

Effects of Procrastination on Customs Clearance Cost: The Case of Kality Customs Branch in Ethiopia

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Abstract

This study has examined factors affecting customs clearance costs in Ethiopian Revenues and Customs Authority, Addis Ababa Kality branch. The main purpose of the study was to investigate the predictors of the customs clearance costs. To this end, primary data were gathered from importers, clearing agents and custom employees by questionnaire and in-depth interview. The quantitative data gathered were analyzed by descriptive and inferential statistics. Qualitative data were analyzed by using three stage processes of data reduction, data display and conclusion drawing. The concurrent triangulation strategy was used to counter balance the conclusion reached from both qualitative and quantitative data analysis. The result from data analysis shown that, the delay time has a significant effect on customs clearance cost. It was evidenced that an hour delay in clearance time boost customs clearance cost by Br. 42.165; holding other things constant.

Keywords: Clearance procedure, Time delay, Cost

1. Introduction

Cross boarder trading has shown a dramatic increase due to Globalization and these have placed an increasing demand upon customs (Lane, 1998; quoted in DeWolf & Sokol, 2005). As a result, equally important focus has been placed on trade and regulatory processes conducted at the border as indicated by DeWolf & Sokol (2005) to ensure the time required for trade-related procedures reduced where appropriate. Thus, Trade facilitation becomes one of the objectives of customs authority and other international organizations. It aimed at ensuring the movement and clearance of goods across borders within the shortest time at the minimum cost as Dominca et al. (2012) notified.

The influence of customs Authorities and other involving agencies on clearance time is explained by Martinica (2013) that transit time between origins and destinations can be influenced by actions of public agencies that intervene in the trade flows to see the compliance of shipments with trade regulations. This indicates customs procedures can increase overall clearance delay time at specific customs station. For instance, early nineties the customs delays in the Sub-Saharan African was highest in the world, 12 days on average, but lowest in other countries like Estonia and Lithuania; require only one day for customs clearance; in Ethiopia it averages more than 30 days (Buyonge & Kireeva, 2008).

The literature also suggests that the complexity or ease of customs and administrative procedures has an impact on trade costs. For instance time delay, unavailability of information on customs import procedure, lack of one stop service especially lack of single window system and other direct and indirect costs impose trade costs.

Prior studies on challenges of customs clearance procedure (e.g., Towfik, 2013, Tweldeberhan, 2011 & World Bank, 2014) have given a clue about national average delay time in clearance and areas where delay takes place in Ethiopia. However, they didn't addressed empirically, how long does it take for a specific importer-exporter to clear customs at specific customs station and what additional cost incurred due to time delays in customs clearance.

The main objectives of this study is to analyze time delays that traders face in customs clearance process, and to examine the significant predictors of the customs clearance costs in Ethiopian Revenues and Customs Authority (ERCA), a Case of Kality Customs Branch. Further, study identified clearance delay time at Kality Customs Branch Office is 4 days and it may go even up to months if disagreement arise regarding to customs duty amount. In addition, only time delay in customs clearance has a significant impact on clearance cost. Therefore, time delay increases clearance cost by birr 42.165 in one additional hour; holding other factors constant.

2. Literature Review

Time delays in international transactions impose trade costs as stated by Jerónimo et al (2014). Jerónimo et al. (2014) described impact thus:

“Imports from foreign countries that arrive at their destination port must be unloaded, moved to customs, inspected, cleared and finally picked up by the importer. These procedures take time and long delays impose a cost. Lengthy clearance times raise inventory and financing costs, impact a firm's ability to respond to market fluctuations and make it more difficult to plan. The total trade costs that imposed by clearance time delay consists of two parts, observable transportation costs and unobservable costs related to observable delays at the port of entry.”

In addition to time delay; goods or cargo examination cost, unavailability of information on clearance procedures when importing goods and lack of one stop service impose trade costs. For example, Air and Surface Logistics website (2016) explained customs examination cost that importers are required to bear when Customs and Border protection examine shipment imported into the United States. Accordingly, exam fees can range from \$25 (per pallet) to as much as \$350 (40' container) for X-Ray exam and it can range from \$500 to well over \$1000, for intensive exam. Similarly, in Ethiopia examination of documents and goods are also indicated in ERCA's Customs problems 859/2014 and the cost of taking samples and cost of examination as well as any expense related thereto shall be borne by the declarant.

Regarding availability of information, trade facilitation agreement calls upon WTO members to promptly publish all information on trade-related regulations and procedures of border agencies. Moreover, Organization for Economic Co-operation and Development (OECD) (2013) quantitative analysis for the group of low income countries, which includes Ethiopia, shows that the areas with the greatest impact on increasing bilateral trade flows and lowering trade costs are formalities (documents, automation and procedures) and information availability.

The basic concept of a one-stop service center according to Cal Student Central website (2016) is that, customers are able to take care of matters related to fees and billing, payments, and registration in one visit, without having to be referred elsewhere. However, in customs environment this concept is more related with 'single window' which provides one entrance, either physical or electronic for submission and handling of all data and documents related to clearance. In Ethiopia there is no single window and there for provision of clearance service at one-stop is very important to expedite clearance and release of goods.

The condition for release of goods in ERCA is also indicated by Tsegaye and Endrias (2014) and they are consignments routed via the Green (are low risk imported goods), Yellow (medium risk goods that handed over for document scrutiny), and Red Channel (declaration carrying heterogeneous imported products who do not have profiles with customs).

3. Methodology

In this study the descriptive and inferential statistics used as the main design. Self-enumerated survey and key informant interview were used to collect data from 261 sampled respondents selected from importers, clearing agents and customs employees by simple random and purposive sampling. The study has employed a combination of quantitative and qualitative approaches to counter-balance the limitations of one approach with the strengths of the other and enhance reliability of the results. In addition study adopted concurrent triangulation strategy. Therefore, to achieve study purpose the following two research questions (RQ) were addressed and two hypotheses were also formulated and tested to answer the research questions. These are:-

RQ1. What are the time delays in customs clearance process at Kality Customs Office?

RQ2. What are the significant predictors of customs clearance costs at Kality Customs?

The hypotheses tested are:

H₁: Mean time delay in custom clearance between Green, Yellow and Red channel are equal.

H₂: Clearance time delay, unavailability of information on clearance procedure, unavailability of one-stop service and sample transportation costs are significant predictors of clearance delay costs at Kality Customs Office.

4. Results and Discussion

4.1. Qualitative Analysis

The qualitative part of the study comprised interviews with a view to assess customs clearance delay and factors affecting costs that caused by time delay. Therefore, this section starts by presenting general customs clearance procedure, time delay and factors affecting clearance cost based on above two research questions.

4.1.1. General Customs Clearance Procedure

The customs declaration process for imported goods, at Kality Customs, starts when documents comply with desired controls through Distance Trade Input (DTI) registration made by declarant. Then, release of goods takes place after the fulfillments of all the required formalities. One of the team coordinator of clearance unit at Kality Customs (Participant 1) describes the process thus¹

'Clearance process starts at transit unit; then documents transmitted to phase-houses. At phase houses, the risk level of goods identified [...], & then documents passes to assessment officer when declaration is risk free, otherwise it passes to examination officer for verification, and an assessment officer who compute value after examination will be indicated on document at same time [Participant 1, team leader].'

¹ There were a total of 10 interview participants in the study from importers, customs clearing agents and Kality Customs Office. For the purpose of analysis, each participant was assigned a number 1 to 10.

A discussion with Participant 1 also indicates that different bodies will involve in the clearance process when risk level of good is red. This also leads to time delay in customs clearance on imported goods. Therefore, time delay and its impact on clearance cost were identified through interviews with importers, clearing agents and custom employees of Branch Office. Following sub section presents the interview results using the guiding research questions:

RQ1. What are the time delays in customs clearance process at Kality Customs Office?

4.1.2. Import Clearance Time

The Kality Customs has specified standard time for a service it provides to customers. As a result, office employees are expected to deliver service within or below the indicated time standard. The time standard for import custom clearance is 10 minute for Green , 2-3 hour for Yellow and 6- 8 hour for Red risk category (ERCA, 2007).

With regard to clearance time delays, respondents from the importers and clearing agents stated that fear of decision makings by employees along with the shortage of skilled manpower and logistics often created problems in the on time delivery of clearance service. One respondent [respondent 2] from the importers stated in the words:

‘At Kality Branch, clearance of a good usually takes two up to five days. If a disagreement arises with regard to computed duty amount it may take more than one month. In that case, we suffer from on time delivery of goods. The reluctance of officers in decision making, offices’ tendency of physical examination and other factors contribute to the delay. Sometimes unknowingly problems created by declarant during filling declaration and delay in issuing corrections still exist at this branch [participant 2, importer].’

The maximum delay suggested by respondents was one months. However, the majority of them agreed that an average delay time in clearance process at this branch was 4 days.

4.1.3. Factors Affecting Costs in Customs Clearance Process

In this study, some factors that expose importers to cost and impacts of those factors on cost were assessed and the results were presented using the following guiding research questions:

RQ2. What are the significant predictors of customs clearance costs that traders face at Kality Customs?

i. Delay Time In Customs Clearance

There are warehouse fees for goods stored in temporary customs storage or bonded customs warehouse, established for rental use, from the date of deposit until release according ERCA’s Proclamation 859/2014. On the other hand, delay in the prompt delivery of imported good/cargo, as Tsegaye and Endris (2011) described, entails lack of just-in-time delivery and tying of money in the form of insurance bond, and escalation in the cost of money or interest rate. Tsegaye and Endris (2011) added the effects of delay time on Ethiopia as:

‘Delay time brings effects on delay in the clearance of imported goods for many days, implying a) 0.8% ad-valorem tariff per day, because the goods cannot be inspected unless they are unloaded; b) Welfare loss to consumers of imported goods as they are forced to pay higher prices as a result of the delays; c) Loss of welfare and competitiveness to producers which use imported inputs for export production. d) [...] a total loss to the importer, if a cargo is disposed of by Customs.’

Interview with clearing agent on effects of time delay in clearance process also implied that, delay has serious effects on cost which is direct and indirect effects on consumer. For example Participant 3 described this in word as:

‘We face delay in clearance at Kality Customs Branch Office; due to this we pay warehouse fees on additional day. There are also time value for import products and importer loss this values due to delay. For example, when goods imported to sale at holy day and do not released on that time, its price will decrease because of decrease in demand of products in other time. The manufactures who imports raw materials also incur cost because materials delay due to clearance process and as a result work activity at factory will stop. On other hand, owners [importers] are paying salary to employees without stopping. To cover these costs and to get profit they raise price of goods. This will harm society and country [participant 3, clearing agents].’

Therefore, the literature and interview result suggests time delay in clearance process expose importers to costs and this in turn transferred to end-users. In general, it seems delays entail a series of costs to importers and to the national economy.

ii. Cost to Examine Sample of Goods

In the ERCA’s customs proclamation No. 859/2014, the cost of transport of the goods to the place where they are examined or samples are taken indicated as to be borne by the declarant. However, interview respondents concerning this issue commented [participant 4] as:

‘Sample is simple; ourselves take it to examination place and we didn’t incur cost. However, when proportion of sample taken is very high we pay for transportation. But this is rare case [participant 4, importer].’

Therefore, it seems that cost incurred due to examination of sample was not major concern for importers even if they make payment when sample is taken to place where test conducted.

iii. Access for Information on Custom Clearance procedure

The availability of information through publication of trade information is one among eleven OECD trade facilitation indicators. However, an overview of areas for trade facilitation, provided in OECD trade facilitation indicators-Ethiopia (2013) shows documentation, automation, procedure and information availability are low and below low income countries and Sub-Saharan countries.

Interview with participants revealed that, Office is making information available for customers through different media and training. However, some respondents indicated that they have no adequate knowledge on directives and regulations because Authority changes directives over time. Interview participants [participant 1] agree with issues raised and commented that:

‘Our office giving training and education to traders to create awareness; government recognized this problem and issued regulation on custom clearing agents in 2004 to fill this gap. As result, clearing agent can deal with office on behalf of importer and exporter [participant 1, team coordinator].’

However, interview with importers shows that they are incurring cost due to lack of adequate knowledge regarding custom clearance process. For example, undeniable fact they commented was they are incurring reasonable and unreasonable cost because clearing agents are asking them high payments for service they delivered.

iv. Provision of One-Stop Service

Interviews with customs official revealed that, office have been showing progress after the restructure in 2012. The customs operations were re-organized in to different clearance unit based on kind/type of imported goods. As a result, importers can get any service from one place depending on type of goods they imported. The Clearing agents agree with this idea except examination place of goods because, examination place somehow far away from place of office. Therefore, a phenomenon implies that lack of one stop service didn’t expose importers to unnecessary cost at Kality Branch Office.

Table 4.1: Summary of Patterns

Parameters		Key summaries of interview data of		
		Custom employees	Clearing agents	Importer
clearance delay	time	<ul style="list-style-type: none"> - Office has time standard for every service - They are unable to provide service according to time standard because different reasons - It is difficult to provide clearance service according to time standard 	<ul style="list-style-type: none"> - clearance of a consignment usually takes 2-5 days - it takes more than 5 days when the risk level of good is red because during this time a dispute arises with regard to classification, valuation etc - different bodies involve if risk level is red and this take enormous time 	<ul style="list-style-type: none"> - we face delay at Kality customs branch due to length clearance process - clearance takes 2 -5 days and it may take months if problem exists in declaration
Factors that has impact on costs incurred due to delay (delay time, sample transportation cost, availability of information and one stop service		<ul style="list-style-type: none"> - provide training to importers and clearing agents on directives and current issues - rearranged clearance unit based on type of imported items to provide service at one place - customs clearing agents directive issued to support importers concerning clearance process and other issues - as a result clearing agents under take customs clearance process on behalf of importer 	<ul style="list-style-type: none"> - Importers pay the warehouse fees for each additional day of delays and they forgo the time value of the products that imported aiming to sale on hold days. - Firms that uses imported raw materials for the production of output face losses by paying salaries to employees without working to them because of to lack of raw material. - damage of perishable products at stay in warehouse, - there are distance between cargo examination place and clearance unit office 	<ul style="list-style-type: none"> - A transportation cost of sample of imported goods to examination place is low. - sometimes no costs incurred to transport sample if item imported was similar and its weight is low - make payment to clearing agents for services under taken on behalf of them - this cost may be reasonable and unreasonable cost

Source: interview result, 2016

4.2. Quantitative Analysis

4.2.1 Hypothesis testing

Hypothesis 1 (H₁): Mean time delay in custom clearance between Green, Yellow and Red channel are equal.

Time take to finish clearance process in Green, Yellow and Red channel of clearance procedure from the arrival

of consignment at Kalitiy Customs Branch Office up to the release was measured by hour. One way ANOVA is an appropriate statistical technique to test this hypothesis. The descriptive statistics of time taken to finish clearance procedure in these three categories of channels of clearance process shows that the consignment that routed through Red channel seems to have highest clearance delay time as its mean delay time is 86.27 hour. The Green channel seems to have the lowest clearance delay time as it have an average clearance time of 12.05 hour (Table 4.2)

Table 4.2: Descriptive Statistics of Clearance Time

Variable	Valid N	Minimum hour	Maximum hour	Mean hour	Std. deviation
Over all clearance delay time	176	1	240	55.69	43.462
delay time in Green channel	37	1	72	12.05	17.850
delay time in yellow channel	46	1	72	28.98	19.394
delay time in Red channel	93	2	240	86.27	34.881

Source: Survey data, 2016

To identify weather the observed difference in mean customs clearance time delay in the above three channels is statistically significant or not, test of equalities were made on those means using ANOVA. The output of ANOVA test is shown in Table 4.3 below.

Table 4.3: Output of ANOVA Test of Mean Time Delay

ANOVA					
Logtim	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	48.095	2	24.047	120.039	.000
Within Groups	34.657	173	.200		
Total	82.752	175			

Source: Survey data, 2016

$$H_0: \mu_1 = \mu_2 = \mu_3$$

H_1 : at least two of means are different: where, 1, 2 and 3 represents mean time of Green, Red and Yellow channel respectively.

Test statistic (F - test) is 120.039 and p-value is 0.000 there for the null hypothesis is rejected since the p-value = 0.000 is less than 5%. This shows that hypothesis 1 above is not supported at the five percent level of significance. There for, there is a statistically significant difference in mean time delay in custom clearance in Green, Yellow and Red channel. In order to identify in which clearance procedure have highest or lowest mean time delay, it requires test of homogeneity of variance because it helps to verify whether the variances of average clearance time in above three cases are statistically significant or not. The SPSS output for homogeneity of variance is shown below in Table 4.4.

Table 4.4: SPSS Output of Homogeneity of Variances of Time

Test of Homogeneity of Variances				
Logtim	Levene Statistic	df1	df2	Sig.
	54.604	2	173	.000

Source: Survey data, 2016

The levene's tests of variances:

$$H_0: \sigma_1^2 = \sigma_2^2 = \sigma_3^2$$

H_1 : at least two of variances are different: where number 1, 2 and 3 represents Green, Red and Yellow channel

The Levene's test from Table 4.4 above has p-value (sig) of 0.000. Since this value is less than 5%, the null hypothesis is rejected. This indicates there is significant variation in clearance delay time in goods cleared through Green, Red and Yellow risk channels at Branch office and this variation in some risk category is large and in some risk categories is small. To identify in which risk category of clearance procedure has highest and lowest mean time delay, it requires application of pair- wise comparisons of means of clearance time delay. Since equality of variances assumption is rejected in first test (Table 4.4) the appropriate tests are those under the equal variances not assumed. The output of Post Hoc tests (multiple comparisons) is shown below (Table 4.5).

Table 4.5: SPSS Output of Pair Wise Comparisons of Mean Time Multiple Comparisons

Multiple Comparisons						
Dependent Variable: Logtim						
Tamhane						
(I) Type of Channels	(J) Type of Channels	Mean Difference (I-J)	Std.Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Green channel	Yellow channel	-.708*	.138	.000	-1.04	-.37
	Red channel	-1.321*	.117	.000	-1.61	-1.03
Yellow channel	Green channel	.708*	.138	.000	.37	1.04
	Red channel	-.613*	.081	.000	-.81	-.41
Red channel	Green channel	1.321*	.117	.000	1.03	1.61
	Yellow channel	.613*	.081	.000	.41	.81

*. The mean difference is significant at the 0.05 level.

Source: Survey data, 2016

The multiple comparisons for all channel has a p-value (under sig column) = 0.000 and this values are less than 5%. Accordingly, analysis to identify the highest and lowest mean time delay among Green, Yellow and Red channel of customs clearance was carried depending on multiple comparisons output and results identified is shown in below Table 4.6.

Table 4.6: Discussions of Results of Multiple Comparisons

	I	J	Hyp othesis	Hyp o. Deci sion	Valu e of I-J	Deci sion	Res ult
1st Row	Green channel (G)	Yellow Channel (Y)	H ₀ : $\mu_G = \mu_Y$ H ₁ : $\mu_G \neq \mu_Y$	Reject H ₀ : since p-value= 0.000 < 5%	- 0.708 (-ve)	I < J = G < Y	Time delay in G < Y
2nd Row	Green channel (G)	Red channel (R)	H ₀ : $\mu_G = \mu_R$ H ₁ : $\mu_G \neq \mu_R$	Reject H ₀ : since p-value= 0.000 < 5%	-1.321 (-ve)	I < J = G < R	Time delay in G < R
3rd	Yellow channel (Y)	Red Channel (R)	H ₀ : $\mu_Y = \mu_R$ H ₁ : $\mu_Y \neq \mu_R$	Reject H ₀ : since p-value= 0.000 < 5%	- 0.613 (-ve)	I < J = Y < R	Time delay in Y < R

Source: Survey data, 201

The results of Table 4.6 above shows, the time delay in customs clearance procedure through a Red channel was greater than that of Green and Yellow channel. There for the highest mean time delay in customs clearance process was in the consignment routed through the Red channel and the second highest is in the Yellow channel. The lowest mean time delay was in the Green channel.

Hypothesis 2 (H2): Clearance time delay, unavailability of information on clearance procedure, unavailability of one- stop service and sample transportation costs are significant predictors of clearance delay costs at Kaliti Customs Office.

To test this hypothesis, a linear regression was conducted and in this case, the predictor variables, time delay, access to information, one stop service and sample transportation cost are the independent variable and the criterion variable clearance cost is the dependent variable. The direction and amount of influence was assessed by using p-value (sig) and unstandardized coefficient of beta (β). As the p- value (sig) of the estimated coefficients of independent variables indicates (Table 4.7), all the variables had values greater than 5% except clearance delay time. This implies that, only clearance time delay has significant impact on cost incurred in processing custom clearance at Kaliti Branch Office. Therefore, as time delay in clearance increase by one hour, customs clearance cost increases by birr 42.165; holding other factors constant. On the other hand, lack of access to information on import clearance process, unavailability of one-stop service and sample exam cost have no statistically significant impact on clearance cost.

Table 4.7: SPSS Output Of P-Vale and Coefficient Beta

Coefficients ^a							
Model	Un standardized Coefficients		Standardized Coefficients	T	Sig.	95.0% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
(Constant)	-270.493	566.316		-.478	.634	-1392.914	851.928
Clearance delay time in hour	42.165	5.192	.614	8.121	.000	31.874	52.456
Do you have information about custom clearance	721.096	485.575	.119	1.485	.140	-241.298	1683.490
Do you receive one stop service	-580.730	486.743	-.098	-1.193	.235	-1545.439	383.980
Cost incurred while transporting sample to be tested	.615	1.230	.037	.500	.618	-1.822	3.053

a. Dependent Variable: Cost incurred due to delays

Source: Survey data and SPSS output, 2016

6. Conclusions

Some of the existing literature (e.g., Towfik, 2013 & Tweldeberhan, 2011) works on the challenges of trade facilitation from the prospects of import clearance procedures and suggested areas that lower the speeds of customs clearance. Furthermore, the limited prior research (e.g., World Bank 2014; Tweldeberhan, 2011 & Tsegaye and Endris, 2011) suggested national average and weighted average customs clearance time in Ethiopia. However, clearance delay time and its effects on customs clearance costs were not sufficiently explored empirically as yet. Thus, studies to assess clearance time delay and factors affecting clearance cost in diverse empirical settings become necessary and would offer practical significance to several stakeholders. There for, considering above issues this study has analyzed time delays and its impact on customs clearance costs. It also examined the impacts of other factors.

The quantitative result of study revealed that the average clearance delay time of Green, Red and Yellow channel at Kality customs Branch Office was 55.69 hours i.e.; more than 2 days. More specifically, the ANOVA test shows that customs clearance delay time appear to be higher in the consignment routed through the Red channel which was 86.27 hours (4 days). This test result is consistent with qualitative results of the customs clearance time delay. The interview results of the suggested that the average clearance time delay at Kality Customs Branch was 5- 6 days; 2 days from this days seems normal clearance time and it seems to take 4 additional days when problem in customs clearance process occurred.

The significant predictors of the customs clearance costs was also examined and found that time delay in clearance process raises costs and it in turn directly transferred to end-users, including consumers and export-oriented producers. The hypotheses tested provides evidence that; as delay time in customs clearance increase by one hour, customs clearance cost increases by birr 42.165 at study Branch Office, keeping other factors constant. In contrast, it found that sample exam cost, unavailability of information on import clearance procedure, and absence of one-stop service are not imposing significant impact on customs clearance costs at study branch. This result is also consistent with interview results.

In general, custom clearance time delays, which driven by different factors, differs across customs clearance channels like Green, Yellow and Red at Kality Branch Office. It is also greater than ERCA's targets of maximum 8 hours of clearance of imports. Thus, targeted trade facilitation on import clearance process of Red channel has a direct cost reducing benefit. Study also examined impacts of some predictors on customs clearance cost and result imply that, clearance time delay have significant impact on costs. Therefore, to mitigate this impact there should be the separation of release of goods from clearance of goods since this practice could reduce customs warehouse costs.

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