T., Endris, N. (2011). *The Impact of Border Clearance Procedures on the Cost of Doing Business in Ethiopia*, Private Sector Development Hub, Addis Ababa Chamber of Commerce and Sectoral Associations.
14. Uzzaman, M.A., & Yosuf, M.A. (2015). *The Role of Customs and Other Agencies in Trade Facilitation in Bangladesh: Hinderances and ways Forward*. *World Customs Journal*, 5(1), 29–42.
15. WCO – World Customs Journal. (2008). *Customs and Trade Facilitation: Concept to Implementation*. International Network of Customs Universities (INCU), Australia, 2(1). Retrieved January 5, 2017 from: [http://worldcustomsjournal.org/Archives/Volume%202,%20Number%201%20\(Apr%202008\)/00%20Complete%20Issue%20WCJ_Volume_2_Number_1.pdf#page=23](http://worldcustomsjournal.org/Archives/Volume%202,%20Number%201%20(Apr%202008)/00%20Complete%20Issue%20WCJ_Volume_2_Number_1.pdf#page=23).
16. WCO – World Customs Journal. (2015). *Safe framework of standards*. Retrieved March 17, 2017 from: www.wcoomd.org/en/topics/intgrety.
17. Widdowson, D. (2005). *International Trade Facilitation: The Customs Imperative*. Presentation to the APEC Workshop on the WTO Trade Facilitation Negotiations, Kuala Lumpur. Retrieved December 7, 2017 from: http://customscentre.com/wp-content/uploads/2012/09/international_trade_facilitation_the_customs_imperative.pdf.
18. Widdowson, D. (2007). *The changing Role of customs evolution or revolution*. *World Customs Journal*, 1(1), 31–37.
19. Wilson, J.S., Mann, C.L., Otsuki, T. (2003). *Trade facilitation and economic development: A new Approach to Quantifying the Impact*. *The World Bank Economic Review*, 17(3), 367–389.
20. Wilson, J.S., Mann, C.L., Otsuki, T. (2005). *Assessing the Benefits of Trade Facilitation: A global Perspective*. *World Economy*, 28(6), 841–871.

21. World Bank. (2014). Strengthening Export Performance through Improved Competitiveness in Ethiopia. The World Bank. Retrieved January 15, 2017 from: <https://olc.worldbank.org/content/strengthening-export-performance-through-improved-competitiveness-ethiopia>.
22. World Bank. (2016). Trading: across Borders. Retrieved January 27, 2017 from: <http://www.doingbusiness.org/data/exploretopics/trading-across-borders>.