

ADDIS ABABA UNIVERSITY
ADDIS ABABA INSTITUTE OF TECHNOLOGY
SCHOOL OF CIVIL AND ENVIRONMENTAL ENGINEERING



**Assessing Freight Transport Performances in Relation to
Delays in Ethiopia:**

the case of Addis Ababa-Djibouti Corridor

A Thesis Submitted to Road & Transport Engineering Stream

By Kalkidan Waktola Bedassa

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Addis Ababa Institute of Technology
School of Civil and Environmental Engineering

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Signed by the Examining Committee:

Mr. Abel Kebede

Internal Examiner

Signature

Date

Dr. Alemayehu Ambo

External Examiner

Signature

Date

Professor Girma Gebresenbet

Advisor

Signature

Date

School or Center Chair Person

UNDERTAKING

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Kalkidan Waktole

ABSTRACT

The major contributing factor for low level of logistic performance in Ethiopia is freight transport delay. Delay affects trade performance of a country in terms of cost, time, reliability, predictability and customer services. This study is designed to estimating the actual time it takes for freight to be transported and delivered to the customers, identify the major factors affecting the logistics service quality in terms of delay, identify the constraints that the delay of freight transports has caused to the country, customer, and service provider and finally to develop recommendations based on the analysis made to improve the delivery system by minimizing delays. In order to produce results which are directed to answer the stated problems and meeting the objectives, both secondary and primary data were collected. In relation to secondary data, necessary documents from different public and private organizations were gathered also related documents were reviewed. Regarding primary data, total average time of customer waiting for commodity were measured and questioners were presented to different stakeholders and analyzed using SPSS software. As a result the analysis finds out that on average it takes 37.4 days for transporter companies to transport goods and deliver to customers. The causes of delay are factors related to Djibouti port management problems, Poor condition of Djibouti-Addis Ababa road, bureaucracy, long clearance time at dry ports and check points, poor information flow and lack of integration between stakeholders. At last, the study identifies the impact of freight delay to different bodies and realizes that delay can affect driving behavior, motivation and performance of truck drivers. Likewise, it can reduce truck transaction, performance of freight transporters and customer service and it can even cause waste of time and extravagancy to the driver, can increases storage cost, market price, can reduce goods quality and even perishable goods can be out of date due to delay. Lastly, the study recommends the improvement of Djibouti port management and shipping service of the port, Djibouti-Addis road, the capacity and integration of logistics service providers such as; transport companies, transit service providers, truckers, brokers and shipping agents, the level of service of warehouses, dry ports, customs authority, and it should be simplified & computerized for the benefit of the country and proper implementation of the truck demurrage proclamation.

Key words: Delay, Local Dry port, Djibouti port, Warehouse.

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LIST OF ABBREVIATION

3PL/4PL:	Third Party logistics/Fourth Party logistics
EFTC:	Ethiopian Freight Transport Corporation
ESL:	Ethiopian shipping lines
ESLSE:	Ethiopian shipping and Logistics service Enterprise
EU:	European Union
FDRE:	Federal Democratic Republic of Ethiopia
GDP:	Gross Domestic Product
GOE:	Government of Ethiopia
GPS:	Global position system
HGVs:	Heavy goods vehicles
ICT:	Information Communication Technology
IT:	Information Technology
LLDCs:	Land Locked Developing Countries
LPI:	Logistics Performance Index
MDG:	Millennium Developmental Goal
MoT:	Minister of Transport
MTSE:	Maritime and Transit Services Enterprise
OECD:	Organization for Economic Cooperation and Development
P-C:	Production–Consumption
SC:	Supply Chain
SCM:	Supply Chain Management
SPSS:	Statistical Package for the Social Sciences
SSA:	Sub-Saharan African
TEU:	Twenty Feet Equivalent unit
TGE:	Transitional Government of Ethiopia
UK:	United Kingdom
UNCTAD:	United Nations Convention on Trade and Development
US:	United States
USA:	United States of America
US \$:	US dollars
VOCs:	Vehicle Operating costs

1. INTRODUCTION

1.1 Background

Transport system is a key element in logistics chain, it join the separated activities. Freight transportation is the process of conveying different types of goods from one point to another using a variety of transport modes (*Shewangizaw, 2009*). Freight transportation plays a vital role in the economy because it connects suppliers, distributors, vendors, and consumers (*Miao et al., 2011*). It also strengthens the business competitiveness of a country. In supply chain and logistics activities inefficiency is one of the activities which can be exhibited in terms of higher cost, delay and unpredictability in delivering the product and service to the customer in turn impacts economic growth of a country (*Shewangizaw, 2009*).

Freight delay happens when time taken to transport goods from one point to another exceeds what is reasonable under the circumstances and this problem has been an increasingly severe issue. Reasonable time is the amount of time which is meant for the transport of goods from the point of departure to the point of destination, considering normal conditions and using concrete means of transportation. A deviation from normal conditions can be force majeure or some other reason, not caused by the carrier (*Gong et al., 2012*). Time savings during transportation lead to a reduction in the resources required to perform a given volume of output(*Adkins et al., 1967*).

The underdevelopment of logistics management system, inadequate fleets of vehicles or means of transport for goods, cargo and truck congestions, lack of coordination of goods transport, organization and management tools that are required to promote intermodal system and due to lack of conceptual understanding of how an intermodal system should operate, the unavailability of well-equipped garages, the inability of taking immediate actions for maintenance of roads. Shortage of different facilities, poor cargo handling and cargo transport equipment shortage within the port, lack of efficiency of customs offices and inadequate and unavailable infrastructures are some of the causes of freight delay while transporting from origin to some other destinations.

In addition to direct costs to truckers, time delays in logistics can create indirect costs. There are delay costs associated with shippers in the form of inventories tied up in traffic, forcing

them to hold greater inventories to avoid outages. In addition, for some commodities, such as fresh fruits and vegetables, delays depreciate the value(*National Cooperative Highway Research Program, 2014*). More recent studies examined the cost of delay to both shippers and to those receiving shipments. They made note of the fact that the magnitude of impacts of freight delay on businesses depend on several factors, including the value of goods, available time windows for delivery, perishability, seasonality, and the type of business. They reported an average value of delay to shippers' operations of \$56 per hour(*National Cooperative Highway Research Program ,2014*). They also noted other potential benefits of freight improvement projects such as; Improved travel times, improved travel time reliability, reduced truck operating costs, safety improvement, freight network connectivity improvement, network resiliency improvement, improved air quality and economic output. Conversely, delays in freight delivery negatively impact each of these factors. Some of these can readily be converted to monetary values based on operator time, fuel and maintenance costs, and reduced crashes. For other factors, the monetary conversion is not as straightforward. Benefits attributable to network connectivity, resiliency, air quality, and economic output can be difficult to quantify(*National Cooperative Highway Research Program, 2014*).

Therefore in order to address the freight delay and prioritize freight projects, public-sector researchers and planners need to know the major causes and impact of delay on stakeholders. This is also important for fully understanding the benefit of transportation improvement projects and for justifying infrastructure investments.

1.2 Problem Statement

The logistic service in Ethiopia is still at the early stage of development against the global best practices. According to the Logistics Performance Index (LPI), the ranking of Ethiopia shows a relative deterioration between 2007 and 2012. In the first LPI of 2007, Ethiopia ranked 104 out of 150 economies; in 2010, it ranked 123 out of 155 economies; and in the most recent version in 2012, Ethiopia reached 141 out of 155 (*The World Bank, 2013*). One contributing factor for this is freight transportation delay.

There are constraints associated with freight delay in Ethiopia these are; underdevelopment of logistics management system, inadequate fleets of vehicles or means of transport for goods

transport, congestion in cities and at inlets/outlets, lack of coordination of goods transport, damage of goods and quality deterioration while in storage, packaging, transporting, no or little study has been made related to logistics and lack of organization and management tools that are required to promote intermodal transportation system due to lack of conceptual understanding of how an intermodal system should operate. Currently, virtually all (98 percent) of Ethiopia's imports and exports are routed through the port facilities in neighboring Djibouti (*Thomas et al., 2008*). The main road passes from Djibouti to Ethiopia is through Galafi, which has felt the effects of the greatly increased numbers of trucks often, overloaded trucks are one contributing factor for freight delay. Furthermore, *Chinniah and Kalimuthu, 2014* list the main problems associated with the existing road transportation system which can also cause delay of goods. As there are lack of parking areas for heavy trucks within Djibouti port, inefficient mechanism that coordinates the movement of trucks in Djibouti port and the inability of taking immediate actions for maintenance of roads. In addition, the port of Djibouti is not well equipped in terms of facility to speed up the smooth flow of transit cargoes. This could be explained as Shortage of cargo handling and cargo transport equipment within the port (*Chinniah and Kalimuthu, 2014*).

In Ethiopia, the efficiency of customs authority is also very low and this causes a lot of delays at check points and the number of days required to get foreign currency from national bank is also very long (*Debela, 2013*). Also, logistic services capability and coordination, organization and stakeholders in Ethiopia's logistics sector including Minister of transport, customs, banks, service providers such as ship agents, carriers and forwarders locally and at Djibouti are uncoordinated (*Shewangizaw, 2009*). With respect to infrastructure, infrastructures are inadequate, unavailable and not developed. Inadequate port/terminal and corresponding facilities, inadequate road, rail, and other mode of transport facilities, old and inadequate type and capacity of trucks, inefficient ICT utilization and unavailability of facilities such as GPS, inefficient management of available facilities at dry ports and terminals (*Shewangizaw, 2009*). All these have resulted in inefficiencies in the logistics operation leading to higher logistics cost, longer lead time and unreliable service offering.

The above delay problem affects trade performance of the country in terms of cost, time, reliability and predictability and customer services. Delay in the clearance of import cargo due to different reasons can eventually lead to a total loss to the importer, it cause a series of costs to importers/exporters and to the national economy at large. In general delay in the

delivery of imported cargo also cause lack of just-in-time delivery and inability to plan ahead (*Teklu and Negus, 2011*). However there is no common agreement on the major causes of freight delay. Hence, in this study, the above discussed shortcomings will be addressed, the other major factors affecting the logistics service quality in terms of delay will be identified, and the degree of the effect will be tested in detail through comprehensive study. In addition, this research is aimed at identifying which of these factors have significant impact on the country's freight transportation system. Furthermore, since the logistics service plays a central role in Ethiopia's economic growth, appropriate recommendations are put in place to improve the capability of the logistics service. Otherwise, it could have significant effect on the overall development effort of the country and its trade competitiveness.

1.3 Objectives

1.3.1 General Objective

The main aim of this research is to assess the performance of the imported goods supply chain through Djibouti–Addis Ababa corridor in terms of delay in order to fulfill all customers' need and develop efficient supply and logistic chain along the corridor.

1.3.2 Specific Objectives

The specific objectives were to:

- estimate the actual time it takes for main freight transport companies to transport goods from Djibouti to deliver to the customers in the hinterland of Ethiopia;
- assess the major factors affecting the logistics service quality in terms of delay;
- identify the constraints that the delay of freight transports has caused to the customer, service providers and country;
- Develop recommendations based on the analysis made to improve the delivery system by minimizing delays.

1.4 Limitations and scope of the study

Although this study tries to see the challenges and constraints in freight transportation system in the country in terms of delay and how it affects the country, it is acknowledged that this study has some limitations. The major limitations of this study were as follows:

This research did not incorporate all the volume of transportation services made by each private and governmental transport companies since acquiring a well-organized data is very difficult. In addition, travelling to Djibouti port to see the general port operations and assess the major problems that cause delay was not possible due to financial constraint and lack of contacts.

Moreover, the study was based on available information from secondary and primary sources. Accuracy of the study depends on provided information but adequate attention was given to reliability and validity of the research by persuading respondents about the importance of their response on the validity of this work and through crosschecking different literatures together with random observations.

2. LITERATURE REVIEW

2.1. Overview of freight transportation

Logistics is part of the supply chain process that plans, implements, and controls the efficient, effective forward and reversal flow and storage of goods, services, and related information between the point of origin and the point of consumption in order to meet customers' requirements (Logistics, 1991). The integration of two or more logistics within a network to create value, enhance efficiency and satisfy customers is called supply chain management (Debela, 2013). There are many components of logistics that interact to impact supply chains and ultimately influence trade flows. Transport is the single most expensive component of logistics, it join the separated activities (Shewangizaw, 2009). Transportation is critical for how supply chain functions, how raw materials get to factories, how goods get to markets, how food gets from farmers to kitchen tables, and how energy products move from areas of production to areas of consumption (Nation, 2013). Freight transportation is critical to economic growth in any country. Efficient freight transport and logistics systems can strengthen the business competitiveness of a country (Wisetjindawat, 2011). Truck, rail, water, air, and pipeline services provide a spectrum of competitive and complementary freight transportation options, with each mode offering advantages and disadvantages in terms of price, speed, reliability, accessibility, visibility, security, and safety (Brogan et al., 2013). An effective transport system in logistics activities could provide better logistics efficiency, reduce operation cost, and promote service quality (Shewangizaw, 2009).

The importance of freight transport for the functioning of both local and global economy is clear but transport volumes are ever growing and the problems of accommodating the freight flows in an efficient and sustainable way is real a challenge. Traffic congestion is rapidly growing; the quality of freight transport couldn't satisfy the ever increasing demand of customers; environmental deterioration, inefficient use of resources, space restrictions and traffic accidents are increasingly acknowledged as serious problems. In light of these problems, there is a great challenge to achieve a breakthrough in the performance of freight transport systems. The practices and developments trying to address the challenges of transport system vary in different parts of the world, both developed and developing countries (Konings et al., 2008).

2.2. Freight transport system in different countries

2.2.1. US and Canada Freight Transportation System

A variety of interrelated factors have converged in the last quarter of the twentieth century and beyond to alter the nature and scope of the US freight transportation enterprise in significant and pervasive ways. There have been major changes in the volume and composition of goods, which are moved over longer distances in both domestic and global markets; freight is moved more frequently in smaller shipments, major freight routes (domestically and globally) are evolving, in short order in response to changes in global economy and in the geography of emerging production centers (*Konings et al. ,2008*).

A major factor underlying this transformation of freight transport is due to changes in the scale, in the composition and in the structure of the American and global economies. The demand for transportation has grown in response to the generally brisk performance of the US and global economies during this period. The US economy is dominantly becoming service-oriented, and shifting from mass manufacturing to high value added custom manufacturing. The resulting combination of increasing information content and decreasing material intensity of goods changes the character and value of goods being moved. Further, the US and the Organization for Economic Cooperation and Development (OECD) countries have created global and regional free trade regimes, and globally organized production systems and value chains, which require speedy and timely movement of goods. These flows of goods are coordinated across national and global transport nodes and links in order to support the smooth functioning of the global economy (*Konings et al. ,2008*),

Technological changes in the transport sector in the US occurred in form of Interstate Highway System, the jet aircraft, the container and container ships, container stacking in rails, roll-on/roll-off vessels, and a variety of micro infrastructure to facilitate operations at seaports and airports. The use of information technology (IT) greatly enhances transport operator and system efficiency, offering not only speedier goods transport at declining costs but also the ability to integrate goods supply chains regionally and globally while maintaining lean inventories. The third factor underlying the major changes in the freight system is deregulation and privatization of the transport sector which stimulated technical innovations and enhanced productivity in the sector – in the process lowering costs and improving speed

and reliability. At the same time, two organizational innovations – business logistics system and inter-modalism – provide major sources of change in the freight sector (*Debela 2013*).

Business logistics service systems, aimed at minimizing total logistics cost (transportation, warehousing and inventories, insurance, administration and so on) by freight transport companies add value to the operation of their customers conferring strategic competitive advantage on US firms operating in the global market (*Debela ,2013*).

Inter-modalism is the fully coordinated door-to-door efficient delivery of freight using two or more dissimilar modes of transport (*Konings et al., 2008*). This is desirable since inefficiencies in the freight sector impact the competitiveness of US firms in the transport and transport using sectors. Inter-modalism seeks to enhance the performance of transportation system by increasing safety, reducing congestion and decreasing delays, thereby enabling more efficient freight and passenger trips (*Konings et al., 2008*).

It is widely recognized in the US, in both industry and policy circles, that the cooperation between transport modes has the potential to reduce congestion, especially in major freight corridors. The traditional attitude toward infrastructure investment to increase capacity and reduce congestion didn't work because increase in capacity attracts more traffic (*Konings et al., 2008*). Thus, the policy shift is towards addressing the unbalanced distribution of freight shipment across modes. Until recently, the competition between different freight transport modes for the same shipments gave rise to independent infrastructure decisions taken in the optimal interest of different modes. As these facilities and terminals are locked into specific locations, adapting them to inter-modalism requires not only major investments but also changes in attitudes and behavior of modal actors. Transportation integration across modes also faces additional complex institutional and regulatory problems at federal, state and local levels. These problems are currently impacting the cost and quality of service of freight movement.

In conclusion, inter-modalism is considered the solution to the above problems and its aim is to provide seamless movement of cargo across a transportation network in which the physical, institutional and information infrastructure are integrated to reduce transaction costs and maximize operational efficiencies. The US intermodal freight is by far the most developed compared to other parts of the world but it is still in its early stages of

development. The obstacles are not fully resolved transfer problem at ports, and information compatibility problem when goods are transferred between modes.

The development in Canada and the US are alike. One important point worth mentioning is that Canada-mid-west USA cross-border rail link is carrying large volumes of lorry trailers on piggyback trains (*Konings et al., 2008*). Canada Pacific Railway launched its Expressway scheme in 2002 and runs regular services between Montreal, Toronto, Windsor (Ontario) and Detroit in the USA. At the heart of this operation is the inland Port of Montreal, 1000 miles along the St Lawrence River serving as a gateway for trade to and from mid-west USA (*Konings et al., 2008*).

2.2.2. European Freight Transport System

The goods transport in Europe increased from 1.4 trillion metric tons in 1970 to 3.1 trillion metric tons in 2000, by 119 percent (*Konings et al., 2008*). Fifty percent of this transport is over distances between 150 and 500 km, 20 percent over 500 km. The market share of uni-modal road transport increased from 35 percent in 1970 to 44 percent in 2000 and intra-European sea transport increased its market share from 27 percent to 38 percent (*Konings et al., 2008*).

As reported by *Site and Salucci, 2010*, a total of 2650 billion tone kilometer (tkm) of freight were transported in the EU-27 only considering the four land transport modes (road, rail, inland waterways and pipelines). More than two thirds of the total (72.7%) was attributed to road transport, while rail, pipelines, and inland waterways accounted for, respectively, 17.1%, 5.3%, and 4.9%. If we also consider intra-EU maritime transport and intra-EU air transport, then road transport accounts for almost half the total (45.6%), while rail and inland waterways contributions decreased respectively to 10.7% and 3.3% (the intra-EU maritime transport share is 37.3%). The average annual growth rate of freight transport between 1995 and 2007 has been 2.7%. It is also worth mentioning that the number of tkm run using road transport has increased by 49.6% during the period 1995-2007, while, in the same period, the rail freight transport trend has been fluctuating, but since 2002 it has increased by 17.7%. Freight transport is expected to grow at roughly similar rates of GDP (2.1%) for the period 2000-2020. Modal split is expected to roughly stabilize in the longer term (*Nathan Associates Inc., 2014*).

As a result of freight and passenger traffic, congestion has become a serious problem. Around 7000 km or 10% of European road network is daily affected by congestion. Then, inter-modalism is considered the solution for congestion and environmental problems, and to attain competitiveness of European economy in the global market but much is not done physically on the ground (*Debela ,2013*).

2.2.3. Asian Freight Transport System

The infrastructure and logistics system of the majority of Asian countries is under developed. The transport modes used in India are road followed by railway and finally coastal shipping. Airfreight is limited to a small percentage of courier service. Trucking accounts for 70 percent of transportation. Water is the cheapest but it is not heavily used in India. And transportation in India accounts for nearly 40 percent of cost of production (*Srivastava, 2006*).

Government is trying hard to develop infrastructure and developed a double stack container freight line which started working from 2006 (*Srivastava, 2006*). Problems are insufficient infrastructure, lack of integration of supply chains and low use of ICT. The entry of large 3PL and 4PL logistics service providers is transforming the nature of logistics services in India. China's railway freight is very good but the road density is low and its international trade has progressed highly and three of the world's busiest sea ports belong to China (Hong Kong), Singapore and Taiwan logistics infrastructure are highly developed in terms of both road infrastructure and sea shipping(*Bookbinder, J. H. and Tan, 2002*).

2.2.4. Freight Transport System of African Countries

It is generally recognized that the African continent lacks natural ports, while its artificial seaports have been poorly developed. African ports became more congested following the rise in GDP growth and levels of global trade witnessed in most African countries in the years leading to the global financial crisis of 2008. Indeed, over the last decade, the amount of cargo transiting through Africa's ports has tripled, but containerization is still low and the inland transportation linkages remain weak. African ports' poor performance can be attributed to a range of factors, principally: geography (poor connectivity); inadequate physical infrastructure resulting in congestion; and weak institutional development. It is important to note that countries with higher port capacity have higher trade capacity.

However, the types of commodity that the country trades in terms of imports and exports also matters. For example, Egypt is ranked number 1 in Africa in terms of port capacity and South Africa is ranked number 2. However, the value of trade in South Africa is higher than Egypt due to the type of exports, which are mainly expensive minerals such as platinum and gold. Moreover, the value can also be driven by the number of ports that the country services. In the case of South Africa, landlocked economies such as Botswana, Lesotho, Swaziland, Malawi, Zimbabwe, and Zambia depend on its ports, and this explains South Africa's higher trade volumes (*Port Development in Africa, 2010*). South Africa's road infrastructure is comparable to the best in the world. According to the Wikipedia data, some of the transport modes in South Africa in 2002 are, for road (362,099km), in 2000 for railway (20,384km) and for sea shipping (8 ports).

2.3. Freight transportation in Ethiopia

2.3.1. History

Commercial road freight transport services were among those that suffered most from the misguided economic policies of the “Derg” regime. Prior to 1991, this subsector was excessively regulated and centrally controlled with services provided only through the Ethiopian Freight Transport Corporation (EFTC), a publicly owned commercial transport entity. This parastatal operated under a cooperative system known as “ketena” whereby five “ketenas” catered for dry cargo transport while one “ketena” handled all bulk cargo transportation. The EFTC collected a five percent commission of total revenue generated by trucks of individual owners. Tariff rates were set and enforced without due consideration for the important need for investment in new vehicles. Nor was provision made for vehicle operating costs (VOCs). Controls were imposed on the allocation of vehicles and the routes on which they operated. Private vehicle owners had no direct control over their vehicles and were forced to rely on whatever remuneration was given to them by the state through the “ketenas”. The “Derg” regime created an unfavorable business environment that discouraged investment in road freight transport services, resulting in a continuous depletion of the stock of commercial vehicles and a severe shortage of spare parts (*Kifle et al. ,2000*).

The “ketena” system was dismantled through the new economic policy formulated by the Transitional Government of Ethiopia (TGE). Accordingly, tariffs were deregulated,

operational mechanisms liberalized, and the private sector allowed free entry and exit in the provision of freight transport services. Despite these policy changes and the improved operating environment created by the Government of Ethiopia (GOE), road freight transport development still suffers from the neglect of the years prior to 1991. GOE's efforts to develop services in this subsector have particularly been frustrated by the age of the vehicle fleet, their inadequate supply against an excessive demand and the underutilization of the existing stock of vehicles due to poor technical back-up. Deployment of freight transport vehicles during the war exacerbated the problem. There is an urgent need to stimulate investment in this subsector through private sector participation (*Kifle et al. ,2000*).

The logistic service in Ethiopia is still at the early stage of development against the global best practices. Well-developed logistic systems and services geared to meeting the impending logistics needs are lacking in the country because it doesn't align with the current and future growth and requirement of the country. Bank process time which takes about from 16 days to 6 month for import and 2&1/2 days for export is relatively higher compared to best practices. With respect to Customs and Dry Ports, there is a lack of synchronization and coordination with other government agencies. In addition, the monopoly control of Ethiopian shipping and Logistics service Enterprise (ESLSE) of the Shipping service and the high level of dependency on port Djibouti are added together in slowing down the logistic performance and trade activity of the country (*Shewangizaw, 2009*).

2.3.2. Current Freight transportation system in Ethiopia and it's challenges

2.3.2.1. General

Ethiopia became the only landlocked country in the Horn of Africa following the independence of Eritrea in 1993. Before that time, the country had access to the sea through the Red Sea ports of Assab and Massawa, both of which now belong to Eritrea. About 86 percent of Ethiopia's imports and exports were handled through the two major ports while only about 14 percent passed through Djibouti (*Kifle et al., 2000*). As a result of the war with Eritrea in 1998, Ethiopian shipping lines (ESL) had to transfer 100 percent of its operations to Djibouti. Then Djibouti became the only feasible port available to serve Ethiopia. And the port of Djibouti has proven its capacity in handling all of Ethiopia's needs (*Hine et al., 2004*). But Ethiopia began experiencing problems as a result of loss of access to the two ports. These problems included high transit transport costs due to increased transit charges, restrictions

and regulations imposed by littoral countries, inadequate infrastructure and poor port facilities, inefficient transport and a diminished bargaining power with littoral countries. The inefficiency of its own road and transport system, as evidenced by factors such as the aging fleet of road trucks, poor roads and other non-infrastructure constraints have aggravated the increase in transit transport costs (*Kifle et al. 2000*). In the Addis-Djibouti corridor, the competition and the availability of transport is plenty to support the need of the exporters. One reason for this fact is that Ethiopia imports around two times more volume than it exports, so there are plenty of capacity available on the way to Djibouti. Ethiopian imports for 2002 were 3.5 million tons and total export volume was a mere 1.6 million tons. Thus most of the trucks are traveling empty to the port (*Hine et al., 2004*). Currently, virtually all (98 percent) of Ethiopian imports and exports are routed through the port facilities in neighboring Djibouti (*Thomas et al., 2008*).

Road and railway transport are the two leading means of transport in Ethiopia with road transport accounting for the movement of about 95 percent of total Ethiopian cargo (*Kifle et al., 2000*). But as in most Sub-Saharan African (SSA) countries, the first leading transport mode in Ethiopia is road transport (*Thomas et al., 2008*). Road transport is the mode of transport that the country relies on for both domestic as well as international transport services (*Debela ,2013*). In Ethiopia, the main challenges in the road transport sector include high transport costs due to high transit charges imposed by littoral country (Djibouti), cumbersome port and customs procedures and poor road infrastructure (*Kifle et al. ,2000*). Deterioration of transit roads in the country, leading to high vehicle operating costs (VOCs) and high road transport costs, has been a matter of serious concern to the government because of the heavy dependence of the national economy on this mode. An efficient low cost road transport system is of critical importance not only to the development of all sectors of the economy including agriculture, mining, manufacturing and service sectors but also to the stimulation of international trade and the integration of the national economy (*Kifle et al. ,2000*).

Inefficiency is one of the supply chain (SC) and logistics activities which can be exhibited in terms of higher cost, delay and unpredictability in delivering the product and service to the customer in turn impacts economic growth of a country (*Shewangizaw ,2009*). The ability to transport goods quickly, safely, economically and reliably (logistics) is seen as vital to success of businesses, and to a nation's prosperity and capacity to compete in globalized

economy (*Debela, 2013*). Even if the importance of freight transport for the functioning of both local and global economy is clear, transport volumes are ever growing and the problems of accommodating the freight flows in an efficient and sustainable way is a real challenge. Traffic congestion is rapidly growing; the quality of freight transport couldn't satisfy the ever increasing demand of customers; environmental deterioration, inefficient use of resources, space restrictions and traffic accidents are increasingly acknowledged as serious problems (*Konings et al., 2008*). Impact of institutional quality on logistics and trade is also getting higher and higher as the main stakeholders like customs authority, banks, transport service providers and other institutions become unreliable (*Shewangizaw, 2009*). In light of these problems, there is a great challenge to achieve a breakthrough in the performance of freight transport systems

Limão and Venables, 2001 suggest different reasons for the logistic performance inefficiency in developing countries. Some of these are poor government policies, cumbersome bureaucracy, poor infrastructure and institutional inefficiency. However, there is no argument on which one of these factors is the most influential causes for countries like Ethiopia.

The study focuses on freight movement from Djibouti port to Addis Ababa. This is because currently almost all (98 percent) of Ethiopian imports and exports are routed through the port facilities in neighboring Djibouti (*Thomas et al., 2008*). And the port of Djibouti has proven its capacity in handling all of Ethiopia's needs. Along Djibouti-Addis corridor, the competition and the availability of transport is plenty to support the need of the exporters. One reason for this fact is that Ethiopia imports around two times more volume than it exports (*Hine et al., 2004*). The capital city of Ethiopia, Addis Ababa is a focus for urban goods distribution by road (*Addis Ababa and Sectorial Associations, 2009*). Therefore this study focuses on import transportation of goods from Djibouti port to Addis Ababa.

2.3.2.2. Freight Transport Infrastructures in Djibouti

The overview of the transportation infrastructures in Djibouti includes specifically the Roads and ports along the international trade route of Ethiopia-Djibouti border to Djibouti port and expansion of other ports. According to *the World Bank 2013*, the routes connecting the Djibouti port to Ethiopia are central to the role Djibouti plays in the region and the lowlands separating Djibouti city from the Ethiopian border are largely arid desert. The older route to Addis Ababa passes through Ali Sabieh and then south into Ethiopia at Dewele, This was the

route taken by the railway built at the start of the 20th century. According to (*Addis Ababa and Sectorial Associations, 2009*), currently, Ethiopia's main transport route between Addis Ababa and Djibouti is via Adama and Awash. There are also secondary goods flows from Djibouti to other main centers such as Kombolcha and Mekele, and between Addis Ababa and other main towns.

2.3.2.3. *The Development of the Multimodal Transport System in Ethiopia*

In Ethiopia, in addition to eliminating bottlenecks of the import export business, attention has been given to ensure internationally competent, efficient, effective and reliable maritime transport services. Accordingly, infrastructure development and regulatory policies such as multimodal transport system supporting the logistics service delivery are put in place (*Shewangizaw, 2009*).

The 'Multimodal Transport' concept can be defined as the combination of various types of transport modes used in a national or international transport operation, which provides door-to-door services, under the responsibility of one single transport operator (*UNCTAD, 2001*). The 'Multimodal Transport' terminology was first coined by the United Nations Convention on Trade and Development (UNCTAD) on International Multimodal Transport of Goods in 1981, which authoritatively defines the term as:

“... the carriage of goods by at least two different modes of transport on the basis of a multimodal transport contract from a place in one country at which the goods are taken in charge by the multimodal transport operator to a place designated for delivery situated in a different country (*UNCTAD, 1981*).”

The government of Ethiopia has been implementing a Multimodal Transport System since January, 2012 to realize the Millennium Developmental Goal (MDG) related to Multimodal Transport system. In this system, The Ethiopian Shipping and Logistics Services Enterprise (ESLSE), a public enterprise, has taken this national responsibility to manage the Multimodal Transport system in transporting cargo from abroad which was explained on the profile of ESLSE. The Multimodal Transport System is a concept aimed at improving trading efficiency and to transform the relationship between trading partners and international carriers under a single liability system, leading to better command, control and coordinated transport system (*Butta and Abegaz ,2016*). The implementation of this system has reduced

the cost of delays, saved transport and warehouse charges and is able to provide prompt delivery of containerized goods (*Debela ,2013*).

The entry of the Ethiopian Shipping Lines (ESL) and Maritime and Transit Services Enterprise (MTSE) into the business will make the activity a multimodal operation with ESL and MTSE as multimodal transport operators. The ESL will transport commodities from their point of origin by sea and then unload them at an intermediate transshipment point before delivery at the final destination. The intermediate transshipment point in this case will be the port of Djibouti. The final destination will be the Comet- bonded warehouse. The document for taking delivery of the cargo will be the Bill of Lading issued by ESL at the port of loading. In this example, customs formalities at the intermediate points of transshipment could perhaps be avoided, thereby saving time for the inland carrier (*Addis Ababa and Sectorial Associations, 2009*).

As a result of multimodal transport system implementation, the share of general cargo imports carried by the multimodal transport system has increased from 21% in 2011/12 to 57.5% in 2012/13. Besides, the share of imported goods transited via dry port/terminal increased to 86% with respect to developing and expanding dry ports, one dry port was developed in Gelan town, while Mekele, Semera, Kombolcha and Direedawa dry ports were expanded to increase the capacity of container accommodation. Furthermore, cargo handling facilities/machineries have been purchased to facilitate the operation. As a result, dry port terminal operation capacity has increased from 5600 TEU in 2011/12 to 14,582 TEU in 2012/13 (*Shewangizaw, 2009*).

But according to *Butta and Abegaz ,2016*, the key challenges related to the operations of Multimodal Transportation System in Ethiopia are; poor network connectivity, the problem of ICT usage at each level, the lack of railway infrastructure, lack of competition in the multimodal transport system, the distance between origin or source materials and customers to get on time, poor coordination, lack of integrity with Stakeholder relationship, shortage of trucks by ESLSE, length of procedures and the involvement of different stakeholders, shortage of skilled human power, resistance from the Djibouti, and employment issues. On the other hand, bureaucratic nature of clearance procedures at Ethiopian customs and inadequate knowledge about Multimodal Transport System (*Butta and Abegaz, 2016*).

The developments in the multimodal transport industry are regarded as of critical interest to the future development of the freight road transport industry in Ethiopia (*Addis Ababa and Sectorial Associations, 2009*). An efficient multimodal transport policy is not just a matter of bringing together separate transport modes; it is a new way of thinking about transport policy to enable the government of a country to facilitate trade. As international trade is often the lifeblood of the economy of any country, it deserves a lot of attention to be given to the detail on how this is to be achieved. But without a full understanding of these multimodal developments, it would be difficult to make a detailed program for the development of the international road freight transport industry.

2.4. Freight Transportation Delay

Quality logistic services play an important role in facilitating the transportation of international trade in goods; inefficient logistic services impede trade by imposing an extra cost in terms of time as well as money (*Debela, 2013*). The ability to transport goods quickly, economically and reliably is vital to a nation's prosperity and capacity to compete in global market and if these could not be realized it can also be a major trade cost driver (*Shewangizaw, 2009*). In general, logistics affects trade performance of a country in terms of cost, time, reliability and predictability and customer services, which further affect overall competitiveness of the export in the international market. As countries of the world become more and more integrated through trade and struggle for the achievement of their developmental goals, calls for the need for efficient logistic system; development of a plan, implementing, and controlling the efficient cost effective flow and storage of raw materials, in-process inventory, finished goods and related information from point of origin to point of consumption for the purpose of meeting customers' requirements (*Shewangizaw, 2009*).

Time delays in logistics create indirect costs and can take several forms. They also increase the cost of firms that are then passed on to consumers. The cost of holding inventory and depreciation is higher for ocean shipped goods. Lower shipping times are associated with higher volume of trade, and there is some evidence that shipping time rather than distance is a more accurate reflection of shipping costs since it better captures the time-sensitivity of certain goods. Time delays at the border due to inefficient and lengthy administrative procedures related to importing and exporting can also have detrimental effect on trade volumes. In addition, time delays may affect firms that rely on just-in-time deliveries of

critical components to their manufacturing process as well as firms who require short lead times between placing an order and getting it to market (e.g. fashion items, technology items) (*Shewangizaw, 2009*). A one-day reduction in inland travel times could lead to a 7% increase in exports equivalent to a cut of 1.5 percentage points on all importing country tariffs (*Freund and Rocha, 2010*).

2.4.1. Freight transportation delay problem in Ethiopia

Developing countries institutions are characterized by poor capacity which can be seen by transit delays, failure to deliver in the needed time window or without the necessary quality and storage cost, false in cargo composition and wrong documentation (*Shewangizaw, 2009*). Ethiopia as a developing country recognized the significance of Trade Logistics before a decade after experiencing a bottleneck when importing heavy machineries to fulfill the demand of the industry and service sector. Similarly, the export market began to demand instant delivery and cost efficiency. Since the Ethiopian economy is largely dependent on Exportable agricultural products mainly Coffee and oilseeds, logistical efficiency is very crucial. As a result, the Ethiopian government practiced many reforms in response to changes in the economy and makes the logistic activities to be regulated under the Ministry of Transport. Specifically, the country issued proclamations, deregulated the transport sector, merged logistics enterprises, restructured the Customs Authority and established dry ports which are the major move in the country that gave recognition to trade logistics (*Shewangizaw, 2009*).

The main charges on Ethiopian transit cargo passing through the port of Djibouti comprise port charges related to cargo handling (measured in volumes and/or weights); clearing and forwarding charges, based on value and cost insurance and freight (CIF); the cost of road transportation; and weight. In addition to these costs, there are a number of indirect costs associated with transit cargo. The port charges are levied at the rate of US \$1.30 per ton while delivery charges, including stevedoring, cost US \$6.70 per ton. A minimum flat rate of US \$6.25 per ton is levied as a transit charge for labor and equipment. This rate constitutes a major proportion of the total transit cost. Other costs include vehicle insurance, port entrance and other road charges. Taking all these charges into account, the aggregate transit cost for moving a container ranges between US \$500 and US \$550 per 20-foot unit (*Kifle et al., 2000*).

Indirect additional transit costs in Ethiopia are due to other factors, including delays to transit vehicles caused by customs checks, time lost at weighbridge stations, overloading fines and other local but unofficial charges. Although the number of customs checks within the Ethiopian territory is often ignored, they adversely affect vehicle utilization rates and the number of turnaround trips, therefore constituting a major transit cost component. Transit vehicles are usually halted for about two hours per trip on each of the four checkpoints (at the Galafi border, Mille, Awash and Nazareth) within the Ethiopian territory, occasioning an average total delay of eight hours per vehicle (*Kifle et al. ,2000*).

Freight transport in Ethiopia is characterized by an inadequate supply and an aging fleet of vehicles with low carrying capacity and low utilization rates (*Kifle et al., 2000*).The current fleet of HGVs is unlikely to enable the country to effectively implement its development policies at planned productivity levels in several sectors such as agriculture, manufacturing, mining and services, unless the private sector investment is encouraged. Continued public sector domination of clearing and forwarding services and inadequate training for both local individuals and private firms in this business also hinder efficiency in cargo transit through delays (*Kifle et al., 2000*).

A well-developed information system and information flow is a significant component of logistics services. The need for a high standard of telecommunication services is imperative to permit the timely and reliable flow of information. If economies, and in particular, developing economies, are to participate fully in global production and supply of intermediate and finished goods, their ability to do so will be affected by the standard of their ICT infrastructure as an important component of trade and transport facilitation (*Shewangizaw, 2009*). On the administration side, procedures (especially added control procedures) are often nonselective and essentially independent of the nature of the shipment (*Arvis et al., 2010*).These leads to the prevalence of physical inspection which increases inspection time, red tape, compulsory warehousing, theft, and informal (corrupt) payments in low performance countries (*Shewangizaw, 2009*).

3. METHODOLOGY

3.1. Study design and participant selection strategy

Sequence of the methodologies used was that, first literature review was made to assess relevant documents related to the Ethiopian freight transportation through Djibouti corridor as a whole and made emphasis on delay of goods for a detailed understanding of the existing conditions. Secondly, stakeholders were selected for in depth analysis about the existence, cause and effects of the problem in the country. The selected stakeholders were based on their direct relation with freight transportation system, their well-organized data recording system, their understanding about the entire processes at Djibouti port, at local dry ports and about the transportation system in general so that these stakeholders can point to us the major causes and the possible effects of delay in all stages. Hence, Freight transport companies, transit service providers companies and Freight truck drivers were selected.

3.2. Data collection

To assess the freight transportation performance of goods at Djibouti-Addis corridor in relation to delays, different methods and approaches were used for data collection. The data collection focuses on acquiring both secondary and primary data. The secondary data could help to have a comprehensive understanding of what the problems of delay are and their effects. It also enables us to gain knowledge on what has been done in the past and current situation, the attempted solutions and possible achieved solutions to problems existing in the study area. On the other hand, primary data was collected based on the knowledge gained through the secondary data to assess the extent of problem.

Secondary source of data

In addition to gathering needed documents related to freight transport system from different public and private organizations such as Federal Road Transport Authority, Trans Ethiopia private limited company, COMET and Central statistical Agency, different related documents such as; books, international journals, studies and other freight transport related materials were reviewed to assess the current condition of freight transport delay and its effect in

different countries, to strengthen the analysis, to have an understanding on what has been done in the past and current situation and to tell the experience of different countries for a better freight transport. In contrast, primary data is collected by the researcher based on the knowledge gained through the secondary data.

Primary source of data

Primary data involve the collection of original data using different data collection methods. Both qualitative and quantitative data gathering methods were used in the form of a questionnaire and interviews. The survey questionnaires were presented to different stakeholders involved in the freight transportation system to have the opinion on possible causes of delay at Djibouti port, at warehouses that are located at different locations, at dry ports and through Djibouti-Addis road and to evaluate importers satisfaction regarding the provided service. The questionnaires were presented to freight transporter companies, transit service providers and truck drivers. Truck drivers covering the land freight transportation from Djibouti port to different locations of the country were selected for the questionnaire to assess the causes of truck delay at Djibouti port, on the road from Djibouti port to different destinations and at warehouses, in addition to evaluating their opinions on the actual work being done (See Appendix A).

For the cross-border freight transporters; as per the recent data from the Federal Road Transport Authority: it was found out that there are 79 associations and companies that are cross boarder freight transport service providers which are classified into smaller groups of 6 different levels from 1-A up to 3-B as shown in the table below.

Table 1: Classification of freight transporters companies

Freight Transporters						
	Level 1		Level 2		Level 3	
	1-A	1-B	2-A	2-B	3-A	3-B
Trucks age (Years)	<10		10 to 20		>20	
Trucks Loading Capacity (ton)	30-40	20-29.9	30-40	20-29.9	30-40	20-29.9

On the other hand, transit service providers do a very important job of organizing safe, efficient and cost effective transportation of goods from origin to destination as intermediaries between the shipper (importer, exporter, trader and other clients) and the carrier. They also provide auxiliary services such as packaging, documentation, consolidation, group age, transit, warehousing and cargo clearing services. Cargo operation is one of the weakest links in the freight transport and logistics system of the country. Transit Service Providers were asked to assess the problems they mostly face at Djibouti port, at local dry ports and at warehouses that causes delay of goods. Transit service providers' view regarding freight transporter companies' contribution to delays and the impacts of freight delay is also assessed using the questionnaire. This will help the study to examine the performance of freight transportation regarding delays at Djibouti-Addis Ababa corridor.

For the questioners, due to time constraints, richness of the data and representativeness of the stakeholder. A total of 90 populations (stakeholders') have been considered. The distribution of questionnaires was made systematically to be representative to 40 truck drivers, 30 Transit service providers and 20 freight transporters. In general, responses for questionnaire were collected from 90 respondents. The Questionnaire consists of closed choice or fixed questions and open-ended questions (See Appendix A).

Concerning the sampling technique for the questioner, simple random sampling technique is used to select a participant from each group in which each element have an equal and non-zero chance of selection though random selection does not always produce a sample that is representative of the population. Therefore, the samples were selected randomly. The respondents for transporters and transit service providers were owners or higher officers in the company rather than ordinary employees. This is because it was believed that a company owner or officer may have an aggregated thought of respective transport company and about the transportation system that may enrich the response to the questionnaire relative to ordinary employees of the company. On the other hand, semi-structured interviews were also conducted which is done by directly approaching the appropriate personnel to get a detailed explanation of the current situation

Besides, actual quantitative data were collected from top seven (7) different companies that give freight transportation services from Djibouti Port to different destination for their customers or importers. These companies were active, have well-organized data collection

methods, are top in their capacities, and have direct contact with importers means, transporters that do their transportation service through being third parties or as intermediaries were not considered. The collected data were the agreement date of the transporters and importers, the day the transporter starts to give its service and the day the transporter completes its service. These data were collected in order to assess the customer or importer waiting time before service is started and the average service time of each company and finally to assess the performance of the provided service. The importers have different needs, some want bulk cargo transportation and some need general cargo transportation. The orders have different tones and destinations and the arrivals of the importers were random. Eight to sixteen months of recent data were collected in order to assess the current condition of total importer waiting time to get transportation service.

3.3. Data analysis

The collected data needs to be calculated and analyzed in order to describe the existing conditions of freight transportation delay, the major causes of delay and the impacts of these delay to different stakeholders participating in this system and seek improvement to meet the required customers' satisfaction. Therefore, for the data analysis purposes, two methods were used in this study namely importer waiting time measurement and SPSS (Statistical Package for the Social Sciences) which are discussed as follows and was utilized for the analysis.

3.3.1. Importer waiting time observation and measurement

From the collected data from different transporters, the time interval between the agreement date of importers with transporters and the day the transporter starts loading the first truck from Djibouti port was calculated for each customers of participating transporter companies in the data collection time. And the average time interval was calculated for each company. This could provide the average waiting time of importers before they start getting the service. In addition, the time interval between the day the transporter start loading the first truck from Djibouti port and the day the transporter unloads the last truck at different destinations was calculated for each customers of transporter companies and the average time interval was calculated for the companies. This gave the average service time of transporter companies for the ordered goods.

The output of calculating all the above was in order to identify the existence and the extent of customer waiting time before service started and the average service time of different transporter companies for different importers order.

3.3.2. Statistical Package for the Social Sciences (SPSS)

Statistical Package for the Social Sciences (SPSS) is the most widely used software for the statistical analysis of quantitative data. In this study, the SPSS software was used in order to analyze the questionnaire which is used to assess the causes and effects of freight transportation delay. Since obtaining an organized data from Djibouti port, Djibouti to Addis road, all Dry Ports or Warehouses was not possible due to time constraint; the questionnaires were designed in such a way that the appropriate parameters are incorporated and were addressed to acquire the opinions from truck drivers, transporters and customers. All the responses of the participants were placed to the SPSS software and the percentage of each response were calculated and ranked. Rank for the causes and effects of freight delay will tell which problems of delay need attention.

Therefore, the results obtained from the analysis of the data using the above two methods is presented in the next chapter.

4. RESULTS

4.1. Importers' total waiting times

The agreement date of freight transporters and importers (customers) for freight transportation service from Djibouti port to different destinations, the loading date of the first vehicle from Djibouti port which can be the day the transporter starts to give the service and the unloading date of the last vehicle to the destination which can be the day the transporter finished its service has been collected and the result is presented under this section.

As stated in the methodology part, actual quantitative data were collected from top seven (7) different companies that give freight transport service. These companies were selected based on their activeness, well-organized data collection methods, their capacities, and their direct contact with importers. The data collection periods were between February 2016 and November 2016 for transporter company-1, September 2016 - April 2017 for transporter company-2, June 2016 - April 2017 for transporter company-3, January 2016 - April 2017 for transporter company-4, January 2016 - March 2017 for transporter company-5, June 2016 - February 2017 for transporter company-6 and between January 2016 and February 2017 for transporter company-7. The results are summarized in Table 2 below and the detailed collected data is enclosed in Appendix B.

Table 2: Total waiting times of importers from each company

Company (C)	Average customer waiting time to start service (in days)	Average service time (in days)	Total customer waiting time (in days)
C1	46.03	24.1	70.13
C2	12	19.94	31.94
C3	14.8	7.45	22.25
C4	2.3	11.46	13.76
C5	9.67	19.43	29.1
C6	15.95	27.33	43.28
C7	12.86	38.57	51.43

4.2. Trucks Demurrage Proclamation

Truck demurrage is a payment to compensate for detaining a truck beyond the time limit allowed for loading or unloading by a sender, consignee or warehouse and for inspection conducted by a government regulatory body (*Truck demurrage proclamation, 2013*).

The aims of this proclamation are, first to transport export and import goods with appropriate cost and within short period of time to the port or from port to consumer distribution channel across the country. Secondly, this proclamation is necessary due to the inefficiencies of shippers and consignees, warehouses providing loading and unloading facilities and regulatory bodies conducting inspection are resulting in considerable time loss in truck operation. Thirdly, it has become necessary to enact legislation on trucks demurrage to avoid such loss of time in truck operations and to increase the frequency of use of trucks and thereby increase freight carrying capacity and shorten the waiting time of goods at ports to minimize unnecessary costs and to avoid related problems.

The proclamation has set time limit for different activities such as; loading, unloading and inspection and it stipulates demurrage payments for whom that has failed to meet the obligations on the given time (See Appendix D). But during the survey most transport companies complained about the implementation of this proclamation. They said that there is no body that controls the implementations of these laws and regulations.

4.3. Observation

This section will outline the observed actual measured monthly delays of truck vehicles from one company's vehicles daily data. Even if most of freight transporter companies have poor data recording system, this company records its vehicles daily performances for each month (See Appendix C). According to appendix-C, the horizontal row is the plate number of each truck while the vertical columns are the days of the month. The numbers written inside the tables represent different reasons for the truck to stop working;

- 1- The truck was under maintenance;
- 2- Problem happens to the truck on the road, therefore the truck stopped working;
- 3- The truck was traveling to Djibouti or from Djibouti to different destinations;

- 4-The truck was unloading the loaded goods at its destination or at Djibouti, if the truck is loaded with export goods;
- 5-The truck was at Djibouti port to load goods;
- 6-Accident happened to the truck. As a result, the truck stopped working;
- 7- The truck stopped due to shortage of the truck driver;
- 8-The truck stopped due to different problems (either for sale or for any other task)

For Example, according to Appendix-C-1 row-1 during the month of October/2016, truck with plate number 3-08531 stopped for the whole month due to accident. In row-2, during this month the performance of truck with plate number 3-08532 was as shown in Table 3 below.

Table 3: Activities of truck with plate number 3-08532 during October/2016

Day	Activity
1	The truck was at Djibouti port to load goods
2,3,4	The truck was traveling from Djibouti to different destinations
5,6,7	The truck was unloading at its destination
8,9,10	The truck was under maintenance
11	The truck was traveling to Djibouti
12	The truck was at Djibouti port to load goods
13,14	The truck was traveling from Djibouti to different destinations
15	The truck was unloading at its destination
16,17,18	The truck was under maintenance
19,20	The truck was traveling to Djibouti
21,22,23,24,25	Problem happens to the truck on the road, therefore the truck had stopped working
26,27	The truck was at Djibouti port to load goods
28,29	The truck was traveling from Djibouti to different destinations
30	Problem happens to the truck on the road, therefore the truck had stopped working
31	The truck was under maintenance

In general, in this month this truck stopped for 7 days for maintenance, it has stopped working on the road due to mechanical problems for 6 days, was traveling for 10 days of October month, stopped for almost 4 days to unload the loaded goods at the destinations and stays for 4 days of the month at Djibouti port to load goods.

From Table 3, it's clear that this truck wasted 7 days of the month for maintenance and 6 days of the month due to mechanical problems; this can tell us that the truck is not working for most of the times. In addition the truck wasted 3 days to unload its goods. But according to the previous section, demurrage proclamation, the maximum time given to unload goods was 6 hours for trucks with loading capacity of 20 tons or above and 4 hours for trucks with

loading capacity of less than 20 tons. For the remaining trucks performance, Refer Appendix C-1&2.

4.4. Survey Questionnaire

4.4.1. Transit Service Providers

This section presents the Transit Service Providers response to the causes of delays at Djibouti port, at warehouses, at local dry ports, transporters contribution to delays and finally the impacts of freight delay to the customers and to the country.

Causes of delays at Djibouti port as evaluated by Transit Service Providers

The results of the questionnaires related to causes of delays at Djibouti port which are responded by Transit Service Providers are summarized below to determine the contribution of Djibouti port operations to delays of goods at the port. For this specific question all 30 participants responded.

Table 4: Transit service providers' response frequencies on the causes of delay at Djibouti port

		Responses	Percent of Cases, %
		N	
Causes of delays at Djibouti Port	Cargo congestion	8	26.7
	Storage problem	10	33.3
	Insufficient truck supply	14	46.7
	Unplanned ship arrival	12	40
	Truck congestion	6	20
	Untrained machine operators	5	16.7
	Poor shipping process and service	7	23.3
	Bureaucracy	22	73.3
	Poor port administration and management	7	23.3
	Poor port service	13	43.3
	Loading/unloading time	14	46.7
Consequence	Loading/unload space	10	33.3
	Insufficient cargo transport equipment	10	33.3
	Long custom clearance	12	40
	Limited port working days	10	33.3
	Long port process	11	36.7
	Insufficient loader/un-loader equipment	7	23.3
	Unorganized ship berth space	9	30

Note: N stands for number of respondents.

As it can be observed from Table 4 above, the majority of Transit service providers (73.3%) responded that Bureaucracy for different activities is the main cause of freight delay at Djibouti port; 40-46.7% of respondents agreed that Poor port service, Long custom clearance, insufficient truck supply for the goods that are unloaded from ships, long loading/unloading time and unplanned ship arrivals to the port are the causes of freight delays at Djibouti port. while 30-33% of the respondents agreed that unorganized ship birth space, insufficient cargo transport equipments within the port, long port process, limited port operators working hours, cargo storage problem at the port and insufficient space to load and unload goods from ship to truck are the causes of delay. Only 16-26% of the respondents stated that Cargo congestion, Truck congestion, untrained machine operators, Poor port administration and management,

Poor shipping process and service and insufficient, old and not working loader/un-loader equipment are the causes of delay.

Delay of goods due to problems related to warehouses evaluated by Transit service providers

The responses of transit service providers with regards to warehouse problems are summarized in Table 5 below to determine which problems need attention. A total of 30 transit service providers were approached with questionnaire and twenty six, 26 (86.7%) of them responded.

Table 5: Transit service providers' response frequencies on the causes of delay at Warehouse

		Responses	Percent of
		N	Cases, %
Causes of delays at Warehouses	Poor information flow	13	50.0
	Many formalities	14	53.8
	Limited working days of warehouse operators	5	19.2
	Insufficient space for storage	11	42.3
	Unsuitable warehouse design for different types of trucks	7	26.9
	Long unloading time	9	34.6

Note: N stands for number of respondents.

As shown in the above Table 5 the Transit service providers' opinion on the warehouse problems that can cause delay of goods. 50-53.8% of respondents stated that formalities to unload the goods from trucks and poor information flow between the operators and truck drivers regarding amount of cargos that are already in the store, number of trucks coming, type and size of cargo coming and other information is the main cause of goods delay after it reaches at the warehouse. More than forty percent of the respondents (42.3%) agreed that insufficient space for storage of the arriving goods due to unbalanced cargo flow is the cause of delay at warehouses and 34.6% of the respondents agreed that the long un-loading time of goods at the warehouse is the cause of delays. While, 26.9% and 19.2% of respondents' respectively states that unsuitable warehouse design for different types of freight trucks to unload and limited working days of warehouse operators are the causes of delay at warehouses.

Figure 1 below present's transit service providers' response on loaded trucks delay due to unprepared warehouse.

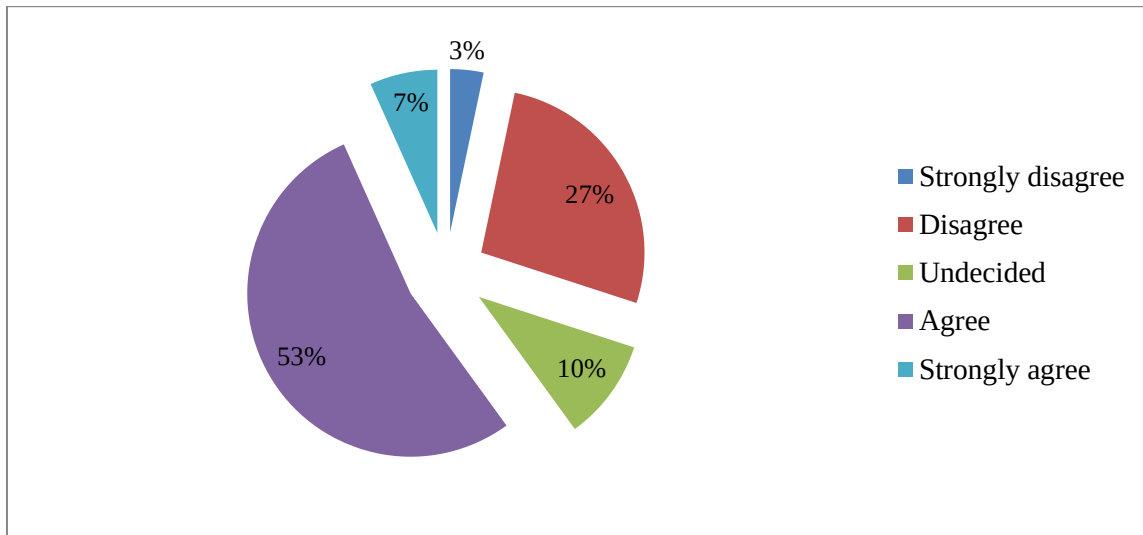


Figure 1: Transit service providers' response on the loaded trucks delay due to unprepared warehouse

The above Figure 1 confirms that 7% of respondents strongly agree and significant amount (53%) of respondents agreed that once the loaded truck has reached to the warehouse, space for the goods is not available and as a result, loaded trucks get delayed. Three percent (3%) of respondents strongly disagree and 27% responded disagree that the loaded trucks will get delayed due to unprepared warehouses and 10% remained undecided.

Contribution of freight transporter companies to delay of goods evaluated by Transit Service Providers

The Transit service providers were asked to evaluate freight transporter companies in relation to their contribution to delay of goods and the results of the questionnaires are summarized below. A total of 30 transit service providers were approached with questionnaire and all of them responded.

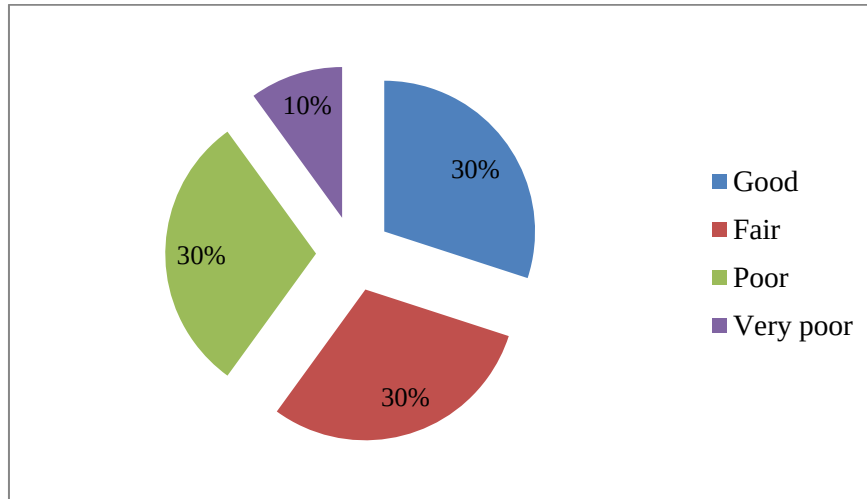


Figure 2: Transit service providers' evaluation on freight transporter companies' service in relation to delays

According to Figure 2, the survey result shows that, 10% of respondents evaluated the freight transport companies' service in relation to delays as very poor, 30% as poor and 30% as fair. While the remaining 30% of the respondents evaluated freight transporter service as good.

Figure 3 below illustrated response of transit service provides on transporter companies organizations and Ethiopian vessels.

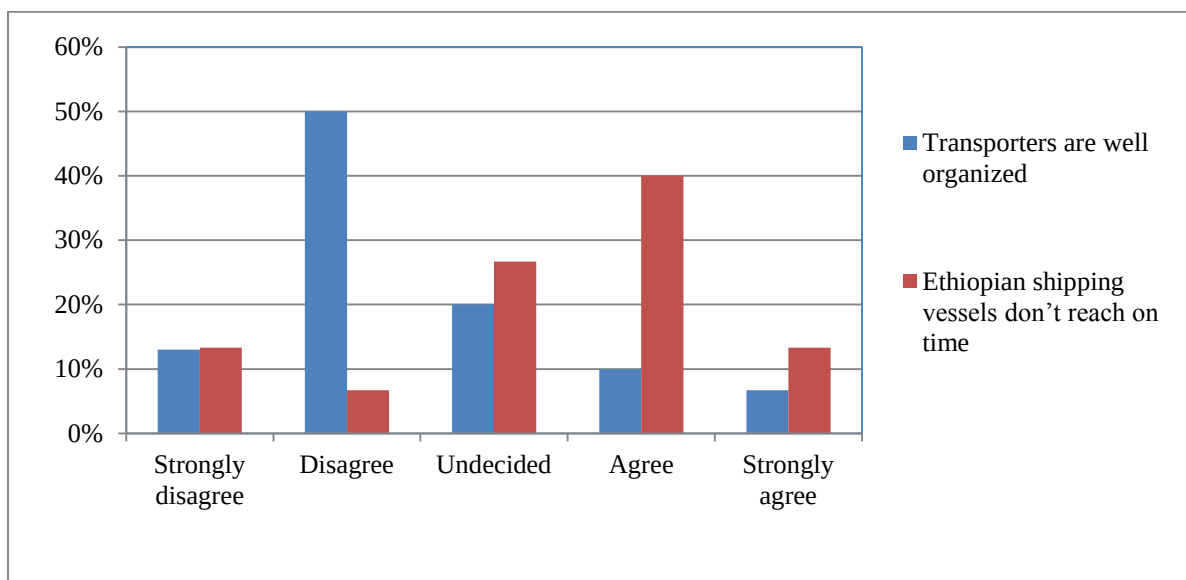


Figure 3: Transit service providers' response on transporter companies' organization and Ethiopian vessels

From Figure 3, it is clear that 50% disagree and 13% strongly disagree that freight transporter companies are well organized and coordinated. While 10% agree and 7% strongly agree that freight transporters are well organized; 20% remain undecided about this issue.

Regarding the Ethiopian ship vessels, 40% agree and 13.3% strongly agree that they don't reach to other countries ports to load the imported goods to Djibouti port at the required time; 6.7% disagree and 13.3% strongly disagree and 26.7% of respondents are undecided.

Causes of delay at local dry ports as evaluated by the Transit Service Providers

The responses of the Transit service providers regarding Local dry ports contribution to delay of goods within the port is summarized in this section to determine which problem mainly contributes to delay of goods within the port. A total of 30 transit service providers were approached with questionnaire and twenty eight, 28 (93.3%) of them responded.

Table 6: Transit service providers' response frequencies on the causes of delay at local dry ports

		Responses	Percent of Cases, %
		N	
Causes of Delay at local dry ports	Poor transport service within local dry ports	7	25
	Long line to load container	13	46.4
	Late collection of cargo	6	21.4
	Poor port management	14	50
	Poor cargo handling	13	46.4
Consequence	Long local port custom clearing	16	57.1
	Containers get lost	7	25
	Insufficient loader/un-loader equipments	6	21.4

Note: N stands for number of respondents.

As shown on Table 6 above, it was noted that 57.1% of the respondents mentioned that the main cause of cargo delays at local dry port is the long process of custom clearance and 50% agreed that poor port management is the cause of delay at the ports. Above forty percent (46.4%) of respondents agree that poor cargo handling methods and the long line of trucks to load cargos is the main cause of cargo delay at the port; While 25% stated that poor

transportation service within the port and containers get lost or disappeared due to poor organization of the port process are the causes of delay. At last, 21.4% of respondents state that late collection of cargo (some importers use the port as storage) and insufficient and old loader/un-loader equipments within the port is the cause of delay at local dry ports.

Response of Transit Service Providers regarding the effect of delay

Effects of freight delay were assessed in terms of market price, goods quality and safety of the imported goods. The responses are summarized as follows. A total of 30 transit service providers were approached with questionnaire and all of them responded.

Figure 4 shown below illustrated transit service providers' response regarding the effects of freight delay.

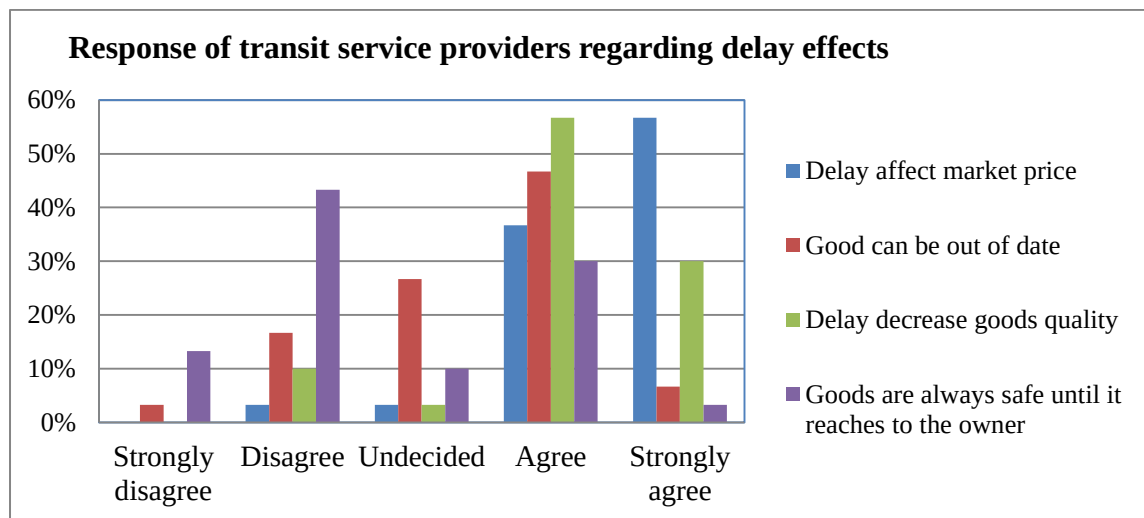


Figure 4: Transit service providers' response on Effects of freight delay

From Figure 4 above, it is clear that out of the total respondents the highest number (56.7%) strongly agreed and 36.7% agreed that delay of goods while coming from Djibouti port can affect the market price while 3.3% of the employees disagree that delay does affect the market price. The remaining 3.3% were undecided.

Concerning the goods quality, 57% agreed and 30% strongly agreed that delay can affect goods quality. Beside those respondents, 46.7% agreed and 6.7% strongly agreed that goods can even be out of date and 10% of respondents disagree that goods quality can decrease due to delay, also 16.7% disagreed and 3.3% strongly disagreed that goods can be out of date due

to delay. Furthermore, 3% and 26.7% were undecided on goods quality minimization and being out of date due to delay respectively.

In regards with goods safety, 43.3% of the respondents disagreed and 13.3% strongly disagreed that goods always reach safe to the destination. Furthermore, 30% agreed and 3.35 strongly agreed that good are always safe and 10 % remain undecided.

Generally, Transit service providers believe that delay has an adverse effect to the country by increasing the market price of the goods and by making the imported goods to be out of date. In addition, they believe that delay has an effect to the importers by decreasing their goods quality and by affecting the safety of the imported goods.

4.4.2. Freight Truck Drivers

A total of 40 freight truck drivers have responded to the questionnaires. The responses are presented in table below.

i. General responses of the drivers

Table 7: Case summary for the number of respondents to general questions

		Age of Driver	Drivers Experience (years)	Average days it took to transport	Working hour of drivers per day	Delay at Addis Ababa gate(hours)	Delayed if problems happen to trucks (days)
N	Valid	39	36	39	40	34	37
	Missing	1	4	1	0	6	3

Table 8: Drivers age, experience and days it took them to travel from Djibouti to Addis Ababa

Age	25-35 years		36-45years		46-55years		>55years	
	18.0%		51.5%		23%		7.5%	
Experience	1-5 Years		6-10 Years	11-15 years	16-20 years	21-25 years	26-30 years	31-35 years
	5.6%		27.7%	22.3%	27.7%	5.6%	8.4%	2.7%
Average days it took to transport	3	3.5	4	4.5	5.5	6	7	10
	20.5%	20.5%	30.8%	5%	2.6%	10.3%	7.7%	2.6%

Table 8 above shows that among the respondents most of them (51.5%) are between the ages 36-45 years while 23.2% are between the ages of 46 and 55 years. Regarding their experience, 27.8%, 27.8% and 22.3% of them are in the range of 6-10 years, 16-20 years and 11-15 years respectively. Concerning days it took for the drivers to travel from Djibouti port to Addis Ababa, most of them (71.8%) took 3-4days.

Table 9 below presents statistical parameters for general responses of freight truck drivers response for the provided questions.

Table 9: Statistical parameters for general responses of truck drivers

Statistical parameters	Working hour of drivers per day	Delay at Addis Ababa gate(hours)	Delay if problems happen to trucks (days)
Mean	12.3	3.4	10.0
Mode	10.0	4.0	10.0
Std. Deviation	3.7	2.1	7.0
Minimum	8.0	0.0	1.0
Maximum	24.0	11.0	30.0

From the above Table 9, it's clear that truck driver's average working hour is 12.3 while the minimum and maximum working hours are 8 and 24 respectively. In relation to delay at Addis Ababa gate, on average truck drivers stop their trucks for 3.4 hours due to congestion

at the gate. If mechanical problems happen to the truck on the road, the truck can stop from working for an average of 10 days.

ii. Causes of delay at Djibouti port as evaluated by freight truck drivers

The responses of the truck drivers regarding cause of delays at Djibouti port has been summarized and presented as follows to determine the problem that need more attention. A total of 40 freight truck drivers' were approached with questionnaire and all of them responded.

Table 10 below presents truck drivers' response regarding causes of delay at Djibouti port.

Table 10: Freight truck drivers' response frequencies on the causes of delay at Djibouti port

		Responses	Percent of
		N	Cases, %
Causes of Delay at Djibouti Port	Truck congestion	27	67.5
	Insufficient container loader and un-loader equipments	24	60.0
	Inexperienced machine operators	21	52.5
	Late loading of goods from ship to trucks	32	80.0

Note: N stands for number of respondents.

Table 10 below presents truck drivers' response regarding causes of delay at Djibouti port.

Table Table 10 above reveals that 80% of the respondents agreed that the main problem that cause delay at Djibouti port is the late loading of goods from ship to trucks. 60%, 65% and 67% of the respondents agreed that shortage of container loader/un-loader equipments at Djibouti port, unavailable of parking spaces for trucks and truck congestion at the port of Djibouti are the main cause of delays respectively, whereas 52.5% of respondents agreed that inexperienced machine operators at Djibouti port cause delay.

Figure 5 below illustrates freight truck drivers' responses regarding bureaucracy at Djibouti port.

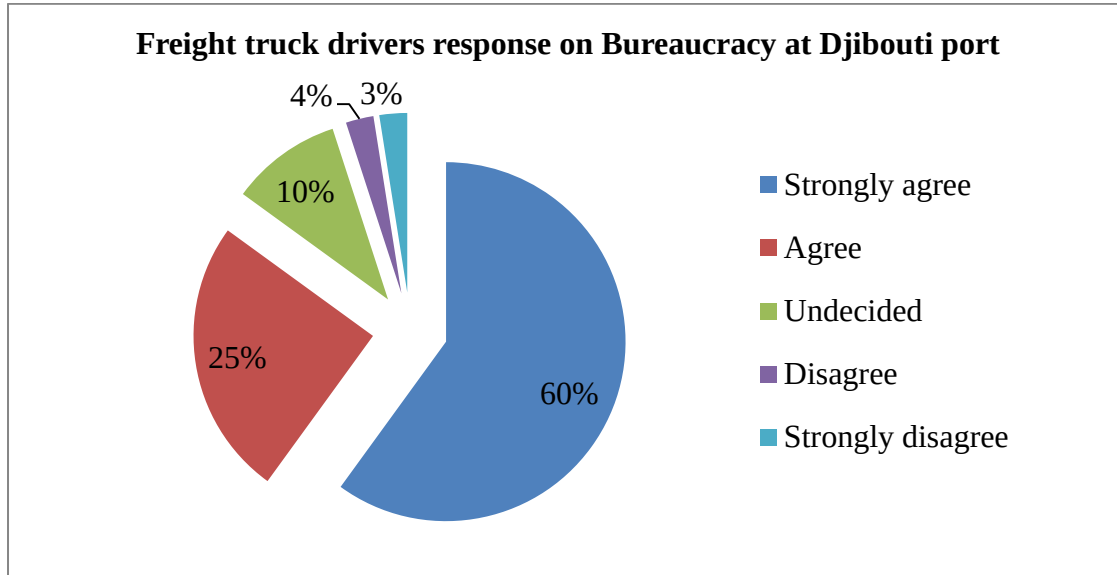


Figure 5: Freight truck Drivers response on the existence of bureaucracy at Djibouti port

The above pie charts in Figure 5 reveals that 60% and 2% of the respondents strongly disagreed and disagreed that there is bureaucracy at Djibouti port that cause delays and 25% and 3% of then agreed and strongly agreed about the existence of bureaucracy at the port; while 10% of Freight truck drivers remain undecided.

iii. Djibouti-Addis Ababa road condition as a cause of delay as evaluated by Truck drivers

The responses of the freight truck drivers with regards to Djibouti to Addis Ababa road condition are summarized in this section to determine which problems need quick resolution.

Figure 6 below illustrates responses of truck drivers concerning Djibouti-Addis Ababa road maintenance.

Assessing Freight Transport Performances in relation to delays in Ethiopia: The case of Addis Ababa-Djibouti Corridor

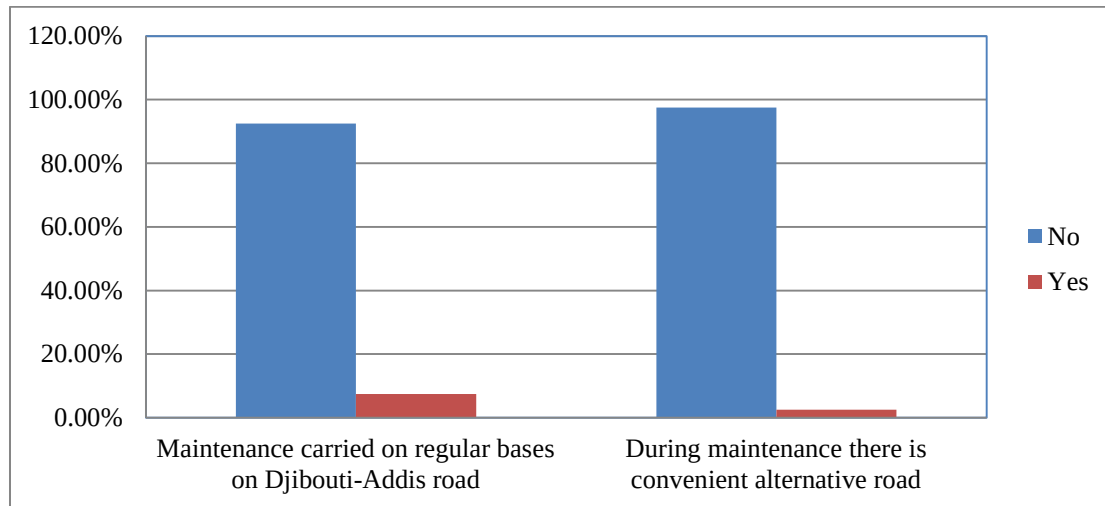


Figure 6: Response of freight truck drivers regarding Djibouti-Addis road maintenance

The above Figure 6 indicates that 92.5% and 97.5% of freight truck drivers disagreed that maintenances on Djibouti-Addis road are carried on regular bases and there is absence of convenient alternative road during maintenance. While 7.5% and 2.5% of them agreed about this issue respectively.

Table 11 below presents freight truck drivers' response regarding Djibouti-Addis Ababa road condition as a cause of delay. For this specific question, all forty drivers responded.

A total of 40 freight truck drivers' were approached with questionnaire and all of them responded.

Table 11: Freight truck drivers' response frequencies on Djibouti-Addis road condition that can cause delay

		Responses	Percent of Cases, %
		N	
Causes of delay on Djibouti to Addis Ababa road	Narrow Djibouti Addis road cause delay	20	50
	Truck congestion on Djibouti Addis road cause delay	14	35
	Large number of trucks on Djibouti Addis road cause delay	17	42.5
Consequence	Uncomfortable Djibouti-Addis road cause delay	39	97.5
	Accidents on Djibouti Addis route cause delay	15	37.5

Note: N stands for number of respondents.

Table 11 above indicates that 97.5% of freight truck drivers' responded that generally the Djibouti-Addis Ababa road is not comfortable; as a result, trucks can get delayed. Fifty percent (50%) of respondents agreed that narrowness of Djibouti-Addis road can cause delay, while 42.5%, 37.5% and 35% of truck drivers agreed that the large number of trucks on Djibouti-Addis road, accidents and congestion are the major causes of truck delays respectively.

iv. Facilities and other causes of delay on Djibouti-Addis route as evaluated by Freight truck drivers

The responses of freight truck drivers to the questions regarding the availability of some facilities on Djibouti-Addis road and the possible causes of truck delay through Djibouti-Addis road is summarized in this section.

Figure 7 below illustrates freight truck drivers' response concerning the existence of facilities on Djibouti-Addis road.

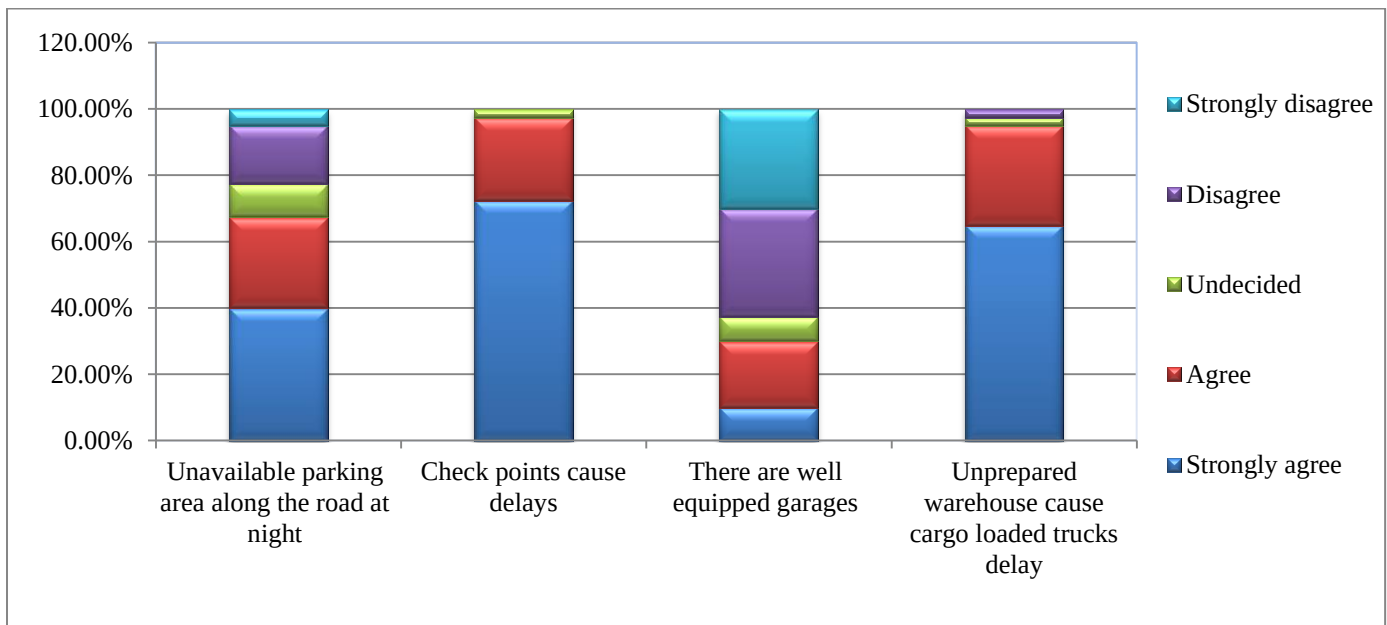


Figure 7: Freight truck Drivers response on the existence of Facilities and other causes of delay Trough Djibouti-Addis route

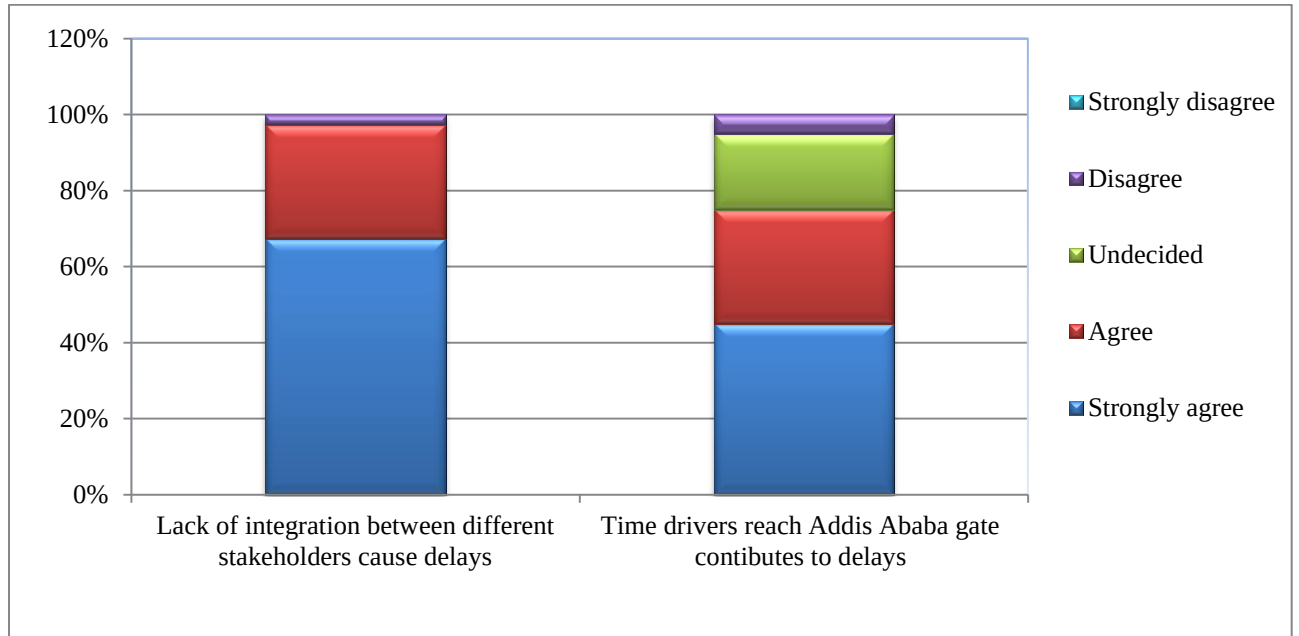


Figure 8: Other causes of delays

Figure 7&8 above shows that 40% and 27.5% of the drivers strongly agreed and agreed respectively that unavailability of parking areas on Djibouti-Addis road at night causes delays. Conversely, 5% and 17.5% strongly disagreed and disagreed the unavailability of parking area effect to delay. 10% of drivers are unsure.

Regarding check points on Djibouti-Addis road, 72.5% of drivers strongly agree and 25% of them agreed that it causes delays, while 2.5% remain undecided.

Concerning well-equipped garages on Djibouti-Addis route, 10% of the respondents strongly agreed and 20% agreed that there are well-equipped garages on the road, while 30% strongly disagreed and 32.5% disagree about the presence of the well-equipped garages through Djibouti-Addis road.

In terms of absence of integration between different stakeholders participating in this system, 67.5% strongly agreed and 30% agreed that it can cause delays. On the other hand, only 2.5% of drivers disagree that the loss of integration can cause delays.

With regards to the time they reach Addis Ababa gate, 45% strongly agree and 30% agree that the time can contribute to delay of trucks at the gate of the city, and 5% of the drivers disagree about the contribution of arrival time to delays. Twenty percent (20%) of the respondents remain undecided.

In addition, the drivers' response on unprepared warehouse, 65% of them strongly agreed and 30% agreed that it causes cargo loaded trucks delay, while 2.5% disagreed and 2.5% remain undecided about this issue.

v. Response of freight truck drivers regarding the effect of delay to drivers

Effects of freight delay were assessed in terms of driver behavior and the responses are summarized as follows. A total of 40 freight truck drivers' were approached with questionnaire and all of them responded.

Table 12 below presents responses of truck drivers regarding the effect of delay to drivers.

Table 12: Freight truck drivers' response on the Effects of freight delay on drivers

		Responses	Percent of Cases, %
		N	
Effects of Delay to Drivers	Delay cause anger	36	90.0
	Delay causes tediousness	32	80.0
	Delay cause fatigue	31	77.5
	Drivers get restless due to delay	29	72.5
	Delay reduces performance	33	82.5
	Delay reduce work motivation	37	92.5
	Delay change drivers driving behavior	33	82.5
	Delay cause waste of time	38	95.0
	Delay cause robbery	25	62.5
	Delay cause accidents	29	72.5
	Delay causes unsatisfactory financial remuneration	8	20.0
	Delay cause extravagancy	37	92.5
	Delay forces drivers to drive day and night	34	85.0

Note: N stands for number of respondents.

Table 12 above shows that more than 90% of truck drivers respond that delay can cause them extravagancy, waste of time, anger and it can reduce their work motivation and 80-85% stated that delay can change their driving behavior, can forces them to drive day and night and it can also reduce their performances by causing tediousness. According to 72.5%-77.5% of the drivers, delay cause fatigue, can make them restless and it can even cause accidents,

62.5% of drivers agreed that delay can cause robbery and only 20% of the respondents said that delay causes unsatisfactory financial remuneration.

4.4.3. Freight Transporter Companies

Transporters were questioned to assess the problems they mostly face at Djibouti port, at local dry ports and at warehouses that can cause delay of goods. The impacts of freight delays are also assessed using the questionnaire. A total of 20 responses from freight transporter companies were gathered.

i. Causes of delay at Djibouti port as evaluated by Freight transporter companies

The results of the questionnaires related to causes of delays at Djibouti port are summarized in table 13 below.

Table 13: Freight transporters' responses on causes of delay at Djibouti port

		Responses	Percent of Cases, %
		N	
Causes of delay at Djibouti port	Cargo congestion at Djibouti port cause delay	8	40.0
	Storage problem at Djibouti port cause delay	11	55.0
	Insufficient space to load unload from ship to truck cause delay	10	50.0
	Unplanned ship arrival cause delay at Djibouti port	13	65.0
	Truck congestion at Djibouti port cause delay	6	30.0
	Untrained machine operators at Djibouti port cause delay	8	40.0
	Many formalities & bureaucracy cause delay at Djibouti port	15	75.0
	Long loading unloading time cause delay at Djibouti port	16	80.0
	Insufficient truck supply at Djibouti port cause delay	4	20.0
	Long custom clearance at Djibouti port delay	5	25.0
	Limited working hours of Djibouti port operators cause delay	13	65.0
	Long Djibouti port processes cause delay	13	65.0
	Insufficient cargo transport equipments cause delay	5	25.0
	Poor port service of Djibouti port cause delay	12	60.0
	Insufficient & unorganized ship berth space cause delay	7	35.0
	Poor Djibouti port administration and management cause delay	10	50.0
	Long and poor shipping process and service cause delay	9	45.0
	Insufficient and old loader un-loader equipments cause delay	8	40.0

Note: N stands for number of respondents.

Freight trucks contribution to delay of goods evaluated by Freight transporter companies

Regarding the contribution of freight trucks to delays of goods, significant amount of transporter companies (85%) do not have special trucks for meat, flower, fruits and vegetables. Only 15% of them have special trucks.

ii. Delay of goods due to problems related to warehouses as evaluated by freight transporter companies

The responses of freight transporter companies to the provided questions with regards to warehouse problems that can cause delay of loaded trucks are summarized in this section. A

total of 20 freight transporter companies were approached with questionnaire and all of them responded.

Table 14 below presents responses of transporter companies regarding causes of delay at warehouses.

Table 14: Freight transporter companies' response on the cause of freight delay at warehouses

		Responses	Percent of Cases, %
		N	
Cause of delay due to warehouse problems	Poor information flow	17	85.0
	Many formalities	7	35.0
	Unlimited working days of warehouse operators	9	45.0
	Insufficient space for storage in the warehouse	13	65.0
	Warehouse construction method	12	60.0
	Long unloading time at warehouse	11	55.0

Note: N stands for number of respondents.

From Table 14, 85% of freight transporter companies agreed that poor information flow is the main cause of freight delay at warehouses; 60-65% of respondents answered that warehouse construction method and insufficient space for storage are also the causes of loaded trucks delay at warehouses; 55% of transporter companies agreed that the long unloading time at warehouse are the causes of delays. Also 45% and 35% of transporters answered that the unlimited working days of warehouse operators and the formalities at warehouse are the cause of delay respectively.

Figure 9 below illustrates response of transporter companies regarding unprepared warehouses as a cause of delay

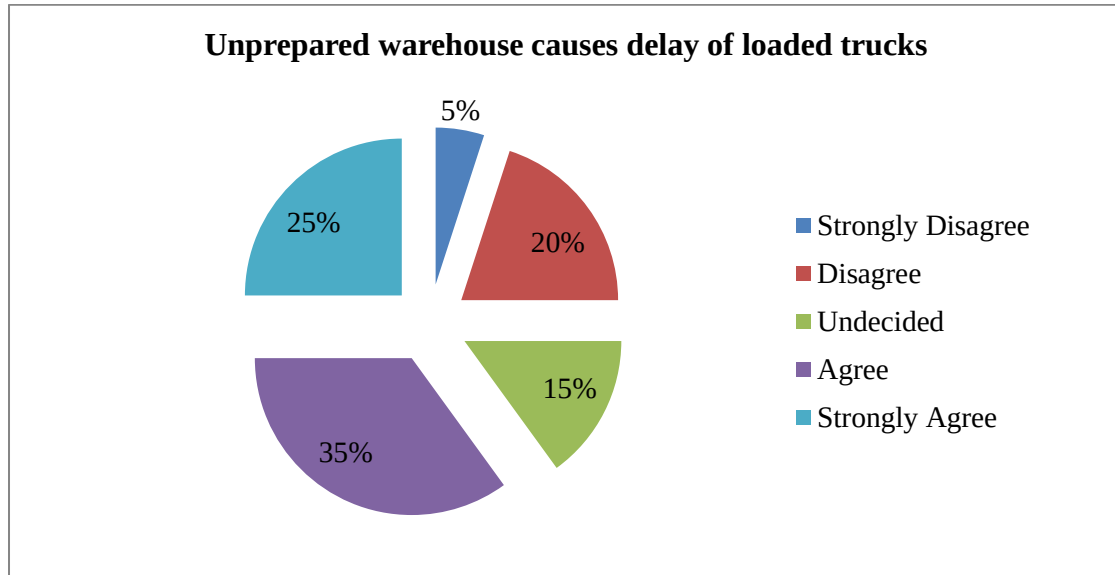


Figure 9: Freight transporter companies' response if unprepared warehouse cause delay

According to Figure 9, the survey result shows that, 25% and 35% of the respondents strongly agreed and agreed respectively that unprepared warehouse cause them delay of loaded trucks. On the other hand 5% and 20% of the respondents strongly disagreed and disagreed that unprepared warehouse cause delays while 15% of them remain undecided.

iii. Delay cause at Local dry ports as evaluated by freight transporter companies

The answers of freight transporter companies regarding goods delay causes at local dry ports are summarized in this section to determine which problem mainly contribute to delay of goods within the local dry port. Twenty (20) freight transporter companies were approached with questionnaire and all of them responded.

Table 15 below presents responses of transporter companies regarding causes of delay at local dry ports.

Table 15: Freight transporter companies' response frequencies regarding cause of delay at local dry ports

		Responses	Percent of cases, %
		N	
Causes of delay at local dry ports	Late space allocation for trucks cause delay at local dry ports	14	70.0
	Crowding and congestion of trucks at local dry port cause delay	11	55.0
	Cargo congestion and pileup at local dry port cause delay	8	40.0
	Old and not working loader un-loader equipments cause delay	6	30.0
	Poor local dry port management cause delay	14	70.0
	Storage problem at local dry port cause delay	7	35.0
	Long custom operations at local dry port cause delay	11	55.0
	Cargos not taken out on time from local dry ports cause delay	9	45.0

Note: N stands for number of respondents.

According to Table 15, freight transporters' evaluations on the cause of delay at local dry ports, equal number of respondents 70% agreed that poor port management and late space allocation for trucks are the causes of delays. Also, equal number of respondents (55%) said the long time custom operations at the port and crowding and congestion of trucks within the port are the causes of delay. Accordingly, 40-45% of freight transporters agreed that cargo congestion and pileup and cargos not taken out on time from the ports are the causes of goods delay at local dry ports. In addition, 30-35% of the respondents agreed that old and not working loader/un-loader equipments and the storage problems at the port are the cause of delay.

iv. Impact of freight delay to freight transporter companies

Regarding the effects of freight delay which was assessed in terms of cost, customer service and congestion; all twenty transporters were presented with questionnaires and all of them responded.

Table 16 below presents responses of transporter companies regarding impacts of delay.

Table 16: Freight transporter companies' response frequencies regarding impact of freight delay

		Responses	Percent of cases, %
		N	
Effects of delay to transporter companies	Delay increase storage cost	12	60.0
	Delay increase fuel consumption	8	40.0
	Delay cause accidents	10	50.0
	Delay decrease truck transaction	16	80.0
	Delay reduce customer service	13	65.0
	Delay reduce freight transporters performance	15	75.0

Note: N stands for number of respondents.

Looking at Table 16, 80% of freight transporter companies responded that delay decrease truck transaction while 75% agreed that delay can reduce the transporter companies' performances. On the other hand, 60-65% of the respondents said that delay of goods can increase storage cost and reduce customer service; 50% of transporters agreed that delay can cause accidents and 40% agreed that delay increase fuel consumption.

Figure 10 below illustrates responses of transporter companies regarding delay contribution to truck congestion at Addis Ababa gate.

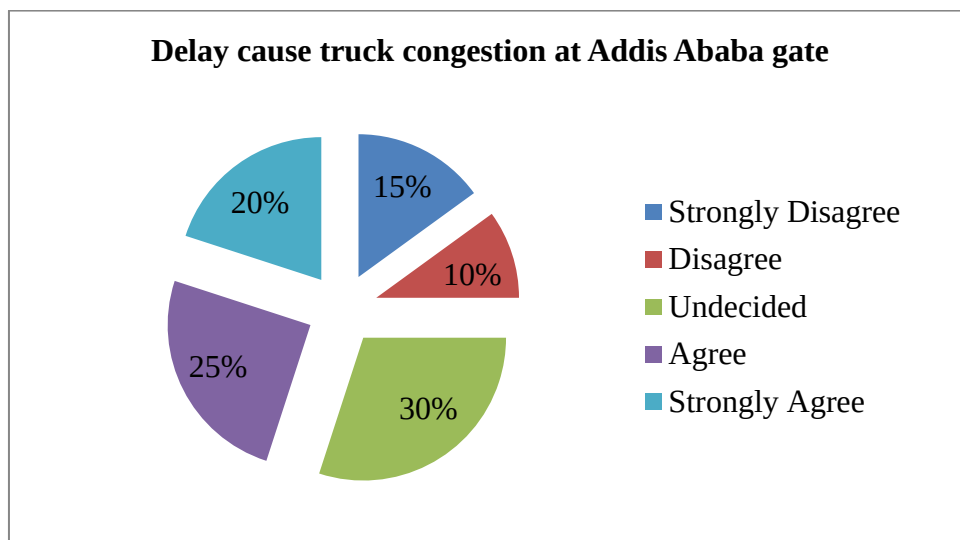


Figure 10: Freight transporter companies' response regarding delay contribution to truck congestion at Addis Ababa gate

Figure 10 indicates that in summary, 45% of freight transporter companies agreed that delay can cause truck congestion at Addis Ababa gate while 25% of the respondents disagree about the effect of delay to truck congestion; 30 % of respondents were undecided about this issue.

5. DISCUSSIONS

5.1. General

As presented in the preceding chapter, total customer waiting time for freight transportation service for each company were previewed and questionnaires were distributed to different stakeholders involved in the freight transport system along the Djibouti corridor. Discussions on results are presented below.

5.2. Importers' average waiting time for transportation services

According to the collected data freight transporter Company-1 recorded the longest average customer waiting time to acquire service which is 46 days; while the average service time of customers for this company was 24 days. Totally, the company took an average of 70.13 days to serve one customer or importer (Refer Table 1) which implies that the performance of the service is low compared to other transport companies. The larger time gap between agreement date and date of commencement of service was due to the Suppliers', i.e. problems, unexpected vessel arrival and other problems related to Djibouti's port ship berth area. On the other hand, freight transporter Company-4 has the shortest total importer waiting time which is 13.76 days; 2.3 days average customer waiting time to start service and 11.46 days average service time of the customer. The other five companies have customer waiting days that are within the above extreme results.

Table shows the descriptive statistics of customer waiting time of different companies which are means, maximums, minimums and standard deviations. Regarding average customer waiting time to start service, among the participant transporter companies the minimum, maximum and means values were calculated as 2.3 days, 46.03 days and 16.23 days respectively while the standard deviation is 13.88 days. For the average service time, minimum, maximum, mean and std. deviation values are 7.45 days, 38.57 days, 21.18 days and 10.30 days respectively. Therefore, the total customer waiting time results confirm that on average importers wait for 37.4 days with minimum of 13.76 days, maximum of 70.13 days and standard deviation of 19.1 days.

Table 17: Descriptive statistics of customer waiting time at different companies

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Average customer waiting time to start service (in days)	7	2.3	46.03	16.23	13.88
Average service time (in days)	7	7.45	38.57	21.18	10.30
Total customer waiting time (in days)	7	13.76	70.13	37.4	19.1

Note: N stands for number of respondent companies.

The higher standard deviation on the table above for each element shows that, the service that transport companies give in relation to time varies with their capacities and coordination. In addition, it depends on the loaded commodities amount and final destinations or country.

5.3. Survey findings

The survey findings are summarized in this section with causes of delays at Djibouti port, on Djibouti-Addis road, at local dry ports and due to freight trucks, transporter companies, and warehouses. In addition, the impacts of delays are assessed and summarized.

5.3.1. Causes of delay at Djibouti port

Table 18 below presents rank of transporter companies and transit service providers' responses regarding causes of delay at Djibouti port

Table 18: Rank of causes of delay at Djibouti port responded by transit service providers and transporters

Causes and Consequences of Delays	N	Percent of Cases, %
Bureaucracy at Djibouti port	37	74
Long un-loading time of vessels at Djibouti port	30	60
Unplanned ship arrival at Djibouti port	25	50
Poor Djibouti port service	25	50
Long Djibouti port processes	24	48
Limited working hours of Djibouti port operators	23	46
Storage problem at Djibouti port	21	42
Insufficient space for unloading of goods from ship to truck within Djibouti port	20	40
Insufficient truck supply at Djibouti port	18	36
Long custom clearance at Djibouti port	17	34
Poor Djibouti port administration and management	17	34
Cargo congestion at Djibouti port	16	32
Insufficient & unorganized ship berth space	16	32
Long and poor shipping process and service	16	32
Insufficient cargo transport equipment	15	30
Insufficient and old loader/un-loader equipment	15	30
Untrained machine operators at Djibouti port	13	26
Truck congestion at Djibouti port	12	24

Note: N stands for number of respondents.

Optimization of cargo handling process duration is one of basic goals of port management activities. At the same time, it means that ship loading/unloading time is the shortest possible time and is one of key principles of shipping industry. There is also, a well-known fact in the shipping industry that *loading/unloading time is money*. Having in mind previously mentioned, it becomes clear that small improvements in the average speed of handling cargoes can mean large savings in costs and ship time (*Delović 2005*).

As shown in Table 18 above, among the causes of delays at Djibouti port, formalities & bureaucracy at the port were ranked highest (74%) followed by long discharge time of vessels

(60%) and unplanned ship arrival to Djibouti port and poor Djibouti port service as a cause of goods delay was ranked third (50%).

Table 19 below presents the summery of truck drivers' responses regarding causes of delay at Djibouti port.

Table 19: Summary of the responses of freight truck drivers regarding causes of delay at Djibouti port in descending order

Causes of Delays		Responses	Percent of Cases, %
		N	
Causes of Delay at Djibouti Port	Late loading of goods from vessel to trucks	32	80.00
	Truck congestion at the port of Djibouti	27	67.50
	Unavailable parking space	26	65.00
	Insufficient container loader un-loader equipment at Djibouti port	24	60.00
	Inexperienced machine operators at Djibouti port	21	52.50
Bureaucracy at Djibouti port cause delay	Strongly agree	60	
	Agree	25	
	Undecided	10	
	Disagree	2.50	
	Strongly disagree	2.50	

Note: N stands for number of respondents.

Truck delays are experienced during loading and unloading of goods, particularly at the port of Djibouti, where the truck parking area is inconveniently located away from the cargo stacking port area. The source of the problem is administrative and it is poor cargo traffic management (Addis Ababa and Sectorial Associations 2009). Again in this study, from truck drivers' responses in Table 19, above significant number of respondents (85%) agreed that bureaucracy at Djibouti port is the main cause of delay within the Port since there are many procedures to get a single service. In addition, 80% of truck drivers responded that it's late loading of goods from vessels to trucks that cause delay within the port. Furthermore, 60%, 65% and 67% of drivers agreed that truck congestion at the port, unavailable parking spaces and insufficient container loader/un-loader equipment respectively were the causes of delays within the port. Lastly, only 52.5% of the respondents agreed that the inexperienced machine operators within Djibouti port are the causes of delays.

5.3.2. Causes of delays along the Djibouti-Addis Ababa road Corridor

Table 20 below presents, summary of truck drivers' responses regarding causes of delay along Djibouti-Addis Ababa road.

Table 20: Summary of the responses regarding cause of delay along the Djibouti-Addis Ababa road

				Responses	Percent of Cases, %
				N	
Causes of delays along the Djibouti-Addis Ababa road corridor	Uncomfortable Djibouti Addis road			39	97.5
	Narrow Djibouti Addis road			20	50.0
	Large number of trucks on Djibouti Addis road			17	42.5
	Accidents on Djibouti Addis route			15	37.5
	Truck congestion on Djibouti Addis road			14	35.0
	Strongly agree	Agree	Undecided	Disagree	Strongly disagree
Check points through Djibouti Addis road, (%)	72	25	3	0	0
Un-integrated work of different bodies, (%)	67	30	3	0	0
Unprepared warehouse cause cargo loaded trucks delay, (%)	65	29	3	3	0
Time drivers reach Addis Ababa gate cause delay in the city, (%)	45	30	20	5	0
Unavailable parking area through Djibouti Addis road at night, (%)	40	28	10	17	5
There are well equipped garages through Djibouti Addis road, (%)	10	20	7.5	32.5	30
	No		Yes		
Maintenance carried on regular bases on Djibouti Addis road, (%)	92.50		7.50		
While maintenance there is convenient alternative road, (%)	97.50		2.50		

Note: N stands for number of respondent companies.

The key element in a logistics chain is transportation system, which join the separated activities. Transportation comprises one-third of the logistic costs and so transportation systems influence the performance of logistics system hugely. Without well-developed transportation systems, logistics could not bring its advantages into full play. A good transport system in logistics activities could provide better logistics efficiency, reduce operation cost, and promote service quality (*Shewangizaw 2009*). Hence, this study uses this system to assess the arrival of freight trucks on time to their destinations.

The Djibouti-Addis Ababa road has a distance of 910Km. Having recently been rehabilitated, the first 71 km from the port is in good condition, while the remainder of the road in Djibouti is heavily pot-holed, especially in the many dry riverbeds that cross the road(*Nathan Associates Inc. 2014*). In this study, the majority (97.5%) of respondents claimed that the Djibouti Addis road is totally uncomfortable and inconvenient it is the main cause of goods delay while transportation. In this regard, 50.0% of respondents stated that it's the narrowness of the road that causes delays while 42.5% agreed that it's the large number of trucks on Djibouti Addis Ababa road that cause delays. On the other hand, 37.5% of drivers state that accidents on Djibouti-Addis Ababa road are the source of delay on the road. At last, 35.0% of the respondents state that truck congestion on Djibouti-Addis Ababa road is one the causes of delays. According to *Elshaday (2016)*, some causes of delays through the Djibouti-Addis Ababa road are; vehicle breakage and accidents mainly caused by poor road conditions at Djibouti and trucks are not equipped with GPS facilities.

According to *Elshaday (2016)*, the main reason for the delay of shipments is due to the time wasted on queue to get service at the check points, especially at Galafi and Mille which takes 6-10 hours each for checking while the Awash check point takes from 10 minutes to 3 hours and the Kality check point takes 10 minutes on average. Aggravating the situation, the network system at the check points is frequently down. Also in this study, significant number (98%) of drivers agreed that check points along the Djibouti-Addis Ababa road are the main causes of delays on the road.

Regarding integrated work of different bodies participating in transportation service, 98% of respondents' stated that lack of integration between different bodies participating in the system are the main cause of delay while goods are transported from Djibouti port to different destinations. On the other hand, 95% of respondents' stated that since warehouses

are not getting prepared at the destinations of the goods, cargo loaded trucks will be delayed. In addition, 75% of respondents agreed that the time truck drivers reach the Addis Ababa gate is one cause of truck delay at the city's gate. According to 68% of respondents, unavailable parking area along the Djibouti-Addis Ababa road at night can also be the cause of truck delays. Concerning well equipped garages along the Djibouti Addis Ababa road, 62.5% of the respondents disagreed about the availability of the garages through the road. In relation to road maintenance, Greater number (92.50%) of respondents agreed that maintenance is not carried on regular bases for Djibouti Addis road and 97.50% stated that while maintenance there is no convenient alternative road.

Looking at the gaps observed from the responses of the questionnaire and listening to multiple complaints of customers, it is easy to say freight transportation system from Djibouti to Addis is very poor.

5.3.3. Causes of delay at local dry ports

Table 21 below presents rank of transporter companies and transit service providers' responses concerning the causes of delay at local dry ports.

Table 21: Rank of the responses of transit service providers' and transporters regarding cause of delay at Local dry ports in descending order

Transit service Providers		Percent of Cases, %
Causes of delay at local dry ports	Long local port custom clearance	57.1
	Poor port management	50.0
	Poor cargo handling	46.4
	Long line to load container	46.4
	Containers get lost	25.0
	Poor transport service with in local dry ports	25.0
	Insufficient loader/un-loader	21.4
	Late collection of cargo	21.4
Transporters		Percent of cases, %
Causes of delay at local dry ports	Late space allocation for trucks	70.0
	Poor local dry port management	70.0
	Crowding and congestion of trucks at local dry port	55.0
	Long custom operations at local dry port	55.0
	Cargos not taken out on time from local dry ports	45.0
	Cargo congestion and pileup at local dry port	40.0
	Storage problem at local dry port	35.0
	Old and not working loader/un-loader equipment	30.0

Dry Port is a place for handling containers or conventional bulk cargo; usually connected to a seaport by rail or road(Addis Ababa and Sectorial Associations 2009). According to *Debela (2013)*, it was found out that Dry ports could handle many activities such as customs clearance, temporary storages, transshipment of goods, stuffing and un-stuffing of containers, consolidation of less than container loads and maintenance and repair of containers. Also the full implementation of Modjo and other dry ports like Comet (Kality Branch office), Gelan, Kombolcha, Mekele, Dire Dewa and Semera will have big impact in reducing sea port and transit costs like the storage cost incurred in foreign currency at Djibouti ports (*Debela 2013*).

According to *Elshaday (2016)*, the average time interval (lead time) to finalize dry port clearance process at Kality Dry Port ranges between 1-2 weeks while at Mojo Dry Port it might take about 2-3weeks. The study also disclosed that the main reason for the delay of shipments is due to the shortage of available trucks, breakage of the trucks along the route

and customs lengthy inspection at the check points. Other mentioned reasons were, coordination problem, information gap between Djibouti port and dry ports, lack of skilled manpower and incomplete documentation. As shown in Table 21 above, the majority (57.1%) of transit service providers stated that the long local port custom clearance process is the main source of delays at local dry ports while 50% of respondents states that the poor dry port management for different activities is the source of delay within the local dry ports. Thirdly, 46.4% of transit service providers said that poor cargo handling and the long line of trucks to load container are the sources of delays. Containers get lost and poor transport service within local dry ports are stated as a cause of delay in the countries local dry ports by 25% of transit service providers. At last, 21.4% of respondents agreed that insufficient loader/un-loader equipments at the dry ports and late collection of cargo are the cause of delay within the dry port.

5.3.4. Causes of delay at Warehouses

Table 22: Summary of the responses regarding cause of delay at warehouses

		Responses	Percent of
		N	Cases, %
Cause of delay at warehouses	Poor information flow	30	65.2
	Insufficient space for storage in the warehouse	24	52.2
	Many formalities	21	45.7
	Long unloading time	20	43.5
	Unsuitable warehouse design for different trucks	19	41.3
	Unlimited working days of warehouse operators	14	30.4
Unprepared warehouse can cause delay of loaded trucks	Strongly agree	14%	
	Agree	46%	
	Undecided	12%	
	Disagree	24%	
	Strongly disagree	4%	

Note: N stands for number of respondent companies.

Logistics operations play an important role in the functioning of freight systems. In production–consumption (P-C) relationships, goods are often transported through distribution centers and warehouses that are operated by wholesalers, retail chains, and manufacturers.

Warehouses and distribution centers provide storage for the goods closer to the consumers and therefore provide a faster response to the varying demand (*Davydenko et al.*).

According to Table 22 above, the majority (65.2%) of the respondents stated that poor information flow is the main cause of loaded trucks delay at warehouses. This is because drivers or transporters and warehouse operators do not exchange information related to cargos that are already in the store, number of trucks coming, type and size of cargo coming and other information. Secondly, 52.2% of the respondents stated that it's the insufficient space for storage that cause delay at warehouses. This is due to unbalanced flow of cargo. Thirdly, 45.7% of the respondents claim that different formalities at warehouses are the cause of delays; 43.5% and 41.3% of the respondents stated that the long loading and discharging time of freight trucks and unsuitable warehouse construction methods for different types of truck are the causes of delays at warehouses respectively. Lastly, 30.4% of them stated that the unlimited working days or hours of warehouse operators is the cause of delays at different warehouses. Regarding the preparation of warehouses before the truck arrives, 60% of respondents agree that it's the unprepared warehouses that cause delays of loaded trucks at warehouses.

5.3.5. Freight Trucks and Truckers as causes of delays

i. Freight Trucks

Table 23 below presents 20 transport companies responses regarding the presence of special trucks for meat, flower, fruits and vegetables.

Table 23: Response of transport companies regarding special trucks

	Yes	No
Do you have special trucks for meat, flower, fruits and vegetables?	15%	85%

As shown in Table 23 above, among the twenty participants of this question, only 15% of freight transport companies have special trucks for meat, flower, fruits and vegetables. Special trucks designed for these goods have the capacity to preserve them in case delay happens while transporting these goods.

Based on the data gathered from the Minister of Transport (MoT), *Shewangizaw (2009)*, in Ethiopia, trucks have limited carrying capacity as well as inappropriateness for container haulage. Due to these facts, loading and unloading operation at ports and destinations as well as travelling takes much time and justifies higher transportation costs and don't benefit from the economies of scale.

ii. Truckers

According to the responses made for questionnaires, most (74.7%) of the freight truck drivers are between the ages of 36-55 years and most of the drivers are well experienced. Regarding travelling time from Djibouti port to Addis Ababa, most of them (71.8%) required 3 to 4 days with 12.3 on average working hours per day. Due to traffic congestion at Addis Ababa gate, the drivers stop their trucks for an average of 3.4 hours and if mechanical problem happens on average they stop their trucks for 10 days.

5.3.6. Other causes of delays

Table 24 below presents summary of transit service providers' responses concerning freight transport companies.

Table 24: Summary of transit service providers' responses

	Good	Fair	Poor	Very poor	
Transporters service evaluation by transit service providers	30%	30%	30%	10%	
	Strongly disagree	Disagree	Undecided	Agree	Strongly agree
Transporters are well organized	13.3%	50.0%	20.0%	10.0%	6.7%
Ethiopian vessels don't arrive on time	13.3%	6.7%	26.7%	40.0%	13.3%

Impact of institutional quality on logistics and trade is getting higher and higher as the main stakeholders like customs authority, banks, transport service providers and other institutions become unreliable. Developing countries' institutions are characterized by poor capacity which can be seen by transit delays, failure to deliver in the needed time window or without the necessary quality and storage cost, false in cargo composition and wrong documentation

(Shewangizaw 2009). As shown in Table 24 above, 30% of transit service providers evaluated freight transporter companies services as poor, 30% evaluated as fair, 30% as good and 10% as very poor. Regarding freight transporter organization and co-ordination, 63.3% of the transit service providers agreed that the companies are not well organized. Also larger number of transit service providers (53.3%) agrees that Ethiopian vessels don't reach at the expected time.

5.3.7. Impact of delays

Table 25 below presents impacts of delays to truck drivers.

Table 25: Impacts of delay to freight truck drivers

		Percent of Cases, %
Effects of Delay to the Driver	Delay cause waste of time	95.0
	Delay reduce work motivation	92.5
	Delay cause extravagancy	92.5
	Delay cause anger	90.0
	Delay forces drivers to drive day and night	85.0
	Delay Reduce performance	82.5
	Delay change drivers driving behavior	82.5
	Delay cause Tediousness	80.0
	Delay cause Fatigue	77.5
	Drivers get restless due to delay	72.5
	Delay cause accident	72.5
	Delay cause robbery	62.5
	Delay cause insufficient remuneration	20.0

Concerning the effect of delay to freight truck drivers, Table 25 above shows that in addition to waste of time and money, delay can affect the driving behavior, motivation and performance of the driver. Above 90% of drivers agreed that delay can cause waste of time and extravagancy and it can also reduce work motivation. While 80-90% of drivers respond that delay can cause anger, it can reduce performance and it forces them to drive day and night. In this regard, 70-80% truck drivers' expressed tediousness, fatigue, restlessness and

accidents as a consequence of delay. Lastly 62.5% drivers agreed that delay can cause robbery and only 20% of the respondents agree on the effect of delays on their salaries. Hence, directly or indirectly they agreed that delay can change their driving behaviors.

Table 26 below presents impact of delays to freight transporter companies.

Table 26: Impact of delay to freight transporter companies in descending order

		Percent of Cases, %
Effect of delay to Freight Transporters	Delay decrease truck transaction or turnaround trips	80.0
	Delay reduce freight transporters performance	75.0
	Delay reduce customer service	65.0
	Delay increase storage cost	60.0
	Delay cause accident	50.0
	Delay increase fuel consumption	40.0

In relation to freight delay impact on freight transporter companies, Table 26 above shows that 80% of transporters agreed on reduction of truck transaction due to delays. On the other hand, 75% of the respondents agreed that delays can reduce performances of freight transporter companies. 65% of the respondents agreed that delays can reduce customer services and 60% agreed that delays increase storage costs. At last 50.0% of transporter companies said that delays can cause accidents and only 40% agreed that delay can increase fuel consumption of trucks.

Table 27 below presents other impacts of delays.

Table 27: Other impacts of delay

	Strongly disagree	Disagree	Undecided	Agree	Strongly agree
Delay affect market price, %	0.0	3.3	3.3	36.7	56.7
Imported goods can be out of date, %	3.3	16.7	26.7	46.7	6.7
Delay minimize goods quality, %	0.0	10.0	3.3	56.7	30.0
Goods are always safe till it reach here, %	13.3	43.3	10.0	30.0	3.3
Delay cause truck congestion at Addis Ababa gate due to untimed/not organized appearance of trucks, %	15.0	10.0	30.0	25.0	20.0

The main charges on Ethiopian transit cargo passing through the port of Djibouti comprise port charges related to cargo handling, clearing, forwarding charges and other (*Kifle et al. 2000*). Therefore, as goods get delayed at the port, the charges will also increase. As a result, market price of the goods will increase. Table 27 above also indicates that 93.4% of the respondents of this study agreed that delay can cause higher market price and 86.7% agreed that delay can also minimize the imported goods quality. Regarding perishable imported goods, 53.4% respondents agreed that goods can be out of date due to delay; 56.6% of the respondents disagreed that goods are always safe until it reaches its destinations. Regarding the congestion effect of freight delay, only 45% of the respondents agreed that delay can cause truck congestion at Addis Ababa gate due to untimed or un-organized appearance of trucks while 30% of the respondents are undecided about this issue.

In general since much of the global trading business is handled by making use of logistics services that deals with offering optimal solutions based on the arrangement of efficient, effective and highly reliable transport service tailor made to specific needs i.e., for the purpose of achieving a high delivery, a high reliability, a high degree of completeness and a short delivery time (*Addis Ababa and Sectorial Associations 2009*). All the above causes for freight delay needs applicable solutions.

6. CONCLUSIONS AND RECOMMENDATIONS

5.4. Conclusions

Based on the collected data and analysis made, the study concludes the following points:

- The average customer waiting time after an agreement is made with the transporter company is 16.23 days and the average service time of transporter companies after the service is started is 21.18 days. Totally on average it takes 37.4 days for transporter to transport goods and deliver to customers or importers. While the minimum and maximum are 13.76 and 70.13 days respectively for different companies.
- At Djibouti port, bureaucracy which can be called as invisible barriers were ranked highest in affecting the logistics service quality in terms of delay, followed by long discharge time of vessels. Unplanned vessels arrival and poor port service was ranked third. Furthermore, congestion and insufficient equipments are the causes of delay.
- Djibouti-Addis road is uncomfortable or inconvenient, which as a result cause delay to truckers. Check points, shortage of well-equipped garages along the road, lack of integration and unprepared warehouses are also the causes of delay. The long local dry port custom clearance process, poor port management, poor cargo handling and long line of trucks to load container are the sources of delay at local dry ports.
- Poor information flow is the main cause of loaded trucks delay at warehouses. This is because drivers (transporters) and warehouse operators do not exchange information related to cargos that are already in the store, number of trucks coming, type and size of cargo coming and other information. In addition, insufficient space, formalities and long loading/discharging time of freight trucks are the causes of delays at warehouses.
- Regarding the consequences of delay, delay can affect driving behavior, motivation and performance of truck drivers. In addition, delay can reduce truck transaction, transporter companies' performance and customer service and it also cause waste of time and extravagancy to drivers, which as result affect customer service quality and the country's economy.

5.5. Recommendations

In order to transport goods quickly, economically, safely and to achieve sustainable mobility of goods and develop the logistic service of the country this analysis recommends the following measures;

- Develop a reliable system for Djibouti corridor performance monitoring and analysis, Djibouti port management should be improved to minimize problems related to port operations that can cause delay of goods within the port. Specially, bureaucracy within Djibouti port should be eliminated since procedures should not risk Ethiopian goods transportation. In addition, the time the ship must wait for loading and unloading service to be completed should be minimized.
- Increasing the number of lanes of Djibouti-Addis road, strengthening or increasing the thickness of the existing pavement through overlay or reconstruction should be done.
- Ethiopian government, as the infrastructure provider, better invest its resources wisely on road, railway, dry ports and other infrastructures and Shifting of heavy traffic to other modes of transport like the railways. This is because progress in logistics performance is driven by improvement in infrastructure.
- Transport companies need to be supported and encouraged to build their capacity in terms of human resources, number and better age of their vehicle fleets, service coordination, and integration of their services with the services of warehouse and dry ports. Furthermore, other logistics service providers such as; transit service providers, truckers, brokers and shipping agents and etc. need to be encouraged because they add so much efficiency to goods flow in a short time and at lower cost.
- Establish warehouses and dry ports at strategic logistics stations with modern cargo handling equipments such as forklifts and cranes. Moreover, attention should be given to improve the level of service of warehouses and procedures at customs authority and service should be simplified & computerized for the benefit of the country.
- There has to be a policy that controls the implementation of those rules and regulations of truck demurrage proclamation (Refer Appendix D). In addition the country should share experience and adopt modern logistic systems from other similar countries.

Future Research Areas

Following the Literature review and the case of Djibouti-Addis Ababa corridor, some area can be recommended for further study. The delay time of different transported commodities along the corridor can be analyzed and changed to money. Even if this study focused on the overall supply chain performance in relation to delays along Djibouti port - Addis Ababa corridor, detail performance assessment can be made specifically at; Djibouti port, different dry ports, warehouses and at both weight and custom control stations. In addition, location of different facilities such as; control stations, warehouses and dry ports can be analyzed and optimum locations can be identified. Moreover, in addition to helping to control and make adjustments for coordinated works, complete analysis on logistics service providers such as; transport companies, transit service providers, truckers, brokers, shipping agents and etc. can encourage the stakeholders to build their capacity in terms of human resources, finance and service quality because they add so much efficiency to goods flow in a short time and at lower cost.

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APPENDIX A-Questionnaires for Key Actors

Questionnaire Survey for MSc. Thesis

Prepared for *transit service providers*

**Thesis title: Assessing freight transport performances in relation to delays in Ethiopia:
The case of Addis Ababa-Djibouti Corridor**

General Information

This research survey is designed to fulfill an academic requirement for M.Sc. degree program in Road and Transport Engineering at Addis Ababa University. I can assure you that the research data will only be used for academic purposes. The name of institutions participated will be recorded confidentially. Your open and prompt response is highly appreciated.

Please give your response for the questions here under by putting a “ ✓ ” mark at your appropriate choice or by putting your answers in the space provided. You may use the back side of the paper if the space provided is not sufficient.

For any clarification on this questionnaire, please contact me on 0912 28 23 35 (Kalkidan waktale)

Thanking you in advance, for your invaluable cooperation.

Company Name _____

A. Delay at Djibouti port

1. Mark the problems that can cause delay of goods at Djibouti port.

- ☐ Cargo congestion
- ☐ Storage problems
- ☐ Space to load/unload goods from ship to truck
- ☐ Unplanned ship arrival
- ☐ Truck congestions
- ☐ Untrained machine operators
- ☐ Many formalities or bureaucracy
- ☐ Long loading/unloading time
- ☐ Insufficient truck supply

2. Which of the following port operations can cause delay at Djibouti port?

- ☐ Long custom clearance
- ☐ Limited Working days of port operators
- ☐ Long port processes
- ☐ Insufficient cargo transport equipments
- ☐ Poor port service
- ☐ Insufficient and unorganized ship berth space
- ☐ Poor port administration and management
- ☐ Long and poor shipping process and service
- ☐ Loader and un-loader equipments (not sufficient, old and not working)

If there are other problems at Djibouti port,

B. Delay happens due to warehouse problems.

3. Due to unprepared warehouse, cargo loaded trucks can get delayed as they come from Djibouti port to Addis Ababa.

- ☐ Strongly disagree
- ☐ Disagree
- ☐ Undecided
- ☐ Agree
- ☐ Strongly agree

4. Which of the following **warehouse problems** can cause delay in Addis Ababa?

- ☐ Poor information flow (Not knowing cargos that are already in the store, number of trucks coming, type and size of cargo coming and other information)
- ☐ Many formalities at the warehouse
- ☐ Limited working days and hours of operators
- ☐ Insufficient space for storage due to unbalanced cargo flow
- ☐ Warehouse construction method (not suitable for different types of trucks)
- ☐ Long un-loading time

If there are other warehouse problems,

C. Transporters contribution to delay

5. Freight transporters are well organized and coordinated.
- ☐ Strongly disagree
- ☐ Disagree
- ☐ Undecided
- ☐ Agree
- ☐ Strongly agree
6. How do you evaluate the general transport service of freight transporters in relation to delays?
- ☐ Very good
- ☐ Good
- ☐ Fair
- ☐ Poor
- ☐ Very poor
7. Ethiopian ship vessels don't reach to the other different countries port at the required time.
- ☐ Strongly disagree
- ☐ Disagree
- ☐ Undecided
- ☐ Agree
- ☐ Strongly agree
8. What are the other problems that transporters caused, that have a consequence of delay?
-
-

D. Delay at dry ports

9. From the following problems mark the factor that can cause delay to your goods at Ethiopian local dry ports which are found through Djibouti-Addis route?
- ☐ Containers get lost
- ☐ Insufficient and old container loader/un-loader Equipments
- ☐ Poor port Management
- ☐ Poor cargo handling at local dry ports
- ☐ Long custom clearance process
- ☐ The transport services with in the local dry ports
- ☐ Long line to load the container
- ☐ Late collection of goods (Use the terminal as storage)

If there are other not listed problems that can cause delay of goods at local dry ports,

E. Delay of goods can affect the country

10. Delay of your goods affects your goods market price.

- ☐ Strongly disagree
☐ Disagree
☐ Undecided
☐ Agree
☐ Strongly agree

11. The imported goods can be out of date (expire date).

- ☐ Strongly disagree
☐ Disagree
☐ Undecided
☐ Agree
☐ Strongly agree

F. Delay affect customer satisfaction

12. Imported goods' quality can decrease due to delay.

- ☐ Strongly disagree
☐ Disagree
☐ Undecided
☐ Agree
☐ Strongly agree

13. Imported goods are always safe until it reaches to the importers.

- ☐ Strongly disagree
☐ Disagree
☐ Undecided
☐ Agree
☐ Strongly agree

14. What are the other effects of freight delay to the importers and to the country?

15. What are the problems your company faces due to imported goods delay?

16. What do you think are the reasons for freight transport delays?

17. What are your recommendations regarding the minimization of delays?

For Freight Truck Drivers

አዲስ አበባ ዩኒቨርሲቲ

አዲስ አበባ ቴክኖሎጂ ኢንስቲትዩት

የሲቪልና ኢንቫይሮንመንታል ምህንድስና ትምህርት ክፍል - ድህረ ምረቃ ፕሮግራም

=====

ለጭነት መኪና አሽከርካሪዎች የተዘጋጀ መጠይቅ

ይህ መጠይቅ በአምስት ኪሎ የሲቪልና ኢንቫይሮንመንታል ምህንድስና ትምህርት ክፍል ለመመረቂያ ጽሑፍ መረጃ ለማሰባሰብ የተዘጋጀ ሲሆን አላማው ለጭነት መዘግየት ምክንያት የሚሆኑትን መንስኤዎች ተገንዝቦ መፍትሔ ለመስጠትና የጭነት መዘግየት የሚያስከትሉትን ችግሮች መቅረፍን በማሰብ ነው፡፡

በመጠይቁ ላይ ጥያቄ ካለዎት በሚቀጥለው ስልክ ቁጥር ይደውሉ

ቃልኪዳን ዋቅቶሌ 0912 28 23 35

ከዚህ በታች ለቀረቡት መጠይቆች በተሰጠው ቦታ ምልክት በማድረግና ተጨማሪ ሃሳቦችን በመስጠት ክፍት ቦታ በመጠቀም መጠይቁን ይሙሉልን፡፡

ለትብብር አመሰግናለሁ!!!

የሚሰሩበት ድርጅት ስም _____

ድርጅቱ የተመሰረተበት ዓመተ ምህረት _____

1. እድሜ _____

2. የሥራ ልምድ (በዓመት) _____

3. በአማካይ በቀን ምን ያህል የሥራ ሰዓት አሎት (በቀን ለምን ያክል ሰዓት ያሸከረክራሉ)? _____

4. ጭነትን ከጅቡቲ አዲስ አበባ ድረስ ለማጓጓዝ ምን ያህል ቀን ይፈጅቦታል? _____

5. ከሚከተሉት ውስጥ በጅቡቲ ወደብ ላይ የትኞቹ የጭነት መዘግየትን ያስከትላሉ?

- ☐ በወደቡ ላይ ያለ የመኪኖች መጨናነቅ
- ☐ በወደቡ ላይ በቂ የመኪና ማቆሚያ አለመኖር
- ☐ በወደብ ያሉት የኮንቴነር (container) መጫኛና ማውረጃ እንዲሁም ሌሎች መሳሪያዎች ማርጀትና በበቂ ሁኔታ አለመኖር
- ☐ ኮንቴነር (container) መጫኛና ማውረጃ እንዲሁም ሌሎች መሳሪያዎችን የያዙት ሹፌሮች ብቁ ያለመሆን
- ☐ ጭነት ወደብ ከደረሰ በኋላ በቶሎ ወደ መኪኖች አለመጫን

ሌሎች በወደቡ ላይ የገጠሞት ችግሮች ካሉ

6. የጅቡቲ ወደብ ብዙ ውጣውረድ የሚያበዙ አሰራሮች አሉት፡፡

- ☐ በጣም እስማማለው
- ☐ እስማማለሁ
- ☐ አስተያየት መስጠት አልቻልኩም
- ☐ አልስማማም
- ☐ በጣም አልስማማም

7. ከጅቡቲ አዲስ አበባ ያለው መንገድ ተከታታይና አፋጣኝ የመንገድ ጥገና ይደረግለታል?

- ☐ አዎ ይደረግለታል
- ☐ አይደረግለትም

8. በመንገድ ጥገና ወቅት ምቹ የሆነ ተለዋጭ መንገድ አለ?

- ☐ አለ
- ☐ የለም

9. ከጅቡቲ ወደብ አዲስ አበባ ባለው መንገድ ላይ የትኞቹ ለጭነት መዘግየት ምክንያት ሊሆኑ ይችላሉ?

- ☐ የመንገዱ ምቹ አለመሆን (የተበላሸ መንገድ መሆኑ)
- ☐ የመንገዱ መጥበብ
- ☐ የመኪና መብዛት
- ☐ የመንገዱ መጨናነቅ
- ☐ በመንገድ ላይ አደጋ መብዛት

ሌሎች በመንገድ ላይ የገጠሞት ችግሮች ካሉ

10. ከጅቡቲ አዲስ አበባ ሲመጡ መንገድ ላይ በቂ የመኪና መጠገኛ ጋራጅ አለ።

- ☐ በጣም እስማማለው
- ☐ እስማማለሁ
- ☐ አስተያየት መስጠት አልችልም
- ☐ አልስማማም
- ☐ በጣም አልስማማም

11. ከጅቡቲ አዲስ አበባ ሲመጡ በመንገድዎ ላይ እያሉ ቢመሽብዎ መኪናዎትን ካለምንም ችግር ማቆም የሚያስችል በቂ የመኪና ማቆሚያ ቦታ አለመኖር ጭነትን ሊያዘገይ ይችላል።

- ☐ በጣም እስማማለው
- ☐ እስማማለሁ
- ☐ አስተያየት መስጠት አልችልም
- ☐ አልስማማም
- ☐ በጣም አልስማማም

12.ከጅቡቲ አዲስ አበባ ሲመጡ በመንገድ ላይ ያሉ የፍተሻ ኬላዎች መጨናነቅና ለፍተሻ ረጅም ጊዜ መውሰድ ጭነት እንዲዘገይ ያደርጋል፡፡

- ☐ በጣም እስማማለው
- ☐ እስማማለሁ
- ☐ አስተያየት መስጠት አልችልም
- ☐ አልስማማም
- ☐ በጣምአልስማማም

13.ከጅቡቲ መተው አዲስ አበባ የሚገቡበት ሰዓት ጭነት በከተማዋ ውስጥ እንዲዘገይ ያደርጋል፡፡

- ☐ በጣምእስማማለው
- ☐ እስማማለሁ
- ☐ አስተያየት መስጠት አልችልም
- ☐ አልስማማም
- ☐ በጣም አልስማማም

14. ጭነት ለማራገፍ ከጅቡቲ አዲስ አበባ መተው ስቶር (store) ባለመዘጋጀቱ ምክንያት የጫኑ መኪኖች ካለስራ ለረጅም ቀናት ይቆማሉ፡፡

- ☐ በጣም እስማማለው
- ☐ እስማማለሁ
- ☐ አስተያየት መስጠት አልችልም
- ☐ አልስማማም
- ☐ በጣም አልስማማም

15. አስመጪዎች፣ ትራንዚተሮች፣ ትራንስፖርተሮች፣ እንዲሁም ሌሎች መስሪያ ቤቶች ተናበው አለመስራታቸው ጭነት እንዲዘገይ ያደርጋል፡፡

- ☐ በጣም እስማማለው
- ☐ እስማማለሁ
- ☐ አስተያየት መስጠት አልችልም
- ☐ አልስማማም
- ☐ በጣም አልስማማም

16. አዲስ አበባ ከተማ መግቢያ ላይ ለምን ያክል ሰአታት ጭነት ሊዘገይ ይችላል?

17. በጉዞ ላይ መኪናዎትን ብልሽት ገጥሞት የሚያውቅ ከሆነ መኪናዎት ተሰርቶ ሥራ እስኪጀምር በአማካይ ከስንት እስከ ስንት ቀን አቆይቶት ያውቃል?

18. ከጅቡቲ አዲስ አበባ የመጡ በተለያዩ ምክንያቶች ሊዘገዩ

- ይናደዳሉ? ☐ አዎ ☐ አልናደድም
- ይሰለገፉ? ☐ አዎ ☐ አልሰላገፉም
- ይደክሞታል? ☐ አዎ ☐ አይደክመኝም
- እረፍት ያጣሉ? ☐ አዎ ☐ አላጣም
- የማሽከርከር አቅሞት ይቀንሳል?
☐ አዎ ☐ አይቀንስም
- የስራ ተነሳሽነቶት ይቀንሳል?
☐ አዎ ☐ አይቀንስም

- በአነዳዶች ላይ ተፅዕኖ አለው?

☐ አለው

☐ የለውም

- የስራ ሰአቶች ይባክናል?

☐ አዎ

☐ አይባክንም

- ዝርፊያ ያጋጥሞታል?

☐ አዎ

☐ አያጋጥመኝም

- አደጋ ያጋጥሞታል?

☐ አዎ

☐ አያጋጥመኝም

- የጭነት መዘግየት በደሞዞች ላይ ተፅዕኖ አለው?

☐ አለው

☐ የለውም

- አላስፈላጊ የምግብና የማደራያ ወጪዎች ይኖርበታል?

☐ አዎ

☐ አይኖርብኝም

- ቀንም ማታም እንዲያሸከረክሩ ይገደዳሉ ?

☐ አዎ

☐ አልገደድም

19. የጭነት መዘግየት ችግር እንዳይኖር እና አስመጪዎች ዕቃቸውን በፍጥነት መረከብ እንዲችሉ ምን ምን መፍትሔዎች ሊኖሩ ይችላሉ?

አመሰግናለሁ!

For Freight Transporter companies

Company name_____

Year established_____

A. Djibouti port is one source of freight delay.

1. Mark the problems that can cause delay of goods at Djibouti port.

- ☐ Cargo congestion
- ☐ Storage problems
- ☐ Space to load/unload goods from ship to truck
- ☐ Unplanned ship arrival
- ☐ Truck congestions
- ☐ Untrained machine operators
- ☐ Many formalities or bureaucracy
- ☐ Long loading/unloading time
- ☐ Insufficient truck supply

2. Which of the following port operations can cause delay at Djibouti port?

- ☐ Long custom clearance
- ☐ Limited Working days of port operators
- ☐ Long port processes
- ☐ Insufficient cargo transport equipments
- ☐ Poor port service
- ☐ Insufficient and unorganized ship berth space
- ☐ Poor port administration and management
- ☐ Long and poor shipping process and service
- ☐ Loader and un-loader equipments (not sufficient, old and not working)

If there are other problems at Djibouti port,

3. How many freight trucks do your company has?

4. Does your company have specialized trucks for meat, flower, fruits and vegetables?

☐ Yes

☐ No

5. Through what way do you control your freight trucks and loaded cargos as it comes from Djibouti port to Addis Ababa?

6. Delay happens due to warehouse problems.

7. Due to unprepared warehouse, cargo loaded trucks can get delayed as they come from Djibouti port to Addis Ababa.

☐ Strongly disagree

☐ Disagree

☐ Undecided

☐ Agree

☐ Strongly agree

8. Which of the following **warehouse problems** can cause delay in Addis Ababa?

☐ Poor information flow (Not knowing cargos that are already in the store, number of trucks coming, type and size of cargo coming and other information)

☐ Many formalities at the warehouse

☐ Unlimited working days and hours of operators

☐ Insufficient space for storage due to unbalanced cargo flow

☐ Warehouse construction method (not suitable for different types of trucks)

☐ Long un-loading time

If there are other warehouse problems,

9. Local dry ports can cause delay.

10. Which of the following are the **problem of Ethiopian local dry ports** that can cause delay of goods through Djibouti-Addis route?

- ☐ Late space allocation for trucks
- ☐ Crowding and congestion of trucks
- ☐ Cargo pileup and congestion
- ☐ Old and not working cargo loader/un-loader equipments
- ☐ Poor port Management
- ☐ Storage problems
- ☐ Long custom operations
- ☐ Cargos are not taken out in time

If there are other problems at dry ports,

11. Delay can affect transporters.

12. Delay can increase fuel consumption of trucks.

- ☐ Strongly disagree
- ☐ Disagree
- ☐ Undecided
- ☐ Agree
- ☐ Strongly agree

13. Which of the following are the **effects of delay** to freight transporters?

- ☐ Increase Storage cost
- ☐ Increase Fuel consumption
- ☐ Cause accidents
- ☐ Decrease truck transaction (as a result income will decrease)
- ☐ Reduce customer service
- ☐ Reduce transporters performance

If there are other effects of delay to freight transporters

14. Delay has an effect to the country.

15. Delay of goods can cause congestion of truck at Addis Ababa city due to untimed/not organized appearance of trucks.

- ☐ Strongly disagree
- ☐ Disagree
- ☐ Undecided
- ☐ Agree
- ☐ Strongly agree

16. What are the other problems that your company faces that cause delay?

17. What are your recommendations regarding the minimization of delays?

APPENDIX B –Freight transporter companies data

Table B-1 : Transporter company-1 customers’ data (February 2016- November 2016)

Customers of Company 1 (C1)	Agreement date	Service start time (first vehicle loading day from Djibouti port)	Service end time (last vehicle unloading day to the destination)	Waiting time to start service (in days)	Total service time (in days)
1	2/6/2016	4/30/2016	5/26/2016	82	27
2	4/13/2016	9/19/2016	10/11/2016	158	23
3	4/22/2016	10/27/2016	11/25/2016	187	30
4	4/25/2016	5/5/2016	6/6/2016	9	33
5	5/11/2016	5/20/2016	6/4/2016	8	16
6	5/11/2016	6/8/2016	6/20/2016	27	13
7	6/3/2016	9/4/2016	10/1/2016	92	28
8	6/9/2016	7/18/2016	7/28/2016	38	11
9	6/23/2016	7/9/2016	7/22/2016	15	14
10	6/24/2016	7/2/2016	8/22/2016	7	52
11	6/24/2016	8/21/2016	9/20/2016	57	31
12	6/24/2016	9/20/2016	10/30/2016	87	41
13	6/24/2016	10/3/2016	11/18/2016	100	47
14	7/27/2016	7/29/2016	8/12/2016	1	15
15	7/30/2016	8/9/2016	8/26/2016	9	18
16	8/16/2016	8/26/2016	9/8/2016	9	14
17	9/28/2016	10/3/2016	10/14/2016	4	12
18	10/8/2016	10/21/2016	11/11/2016	12	22
19	10/10/2016	11/4/2016	11/18/2016	24	15
20	11/10/2016	11/10/2016	11/29/2016	0	20

Table B-2 : Transporter company-2 customers' data (September 2016- April 2017)

Customers of Company 2 (C2)	Agreement date	Service start time (first vehicle loading day from Djibouti port)	Service end time (last vehicle unloading day to the destination)	Waiting time to start service (in days)	Total service time (in days)
1	9/9/2016	10/9/2016	20-10-2016	0	41
2	11/9/2016	20-9-2016	27-10-2016	8	38
3	23-9-2016	30-9-2016	21-10-2016	6	22
4	4/10/2016	19-10-2016	18-12-2016	14	61
5	12/11/2016	13-11-2016	3/12/2016	0	21
6	26-11-2016	3/12/2016	18-12-2016	6	16
7	5/12/2016	6/1/2017	15-3-2017	31	69
8	16-12-2016	22-12-2016	1/1/2017	5	11
9	19-12-2016	25-12-2016	27-12-2016	5	3
10	15-1-2017	10/3/2017	17-3-2017	53	8
11	17-1-2017	12/2/2017	15-2-2017	24	4
12	6/2/2017	12/2/2017	28-2-2017	5	17
13	14-2-2017	17-2-2017	20-2-2017	2	4
14	17-2-2017	16-3-2017	20-3-2017	26	5
15	22-2-2017	24-2-2017	4/3/2017	1	9
16	25-2-2017	22-3-2017	28-3-2017	24	7
17	1/3/2017	7/3/2017	21-3-2017	5	15
18	23-3-2017	25-3-2017	1/4/2017	1	8

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Table B-3 : Transporter company-3 customers' data (June 2016- April 2017)

Customers of Company 3 (C3)	Agreement date	Service start time (first vehicle loading day from Djibouti port)	Service end time (last vehicle unloading day to the destination)	Waiting time to start service (in days)	Total service time (in days)
1	17-3-2017	22-3-2017	1/4/2017	4	11
2	1/2/2017	10/2/2017	13-2-2017	8	4
3	18-3-2017	27-3-2017	3/4/2017	8	8
4	27-3-2017	1/4/2017	6/4/2017	4	6
5	13-3-2017	3/4/2017	8/4/2017	20	6
6	18-3-2017	26-3-2017	31-3-2017	7	6
7	4/2/2017	28-2-2017	5/3/2017	23	6
8	22-2-2017	27-2-2017	3/3/2017	4	5
9	20-2-2017	22-2-2017	25-2-2017	1	4
10	18-1-2017	20-1-2017	28-1-2017	1	9
11	7/1/2017	14-1-2017	18-1-2017	6	5
12	5/12/2016	13-12-2016	20-12-2017	7	8
13	6/12/2016	14-12-2016	22-12-2017	7	9
14	1/12/2016	24-1-2017	29-1-2017	53	6
15	2/11/2016	6/11/2016	26-11-2016	3	21
16	14-11-2016	14-11-2016	17-11-2016	0	4
17	11/9/2016	25-10-2016	2/11/2016	43	9
18	26-9-2016	28-9-2016	7/10/2016	1	10
19	2/8/2016	7/10/2016	12/10/2016	65	6
20	15-6-2016	17-7-2016	22-7-2016	31	6

Table B-4 : Transporter company-4 customers' data (January 2016- April 2017)

Customers of Company 4 (C4)	Agreement date	Service start time (first vehicle loading day from Djibouti port)	Service end time (last vehicle unloading day to the destination)	Waiting time to start service (in days)	Total service time (in days)
1	19-1-2016	20-1-2016	8/2/2016	0	20
2	7/2/2016	9/2/2016	26-2-2016	1	18
3	28-3-2016	28-3-2016	6/4/2016	0	10
4	26-2-2016	28-2-2016	13-3-2016	1	14
5	22-2-2016	24-2-2016	1/3/2016	1	6
6	22-2-2016	23-2-2016	28-2-2016	0	6
7	29-1-2016	2/2/2016	22-2-2016	3	21
8	1/4/2016	1/4/2016	18-4-2016	0	18
9	14-6-2016	14-6-2016	19-6-2016	0	6
10	16-3-2016	15-4-2016	1/5/2016	29	17
11	22-6-2016	2/7/2016	7/7/2016	9	6
12	23-2-2016	24-2-2016	2/3/2016	0	7
13	28-8-2016	30-8-2016	8/9/2016	1	10
14	13-9-2016	16-9-2016	25-9-2016	2	10
15	30-8-2016	30-8-2016	8/9/2016	0	10
16	2/8/2016	6/8/2016	16-8-2016	3	11
17	16-12-2016	16-12-2016	21-12-2016	0	6
18	24-12-2016	24-12-2016	15-1-2017	0	23
19	16-12-2016	17-12-2016	22-12-2016	0	6
20	14-12-2016	15-12-2016	22-12-2016	0	8
21	15-10-2016	16-10-2016	21-10-2016	0	6
22	10/3/2017	14-3-2017	3/4/2017	3	21
23	8/2/2017	9/2/2017	18-2-2017	0	10
24	6/2/2017	10/2/2017	14-2-2017	3	5

Table B-5 : Transporter company-5 customers' data (January 2016- March 2017)

Customers of Company 5 (C5)	Agreement date	Service start time (first vehicle loading day from Djibouti port)	Service end time (last vehicle unloading day to the destination)	Waiting time to start service (in days)	Total service time (in days)
1	17-2-2017	20-2-2017	20-3-2017	2	29
2	5/1/2017	11/1/2017	10/2/2017	5	31
3	6/2/2017	7/2/2017	10/2/2017	0	4
4	11/4/2016	21-4-2016	12/5/2016	9	22
5	20-11-2016	1/12/2016	10/12/2016	10	10
6	21-8-2016	1/9/2016	23-9-2016	10	23
7	28-7-2016	4/8/2016	12/8/2016	6	9
8	20-8-2016	28-8-2016	23-9-2016	7	27
9	1/6/2016	27-6-2016	30-6-2016	25	4
10	19-5-2016	1/6/2016	12/6/2016	12	12
11	16-5-2016	1/6/2016	9/6/2016	15	9
12	26-4-2016	12/5/2016	30-5-2016	15	19
13	29-3-2016	27-4-2016	27-4-2016	28	1
14	28-3-2016	2/4/2016	7/6/2016	4	67
15	16-3-2016	1/4/2016	11/4/2016	15	11
16	2/3/2016	4/3/2016	21-3-2016	1	18
17	23-3-2016	26-3-2016	11/4/2016	2	17
18	1/2/2016	13-2-2016	29-2-2016	11	17
19	10/6/2016	25-6-2016	2/8/2016	14	39
20	12/1/2016	16-1-2016	5/2/2016	3	21
21	3/1/2016	13-1-2016	30-1-2016	9	18

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Table B-6 : Transporter company-6 customers' data (June 2016 - February 2017)

Customers of Company 6 (C6)	Agreement date	Service start time (first vehicle loading day from Djibouti port)	Service end time (last vehicle unloading day to the destination)	Waiting time to start service (in days)	Total service time (in days)
1	2/9/2016	23/9/2016	20-10-2016	20	28
2	18-11-2016	22/11/2016	27-12-2016	3	36
3	13-11-2016	20/11/2016	14-12-2016	6	25
4	21-11-2016	1/12/2016	22-12-2016	9	22
5	31-10-2016	31/10/2016	4/11/2016	0	5
6	23-9-2016	29/9/2016	19-10-2016	5	21
7	29-8-2016	1/9/2016	22-9-2016	2	22
8	11/8/2016	7/9/2016	30-9-2016	26	24
9	26-7-2016	30/7/2016	17-8-2016	3	19
10	12/8/2016	27/8/2016	30-9-2016	14	35
11	3/8/2016	11/8/2016	2/9/2016	7	23
12	26-7-2016	31/7/2016	16-8-2016	4	17
13	14-7-2016	15/7/2016	23-7-2016	0	9
14	20-7-2016	1/8/2016	11/9/2016	11	42
15	18-6-2016	3/8/2016	3/10/2016	46	62
16	21-7-2016	30/7/2016	13-8-2016	8	15
17	8/7/2016	21/7/2016	4/8/2016	12	15
18	8/8/2016	19/8/2016	4/9/2016	10	17
19	8/7/2016	18/11/2016	5/2/2017	132	80
20	18-1-2017	25/1/2017	27-2-2017	6	34
21	3/1/2017	15/1/2017	6/2/2017	11	23

Assessing Freight Transport Performances in relation to delays in Ethiopia:
The case of Addis Ababa-Djibouti Corridor

Table B-7 : Transporter company-7 customers' data (January 2016 - February 2017)

Customers of Company 7 (C7)	Agreement date	Service start time (first vehicle loading day from Djibouti port)	Service end time (last vehicle unloading day to the destination)	Waiting time to start service (in days)	Total service time (in days)
1	4/8/2016	16/9/2016	22-11-2016	42	68
2	13-9-2016	27/9/2016	23-11-2016	13	58
3	13-9-2016	5/10/2016	18-12-2016	21	75
4	31-5-2016	2/6/2016	22-6-2016	1	21
5	1/4/2016	19/6/2016	23-11-2016	78	158
6	24-11-2016	1/12/2016	14-12-2016	6	14
7	22-8-2016	31/8/2016	17-9-2016	8	18
8	20-6-2016	22/6/2016	20-7-2016	1	29
9	22-8-2016	3/10/2016	4/12/2016	41	63
10	26-6-2016	30/6/2016	24-7-2016	3	25
11	4/7/2016	13/7/2016	29-8-2016	8	48
12	22-3-2016	25/3/2016	17-4-2016	2	24
13	5/1/2016	8/1/2016	27-1-2016	2	20
14	23-1-2016	28/1/2016	10/3/2016	4	42
15	23-2-2016	6/3/2016	5/4/2016	10	31
16	5/1/2017	10/1/2016	22-2-2017	4	44
17	15-11-2016	21/11/2016	4/12/2016	5	14
18	15-7-2016	18/7/2016	2/8/2016	2	16
19	15-7-2016	20/7/2016	6/8/2016	4	18
20	31-5-2016	9/6/2016	15-6-2016	8	7
21	22-1-2016	30/1/2016	15-2-2016	7	17

APPENDIX C –Freight trucks daily performance

ወር አካባቢ / 2016

አለታዊ የተሽከርካሪዎች እንቅስቃሴ መከታተያ ቅጽ

1. በጥጥ ላይ			2. መገኛ ብልሽት			3. ጉዞ			4. ማራገፍ			5. መጫን			6. አደጋ			7. በሽፈር			8. ልዩ ልዩ												
ተ.ቁ	ሊ.ቁ	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
1	3-08531	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	
2	3-08532	05	03	03	03	04	04	04	01	01	01	03	03	03	03	04	01	01	03	03	03	03	03	03	03	03	03	03	03	03	03	03	
3	3-08535	03	03	03	03	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	
4	3-08536	04	04	04	03	03	05	05	03	03	03	04	01	01	01	01	03	03	05	03	03	03	03	03	03	03	03	03	03	03	03	03	
5	3-08539	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	
6	3-08540	04	04	01	03	05	05	05	03	01	01	01	01	03	03	03	03	03	01	01	01	01	01	01	01	01	01	01	01	01	01	01	
7	3-08542	07	07	07	07	07	07	07	07	07	07	07	07	07	07	07	07	07	07	07	07	07	07	07	07	07	07	07	07	07	07	07	
8	3-08543	07	07	03	07	03	03	03	03	05	05	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	
9	3-08545	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	
10	3-08547	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	
11	3-08549	01	03	03	04	04	04	01	01	01	01	01	01	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	
12	3-08553	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	
13	3-08555	08	08	08	08	08	08	08	08	08	08	08	08	08	08	08	08	08	08	08	08	08	08	08	08	08	08	08	08	08	08	08	08
14	3-08557	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	
15	3-08561	01	03	03	03	05	05	05	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	
16	3-11781	03	03	03	04	04	01	01	01	03	05	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	
17	3-17722	03	03	03	01	01	01	04	04	04	01	01	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	
18	3-23849	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	
19	3-23851	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	
20	3-23853	03	05	05	05	05	05	05	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	
21	3-23985	01	01	03	03	03	03	03	05	05	05	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	
22	3-23986	01	03	03	04	01	01	01	03	03	05	05	05	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	
23	3-23987	01	01	03	03	03	03	05	05	05	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	
24	3-23988	01	03	05	05	05	05	05	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	
25	3-23989	01	01	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	
26	3-23990	05	05	03	03	03	03	04	04	04	01	01	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	
27	3-23991	01	01	01	01	01	01	01	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	
28	3-23992	01	03	03	04	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	
29	3-23993	04	04	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	
30	3-27986	07	07	07	07	07	07	07	07	07	07	07	07	07	07	07	07	07	07	07	07	07	07	07	07	07	07	07	07	07	07	07	
31	3-28505	01	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	
32	3-28506	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	
33	3-28507	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	
34	3-28508	01	03	03	03	05	05	05	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	
35	3-28509	03	04	03	01	04	03	05	05	05	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	
36	3-36442	03	03	04	03	01	01	01	03	03	05	05	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	
37	3-36626	03	03	03	04	04	04	01	01	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	

Assessing Freight Transport Performances in relation to delays in Ethiopia:
The case of Addis Ababa-Djibouti Corridor

የኢትዮጵያ የተሽከርካሪዎች እንቅስቃሴ መከታተያ ቅጽ																																																																					
1. በጥገና ላይ										2. መገንዘብ ብልሽት										3. ጉዞ										4. ማረጋገጫ										5. መመገቢያ										6. አደጋ 7. በሽፌር										8. ልዩ ልዩ									
ተ.ቁ	ሰ.ቁ	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31																																					
38	3-36627	01	01	01	01	01	01	01	01	03	03	03	03	03	03	03	03	03	01	03	03	03	03	03	03	03	03	03	03	04	01	01	01																																				
39	3-36628	01	01	01	01	01	01	01	03	03	03	03	03	03	03	03	03	03	01	03	03	03	03	03	03	03	03	03	03	04	01	01	01																																				
40	3-36629	03	03	04	04	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03																																				
41	3-36630	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03																																				
42	3-36631	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03																																				
43	3-36632	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03																																				
44	3-36633	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03																																				
45	3-36634	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03																																				
46	3-47639	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03																																				
47	3-48883	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03																																				
48	3-48884	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03																																				
49	3-49761	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03																																				
50	3-49909	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03																																				
51	3-49910	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03																																				
52	3-49911	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03																																				
53	3-49912	04	04	03	01	01	01	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03																																				
54	3-50277	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03																																				
55	3-50278	04	04	07	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03																																				
56	3-51130	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03																																				
57	3-51132	03	04	04	03	01	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03																																				
58	3-51240	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03																																				
59	3-51241	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03																																				
60	3-51242	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03																																				
61	3-51243	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06																																				
62	3-51793	01	01	01	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03																																				
63	3-57471	01	01	01	01	01	01	01	01	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03																																				
64	3-57766	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03																																				
65	3-57971	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06																																				

Appendix C-1: Summary of freight trucks daily performance

ተ.ቁ	ሰ.ቁ	ጥንጥሩ ለፋ	ጥንጥሩ ጥንጥሩ	ጥንጥሩ	ጥንጥሩ	ጥንጥሩ	ጥንጥሩ	ጥንጥሩ	ጥንጥሩ
1	3-08531	-	-	-	-	-	31	-	-
2	3-08532	7	6	10	4	4	-	-	-
3	3-08535	16	-	10	-	5	-	-	-
4	3-08536	6	1	13	4	7	-	-	-
5	3-08539	31	-	-	-	-	-	-	-
6	3-08540	19	1	8	2	3	-	-	-
7	3-08542	-	-	-	-	-	-	31	-
8	3-08543	12	1	12	2	2	-	2	-
9	3-08545	12	1	15	2	1	-	-	-
10	3-08547	31	-	-	-	-	-	-	-
11	3-08549	12	5	9	4	1	-	-	-
12	3-08553	2	4	22	2	1	-	-	-
13	3-08555	-	-	-	-	-	-	-	31
14	3-08557	-	-	-	-	-	31	-	-
15	3-08561	12	5	11	-	3	-	-	-
16	3-11781	11	3	11	4	2	-	-	-
17	3-17722	6	2	12	6	4	1	-	-
18	3-23849	-	-	-	-	-	31	-	-
19	3-23851	31	-	-	-	-	-	-	-
20	3-23853	17	-	8	-	6	-	-	-
21	3-23985	11	-	14	-	6	-	-	-
22	3-23986	8	2	11	4	6	-	-	-
23	3-23987	9	7	8	1	6	-	-	-
24	3-23988	6	-	14	4	7	-	-	-
25	3-23989	6	-	15	2	8	-	-	-
26	3-23990	6	-	10	4	5	-	-	6
27	3-23991	10	-	15	1	5	-	-	-
28	3-23992	8	7	9	3	4	-	-	-
29	3-23993	19	-	6	3	3	-	-	-
30	3-27986	-	-	-	-	-	-	31	-
31	3-28505	12	7	11	-	1	-	-	-
32	3-28506	-	-	-	-	-	31	-	-
33	3-28507	31	-	-	-	-	-	-	-
34	3-28508	5	-	13	5	4	-	4	-
35	3-28509	7	-	13	3	8	-	-	-
36	3-36442	11	-	12	3	5	-	-	-
37	3-36626	6	-	17	5	3	-	-	-

Assessing Freight Transport Performances in relation to delays in Ethiopia:
The case of Addis Ababa-Djibouti Corridor

ተ.ቁ	ሰ.ቁ	ገንዘብ	ገንዘብ	ገንዘብ	ገንዘብ	ገንዘብ	ገንዘብ	ገንዘብ	ገንዘብ	ገንዘብ
38	3-36627	12	-	14	1	4	-	-	-	-
39	3-36628	22	1	6	1	-	1	-	-	-
40	3-36629	2	-	16	3	10	-	-	-	-
41	3-36630	1	-	21	5	4	-	-	-	-
42	3-36631	16	-	6	5	4	-	-	-	-
43	3-36632	9	-	13	4	5	-	-	-	-
44	3-36633	6	2	12	2	9	-	-	-	-
45	3-36634	-	-	-	-	-	31	-	-	-
46	3-47639	9	2	10	5	5	-	-	-	-
47	3-48883	1	-	16	3	11	-	-	-	-
48	3-48884	3	2	16	2	8	-	-	-	-
49	3-49761	6	-	15	6	4	-	-	-	-
50	3-49909	4	-	10	8	9	-	-	-	-
51	3-49910	12	-	9	2	8	-	-	-	-
52	3-49911	3	-	18	4	6	-	-	-	-
53	3-49912	5	2	9	5	10	-	-	-	-
54	3-50277	8	-	7	8	8	-	-	-	-
55	3-50278	6	-	11	8	5	-	1	-	-
56	3-51130	4	-	14	6	7	-	-	-	-
57	3-51132	5	4	11	4	7	-	-	-	-
58	3-51240	7	-	10	7	7	-	-	-	-
59	3-51241	4	-	14	3	10	-	-	-	-
60	3-51242	3	-	19	3	8	-	-	-	-
61	3-51243	-	-	-	-	-	31	-	-	-
62	3-57193	5	-	17	1	8	-	-	-	-
63	3-57471	14	-	11	2	4	-	-	-	-
64	3-57766	6	1	12	4	8	-	-	-	-
65	3-57971	-	-	1	-	1	29	-	-	-

APPENDIX D –Trucks Demurrage Proclamation/Proclamation No. 811/2013/

 የኢትዮጵያ ፌዴራላዊ ዲሞክራሲያዊ ሪፐብሊክ ፌዴራል ነጋሪት ጋዜጣ FEDERAL NEGARIT GAZETTE OF THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA የጋዜጣው ቁጥር ፩ አዲስ አበባ ታህሳስ ፱ ቀን ፳፯ኛ ዓ.ም በኢትዮጵያ ፌዴራላዊ ዲሞክራሲያዊ ሪፐብሊክ የሕዝብ ተወካዮች ምክር ቤት ጠባቂነት የወጣ 20th Year No. 3 ADDIS ABABA 18th December, 2013	
ግዜ-ጊዜ አዋጅ ቁጥር ፳፻፲፩/፳፻፲፯ ዓ.ም የጭነት ማመላለሻ ተሽከርካሪዎች የዲሞራጅ ክፍያ አዋጅ.....፲፩ ፳፻፲፯ አዋጅ ቁጥር ፳፻፲፩/፳፻፲፯ የጭነት ማመላለሻ ተሽከርካሪዎች የዲሞራጅ ክፍያ ሰዎችን የወጣ አዋጅ የወጪና ገቢ ምርቶችን በተመለከተ የትራንስፖርት ዋጋ በአጭር ጊዜ ውስጥ ተጓጉዞው ወደ ወደብ እንዲደርሱ ወይም ከወደብ ወደተለያዩ የአገሪቱ ክፍሎች ተሰራጭተው ለተጠቃሚው እንዲቀርቡ ማስቻል አስፈላጊ በመሆኑ፤ በጭነት ላኪዎችና ተረካቢዎች፤ የመጓጓዣ የማራገፊያ አገልግሎት በሚሰጡ መጋዘኖች፤ እና ቁጥጥር በሚያከናውኑ አካላት የአሰራር ቅልጥፍና መጓደል ምክንያት የጭነት ማመላለሻ ተሽከርካሪዎች የሥራ ጊዜ ከፍተኛ ብክነት የሚታይበት በመሆኑ፤ ይህን የጭነት ማመላለሻ ተሽከርካሪዎች የሥራ ጊዜ ብክነት በማስቀረትና ምልልስን በማፋጠን ጭነት የማንሳት አቅምን ለማሳደግ እንዲሁም የዕቃዎችን የወደብ ቆይታ ጊዜ በማሳጠር አሳስፈላጊ ወጪን ለመቀነስና ተያያዥ ችግሮችን ለማስወገድ የጭነት ማመላለሻ ተሽከርካሪዎች የዲሞራጅ ክፍያን የሚያነግግ ህግ ማውጣት አስፈላጊ በመሆኑ፤ በኢትዮጵያ ፌዴራላዊ ዲሞክራሲያዊ ሪፐብሊክ ሕገ መንግስት አንቀጽ 9፳(ሐ) መሠረት የሚከተለው ታውጧል፡፡ ከፍል አንድ ጠቅላላ ፩. አጭር ርዕስ ይህ አዋጅ የጭነት ማመላለሻ ተሽከርካሪዎች የዲሞራጅ ክፍያ አዋጅ ቁጥር ፳፻፲፩/፳፻፲፯ ተብሎ ሊጠቀስ ይችላል፡፡	CONTENTS Proclamation No. 811/2013 Trucks Demurrage Proclamation Page 7115 PROCLAMATION No. 811/2013 A PROCLAMATION TO PROVIDE FOR TRUCKS DEMURRAGE WHEREAS, it has become necessary to transport export and import goods with appropriate cost and within short period of time to the port or from port to consumer distribution channels across the country; WHEREAS, the inefficiencies of shippers and consignees, warehouses providing loading and unloading facilities and regulatory bodies conducting inspection are resulting in considerable time loss in truck operations; WHEREAS, it has become necessary to enact a legislation on trucks demurrage to avoid such loss of time in truck operations and to increase the frequency of use of trucks and thereby increase freight carrying capacity and shorten the waiting time of goods at ports to minimize unnecessary costs and to avoid related problems; NOW, THEREFORE, in accordance with Article 55(1) of the Constitution of the Federal Democratic Republic of Ethiopia, it is hereby proclaimed as follows: PART ONE GENERAL 1. Short Title This Proclamation may be cited as the "Trucks Demurrage Proclamation No. 811/2013".

Assessing Freight Transport Performances in relation to delays in Ethiopia: The case of Addis Ababa-Djibouti Corridor

ገጽ ፳፻፩፻፲፯ ፌዴራል ነጋሪት ጋዜጣ ቀጥሮ የ ታህሳስ ዘ ቀን ፳፻፳ ዓ.ም	Federal Negarit Gazette No.3 18 th December 2013page 7116
፩. ትርጓሜ	2. Definitions
በዚህ አዋጅ ውስጥ የቃሉ አገባብ ሌላ ትርጉም የሚያሰጠው ካልሆነ በስተቀር፦	In this Proclamation unless the context otherwise requires:
፩/ "የጭነት ማመላለሻ ተሽከርካሪ" ማለት ማንኛውንም ዕቃ እንዲያመላልስ ተብሎ የተሰራና ለዚሁ አገልግሎት እንዲውል የተደረገ ባለሞተር ተሽከርካሪ ሊሆን ጉታች መኪናን ይጨምራል፤	1/ "truck" means a motor vehicle constructed or adapted for use and used primarily for the conveyance of goods of any description and includes a truck tractor;
፪/ "ዕቃ" ማለት የቀም እንስሳትን ጨምሮ ኮንቴነሮች፣ የዕቃ ማሸጊያዎችን ወይም ተመሳሳይ የዕቃ ማሸጊያ ቁሶችን ወይም በዕቃ ላኪው ወይም በዕቃ አስረካቢ በጥቅል መልክ ለጭነት የሚቀርብ ማንኛውም ንብረት ነው፤	2/ "goods" means any property including live animals as well as containers, pallets or similar articles of transport or packaging supplied by the sender or consignor;
፫/ "አጓጓዥ" ማለት ዕቃን በተሽከርካሪ አማካኝነት በየብስ ወይም በአገር ውስጥ ውሃ የሚያጓጉዝ ሰው ነው፤	3/ "carrier" means a person who performs the carriage of goods by land or internal waters;
፬/ "ላኪ" ማለት ለራሱ ወይም ለሦስተኛ ወገኖች ሲል ዕቃውን እንዲያጓጉዝ ለአጓጓዣ የሚያስረክብ ሰው ነው፤	4/ "sender" means a person who, either for his own account or for that of third parties, delivers goods to the carrier for carriage;
፭/ "ተረካቢ" ማለት ዕቃውን ለመቀበል ህጋዊ መብት ያለው ሰው ነው፤	5/ "consignee" means a person authorized to receive the goods;
፮/ "መጋዘን" ማለት ማንኛውም ብትንም ሆነ ጥቅል ዕቃዎችን በኮንቴነር ጭምር የመጫኛና የማራገፊያ አገልግሎት የሚሰጥ ማንኛውም ቦታ ሆኖ ወደብንና የጉምሩክ መጋዘንን ይጨምራል፤	6/ "warehouse" means any place, including port and customs warehouse, that provides loading and unloading facilities including packed and unpacked goods in container;
፯/ "አሽከርካሪ" ማለት የጭነት ማመላለሻ ተሽከርካሪ ለመንዳት የሚያስችለው ህጋዊ የአሽከርካሪ ብቃት ማረጋገጫ ፈቃድ ያለው ሰው ነው፤	7/ "driver" means an individual who holds the required driving license to drive trucks;
፰/ "ዲመራጅ" ማለት የጭነት ማመላለሻ ተሽከርካሪ፦	8/ "demurrage" means a payment to compensate for detaining a truck beyond the time limit allowed:
ሀ) በላኪ፣ በተረካቢ ወይም በመጋዘን ለመጫኛ ወይም ለማራገፊያ ከተወሰነው የጊዜ ገደብ በላይ፤ ወይም	a) for loading or unloading by a sender, consignee or warehouse; or
ለ) በመንግሥት ተቆጣጣሪ አካል ለሚካሄድ የቁጥጥር ሥራ ከተወሰነው የጊዜ ገደብ በላይ፤	b) for inspection conducted by a government regulatory body;
እንዲቆይ በመደረጉ ለባክነው ጊዜ ማኮነሻ የሚፈጸም ክፍያ ነው፤	

፱/ "የመጫኛ ወይም የማራገፊያ ጊዜ" ማለት የጭነት ማመላለሻ ተሽከርካሪ ለመጫኛ ወይም ለማራገፍ የተወሰነለት ቦታ ከደረሰ በኋላ ጭነቱን ለመጫኛ ወይም ለማራገፍ የሚወስደው ጊዜ ሲሆን ተፈላጊ ሰነዶች ተጠናቀዉና ተፈርመው አሽከርካሪው የሚረከብበትን ጊዜ ያጠቃልላል፤

፲/ "ሚኒስቴር" ወይም "ሚኒስትር" ማለት እንደቅደምተከተሉ የትራንስፖርት ሚኒስቴር ወይም ሚኒስትር ነው፤

፲፩/ "ባለስልጣን" ማለት በትራንስፖርት አዋጅ ቁጥር ፱፻፷፮/፲፱፻፺፯ የተቋቋመው የትራንስፖርት ባለሥልጣን ነው፤

፲፪/ "ሰው" ማለት የተፈጥሮ ሰው ወይም በህግ የሰውነት መብት የተሰጠው አካል ነው፤

፲፫/ ማንኛውም በወንድ ጾታ የተገለጸው የሴትንም ይጨምራል፡፡

፫. የተፈጻሚነት ወሰን

ይህ አዋጅ በጭነት ላኪዎች፣ ተረካቢዎች፣ የመጫኛና የማራገፊያ አገልግሎት በሚሰጡ መጋዘኖች፣ የፍተሻና የቀጥተኛ ሰራ በሚያከናውኑ አካላት፣ የጭነት ትራንስፖርት አገልግሎት በሚሰጡ ትራንስፖርተሮች እና የጭነት ማመላለሻ ተሽከርካሪዎች ላይ ተፈጻሚነት ይኖረዋል፡፡

ክፍል ሁለት

የመጫኛ፣ የማራገፊያና የቀጥተኛ ጊዜ ገደብ እና የዳመራጅ ክፍያ

፩. የመጫኛና የማራገፊያ ጊዜ ገደብ

፩/ ማንኛውም ላኪ፣ ተረካቢ ወይም የመጋዘን አገልግሎት የሚሰጥ አካል፡-

- ሀ) የመጫኛ አቅሙ ፳ ቶን ወይም ከዚያ በላይ የሆነ የጭነት ማመላለሻ ተሽከርካሪን በ፳ ሰዓት ውስጥ የመጫኛ ወይም በ፳ ሰዓት ውስጥ የማራገፍ ወይም

9/ "period of loading or unloading" means the time required for loading or unloading of a truck after its arrival at the place specified for loading or unloading and includes the time required for handing over to the driver the fully completed and signed documents;

10/ "Ministry" or "Minister" means the Ministry or Minister of Transport, respectively;

11/ "Authority" means the Transport Authority established under the Transport Proclamation No. 468/2005;

12/ "person" means any natural or juridical person;

13/ any expression in the masculine gender includes the feminine.

3. Scope of Application

This Proclamation shall be applicable on shippers, consignees, warehouses providing loading and unloading facilities, bodies conducting search and inspection activities, transporters engaged in truck operations and trucks.

PART TWO

TIME LIMIT FOR LOADING, UNLOADING AND INSPECTION AND PAYMENT OF DEMURRAGE

4. Time Limit for Loading and Unloading

- 1/ Any sender or consignee or warehouse operator shall have the obligation:
 - a) to load within 8 hours and unload within 6 hours a truck with loading capacity of 20 tons or above; or

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ገጽ ፪፻፩፻፩ ፌዴራል ንጋሪት ጋዜጣ ቁጥር ፫ ታህሳስ ፱ ቀን ፪ሺ፯ ዓ.ም	Federal Negarit Gazette No.3 18 th December 2013	page 7118
ለ) የመጓጓዣ አቅጣጫ ከፊት ተቀባይነት የሆነ የጭነት ማመላለሻ ተሽከርካሪን በፎ ሰዓት ውስጥ የመጓጓዣ ወይም በ፱ ሰዓት ውስጥ የማራገፍ፤ ማድረግ አለበት፡፡ ፪/ በዚህ አንቀጽ ንዑስ አንቀጽ (፩) የተመለከተው የጊዜ ገደብ መቆጠር የሚያምረጩ የጭነት ማመላለሻ ተሽከርካሪዉ የመጓጓዣ ወይም የማራገፊያ ቦታው እንደያረሰ ይሆናል፡፡ ፫/ የጭነት ማመላለሻ ተሽከርካሪው የመጓጓዣ ወይም የማራገፊያ ቦታው ከደረሰ በኋላ ከአንጓገፍ ጋር ባልተያያዘ ምክንያት የመጓጓዣ ወይም የማራገፊያ ቦታ ለውጥ ከተደረገ በላውጡ ምክንያት የባከነው ጊዜ በዚህ አንቀጽ ንዑስ አንቀጽ (፩) በተመለከተው የጊዜ ገደብ ውስጥ ተካቶ ይታሰባል፡፡	b) to load within 5 hours and unload within 4 hours a truck with loading capacity of less than 20 tons. 2/ The time limit referred to in sub-article (1) of this Article shall begin to run from the time of arrival of the truck at the place of loading or unloading. 3/ If there is a change on the place of loading or unloading after the arrival of a truck at the place of loading or unloading for reasons not attributable to the carrier, the extra time spent due to the change shall be included in the calculation of the period referred to in sub-article (1) of this Article.	
፩. የጭነት ጊዜ ገደብ	5. Time Limit for Inspection	
፩/ የኢትዮጵያ ገቢዎችና ጉምሩክ ባለሥልጣን የጭነት ማመላለሻ ተሽከርካሪ የጭነትን ዕቃ በመግቢያ ወይም በመውጫ በር ወይም በመተላለፊያ መንገድ ላይ የሚያደርገውን ቁጥጥር በአንድ ሰዓት ውስጥ እንዲሁም በመዳረሻ የጉምሩክ ጣቢያ የሚያደርገውን ከአራት ሰዓት ባነሰ ጊዜ ውስጥ ማጠናቀቅ አለበት፡፡ ፪/ የግብርና ሚኒስቴር የአንስሳት ካራንቲን ጣቢያ፡- ሀ) የአንድ የጭነት ማመላለሻ ተሽከርካሪን ንጽህና እና ምቹነት የማረጋገጥ ስራ በ፱ ደቂቃ ውስጥ፤ ለ) በአንድ የጭነት ማመላለሻ ተሽከርካሪ የተጫኑ እንስሳትን የጤና ማረጋገጫ ለርተፍኬት መስራትና መስጠት በሦስት ሰዓት ውስጥ፤ ሐ) የአንድ የጭነት ማመላለሻ ተሽከርካሪን የመኖ የደለፍ ለርተፍኬት መስራትና መስጠት በ፱ ደቂቃ ውስጥ፤ ማጠናቀቅ አለበት፡፡	1/ The Ethiopian Revenues and Customs Authority shall conduct inspection of goods loaded on a truck within one hour at port of entry or exit or transit route, or in less than four hours at the destination customs station. 2/ Any animal quarantine station of the Ministry of Agriculture shall: a) conduct a truck sanitation and suitability inspection within 30 minutes; b) prepare and issue animal health certificate with respect to animals loaded on a truck within three hours; c) prepare and issue animal feed pass certificate with respect to animal feed loaded on a truck within 30 minutes.	

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ገጽ ፳፻፳፻፱ ፌዴራል ንጋሪት ጋዜጣ ቁጥር ፫ ታህሳስ ወ ቀን ፪ሺ፰ ዓ.ም		Federal Negarit Gazette No.3 18 th December 2013page 7119	
፫/ የኢትዮጵያ መንግሥት ባለስልጣን የአንድ የጭነት ማመላለሻ ተሽከርካሪን የክብደት ሚዛን ቁጥጥር በ፳ ደቂቃ ውስጥ ማጠናቀቅ አለበት፡፡	3/	The Ethiopian Roads Authority shall undertake truck weight inspection process within 20 minutes.	
፬/ በጤና ጥበቃ ሚኒስቴር፣ በግብርና ሚኒስቴር፣ በንግድ ሚኒስቴር ወይም የተቆጣጣሪነት ሥልጣን ባለው የሚመለከተው ሌላ መንግሥታዊ አካል የሚካሄድ አንድ የጭነት ማመላለሻ ተሽከርካሪ የጫነውን ዕቃ የመቆጣጠር ሥራ በሦስት ሰዓት ውስጥ መጠናቀቅ አለበት፡፡	4/	The Ministry of Health, Ministry of Agriculture, Ministry of Trade or any other concerned government regulatory body shall conduct inspection of goods loaded on a truck within three hours.	
፭/ በዚህ አንቀጽ ንዑስ አንቀጽ (፩)፣ (፪)፣ (፫) እና (፬) የተመለከተው የጊዜ ገደብ መቆጠር የሚጀምረው የጭነት ማመላለሻ ተሽከርካሪው ቁጥጥር ወደማደረግበት ጣቢያ እንደደረሰ ይሆናል፡፡	5/	The time limit referred to in sub-article (1), (2), (3) and (4) of this Article shall begin to run from the time of arrival of the truck at the station where the inspection is conducted.	
፮. የመጣሻ፣ የማራገፊያና የቁጥጥር የሥራ ሰዓት	6.	<u>Working Hours for Loading, Unloading and Inspection</u>	
በዚህ አዋጅ አንቀጽ ፬ መሠረት የመጫንና የማራገፍ አገልግሎት የሚሰጥ መጋዘን ወይም በዚህ አዋጅ አንቀጽ ፭ መሠረት ቁጥጥር የሚያካሂድ ማንኛውም ተቆጣጣሪ አካል ከሰኞ እስከ እሁድ ፳፪ ሰዓት ሙሉ ይህንኑ አገልግሎት መስጠት አለበት፡፡		Any warehouse engaged in loading and unloading operations in accordance with Article 4 of this Proclamation or any regulatory body conducting inspection in accordance with Article 5 of this Proclamation shall provide such service for 24 hours from Monday to Sunday.	
፯. የዲሞራጅ ክፍያ	7.	<u>Demurrage</u>	
፩/ ማንኛውም ሳኪ፣ ተረካቢ ወይም የመጋዘን አገልግሎት የሚሰጥ አካል በዚህ አዋጅ አንቀጽ ፬ በተደነገገው መሠረት ግዴታውን ካልተወጣ፡-	1/	Any sender, consignee or warehouse operator who has failed to meet its obligations as stipulated under Article 4 of this Proclamation shall pay demurrage to the carrier on the following basis:	
ሀ) የመጫን አቅሙ ፳ ቶን ወይም ከዚያ በላይ የሆነ የጭነት ማመላለሻ ተሽከርካሪን በሚመለከት፡-	a)	with respect to a truck with loading capacity of 20 tons or above:	
(፩) ለመጀመሪያ ሁለት ሰዓት የባከነ ጊዜ በሰዓት ብር ፩፻ ሂሳብ፤	(1)	Birr 100 per hour for the first two hours delay;	
(፪) ከሁለት ሰዓት በላይ እስከ አራት ሰዓት ለባከነ ጊዜ በሰዓት ብር ፩፻፱ ሂሳብ፤	(2)	Birr 150 per hour for the delay of more than two hours up to four hours;	
(፫) ከአራት ሰዓት በላይ ለባከነ ጊዜ በሰዓት ብር ፪፻ሂሳብ ወይም	(3)	Birr 200 per hour for the delay of more than four hours; or	

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ገጽ ፩፻፩፻፩ ፌዴራል ንጋሪት ጋዜጣ ቁጥር 17 ታህሳስ ፱ ቀን ጳጉሜ ፡፱፻፲፯	Federal Negarit Gazette No.3 18 th December 2013 page 7120
ሰ) የመጫን አቅሙ ከፍተኛ በታች የሆነ የጭነት ማመላለሻ ተሽከርካሪን በሚመለከት፡- (፩) ለመጀመሪያ ሁለት ሰዓት የባከነ ጊዜ በሰዓት ብር ፸፭ ሂሳብ፤ (፪) ከሁለት ሰዓት በላይ እስከ አራት ሰዓት የባከነ ጊዜ በሰዓት ብር ፩፻ ሂሳብ፤ (፫) ከአራት ሰዓት በላይ ለባከነ ጊዜ በሰዓት ብር ፩፻፶ ሂሳብ፤ የዲመራጅ ክፍያ ለአንጓገፍ መከፈል አለበት፡፡ ፪/ ማንኛውም ቁጥጥር የሚያካሂድ አካል በዚህ አዋጅ አንቀጽ ፭ በተደነገገው መሠረት ግዴታውን ካልተወጣ፡- ሀ) የመጫን አቅሙ ሽ ተን ወይም ከዚያ በላይ የሆነ የጭነት ማመላለሻ ተሽከርካሪን በሚመለከት ለባከነ ጊዜ በሰዓት ብር ፩፻ ሂሳብ ወይም ለ) የመጫን አቅሙ ከፍተኛ በታች የሆነ የጭነት ማመላለሻ ተሽከርካሪን በሚመለከት ለባከነ ጊዜ በሰዓት ብር ፸፭ ሂሳብ፤ የዲመራጅ ክፍያ ለአንጓገፍ መከፈል አለበት፤ ሆኖም የጭነት ማመላለሻ ተሽከርካሪው ከተወሰነው የጊዜ ገደብ በላይ እንዲቆይ ሲደረግ የቻለው መቅረብ የሚገባው የጭነት ማንጓገፍ ሰነድ በአንጓገፍ ባለመቅረቡ ምክንያት ከሆነ የዲመራጅ ክፍያ ሲጠየቅ አይቻልም፡፡ ፫/ በዚህ አንቀጽ ንዑስ አንቀጽ (፩) እና (፪) መሠረት የዲመራጅ ክፍያ ተግባራዊ የሚሆነው በቀን ለ፲ ሰዓት ብቻ ይሆናል፡፡ ፬/ በዚህ አንቀጽ ንዑስ አንቀጽ (፩) መሠረት ከሚወሰነው የዲመራጅ ክፍያ በላይ የሆነ ጉዳት የደረሰበት አንጓገፍ በማንጓገፍ ውሉና አግባብ ባለው ህግ መሰረት ተጨማሪ የጉዳት ካሳ የመጠየቅ መብቱ የተጠበቀ ነው፡፡	b) with respect to a truck with loading capacity of less than 20 tons: (1) Birr 75 per hour for the first two hours delay; (2) Birr 100 per hour for the delay of more than two hours up to four hours; (3) Birr 150 per hour for the delay of more than four hours. 2/ A body conducting inspection which has failed to meet its obligations as stipulated under Article 5 of this Proclamation shall pay demurrage to the carrier for the delay on the following basis: a) Birr 100 per hour with respect to a truck with loading capacity of 20 tons or above; or b) Birr 75 per hour with respect to a truck with loading capacity of less than 20 tons; provided, however, that no demurrage may be payable where the detention of the truck beyond the specified time limit is caused by failure of the carrier to present the required consignment note. 3/ The demurrage payable pursuant to sub-article (1) and (2) of this Article shall apply only for 10 hours per day. 4/ A carrier who has sustained more damages than the demurrage determined pursuant to sub-article (1) of this Article shall have the right to claim the excess on the basis of his contract of carriage and the appropriate law.

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ገጽ ፲፱፻፳፱ ፌዴራል ንጋሪት ጋዜጣ ቁጥር ፫ ታህሳስ ፱ ቀን ደሴ ፲፱፻፲፯ Federal Negarit Gazette No.3 18th December 2013page 7121	
ሸ/ የጭነት ማመላለሻ ተሽከርካሪን ለመጫን ወይም ለማራገፍ ወይም ለቁጥጥር ከተወሰነው የጊዜ ገደብ በላይ ሆኑ ብሎ ወይም በቸልተኝነት እንዲቆይ ያደረገ የመንግሥት መጋዘን ወይም የተቆጣጣሪ አካል ሠራተኛ ወይም ኃላፊ በዚህ አንቀጽ ንዑስ አንቀጽ (፩) ወይም (፪) መሠረት በእሠራው የተፈጸመን የዲመራጅ ክፍያ የመተካት ኃላፊነት አለበት።	5/ Any employee or officer of a government warehouse or a regulatory body who has, intentionally or by negligence, detained a truck beyond the time limit specified for loading or unloading or for inspection shall be liable to reimburse the demurrage paid by his employer in accordance with sub-article (1) or (2) of this Article.
፩. የመጫኛ የማራገፊያና የቁጥጥር ጊዜ ማረጋገጫ ሰነድ	8. <u>Document Evidencing Loading, Unloading and Inspection Period</u>
ሸ/ ማንኛውም ላኪ፣ ተረካቢ፣ መጋዘን ወይም ተቆጣጣሪ አካል የጭነት ማመላለሻ ተሽከርካሪ በመጫኛ፣ በማራገፊያ ወይም በመቆጣጠሪያ ቦታ የደረሰበትንና አጠናቆ የወጣበትን ቀንና ሰዓት ለዚሁ ተግባር በተዘጋጀ ቅጽ ላይ መዝግቦ ከአሽከርካሪው ጋር መፈራረም አለበት።	1/ Any sender, consignee, warehouse operator or regulatory body shall register the date and time of arrival of a truck at a place for loading, unloading or inspection and the completion of the operation on a form prepared for such purpose and counter sign same with the driver.
፪/ አሽከርካሪው በዚህ አንቀጽ ንዑስ አንቀጽ (፩) መሠረት በተመዘገበው ቀንና ሰዓት የማይሰማማ ከሆነ ልዩነቱን አስፍሮ ለነዱን መፈረምና ወዲያውኑ በአቅራቢያው ለሚገኝ የባለሥልጣኑ የትራንስፖርት ኢንስፔክተር ወይም በትራንስፖርት አዋጅ ቁጥር ፱፻፳፭/፲፱፻፺፯ አንቀጽ ፳፱ መሠረት በባለሥልጣኑ ውክልና ለተሰጠው አካል ሪፖርት ማድረግ አለበት።	2/ If the driver disagree with the date and time registered in accordance with sub-article (1) of this Article, he shall sign the document by entering his reservations, and report same immediately to the nearest transport inspector of the Authority or to the organ delegated by the Authority pursuant to Article 24 of the Transport Proclamation No. 468/2005.
፫/ በዚህ አንቀጽ ንዑስ አንቀጽ (፪) መሠረት ሪፖርት የደረሰው የትራንስፖርት ኢንስፔክተር ወይም ውክልና የተሰጠው አካል ጉዳዩን አጣርቶ የምርመራ ውጤቱን የያዘ ማስረጃ ለሚመለከታቸው ወገኖች ይሰጣል።	3/ The transport inspector or the delegated organ that has received a report in accordance with sub-article (2) of this Article shall investigate the case and issue the concerned parties with evidence containing its findings.
ከፍል ሦስት ልዩ ልዩ ድንጋጌዎች	PART THREE MISCELLANEOUS PROVISIONS
፱. የባለሥልጣኑ ሥልጣንና ተግባር ባለስልጣኑ፡-	9. <u>Powers and Duties of the Authority</u> The Authority shall:
ሸ/ ይህ አዋጅ በሚገባ በሥራ ላይ መዋሉን ይከታተላል፤ ይቆጣጠራል፤	1/ follow up and supervise the proper implementation of this Proclamation;

Assessing Freight Transport Performances in relation to delays in Ethiopia: The case of Addis Ababa-Djibouti Corridor

ገጽ ፳፻፩፻፳፪ ፌዴራል ነጋሪት ጋዜጣ ቁጥር ፫ ታህሳስ ፱ ቀን ፳፻፩ ዓ.ም	Federal Negarit Gazette No.3 18 th December 2013page 7122
፩/ እንደአስፈላጊነቱ በጭነት ማመላለሻ ተሽከርካሪዎች የመጫኛ፣ የማራገፊያና የመቆጣጠሪያ ቦታዎች የትራንስፖርት ኢንስፔክተሮች ይመድባል፤ ፪/ ሞዴል የጭነት ማመላለሻ ውልና የጭነት ማመላለሻ ተሽከርካሪ እንቅስቃሴ መቆጣጠሪያ ቅጾችን ያዘጋጃል፤ ለማመልከታቸው አካላት ያሰራጫል፤ ፫/ አስፈላጊ ሆኖ ሲገኝ የጭነት ማመላለሻ ተሽከርካሪዎችን የጭነት ማጓጓዣ ታሪፍ በማጥናት የውላኔ ሃሳብ ያቀርባል፤ በሚኒስትሮች ምክር ቤት ሲጸድቅም ተግባራዊነቱን ይከታተላል፡፡	2/ assign transport inspectors, as deemed necessary, at the places for loading, unloading and inspection of trucks; 3/ prepare and distribute to the concerned bodies model contract for freight transport and trucks movement monitoring formats; 4/ undertake study and submit proposal on freight tariffs for trucks, when deemed necessary, and follow up the implementation of same upon approval by the Council of Ministers.
፲. ተፈጻሚነት ስለማይኖራቸው ሀጎች ከዚህ አዋጅ ጋር የሚቃረን ማንኛውም ህግ ወይም የአሰራር ልምድ በዚህ አዋጅ በተመለከቱ ጉዳዮች ላይ ተፈጻሚነት አይኖረውም፡፡	10. Inapplicable Laws No law or customary practice may, in so far as it is inconsistent with the provisions of this Proclamation, be applicable with respect to matters provided for by this Proclamation.
፲፩. ደንብ እና መመሪያ የማውጣት ሥልጣን ፩/ የሚኒስትሮች ምክር ቤት ይህን አዋጅ በሚገባ ሥራ ላይ ለማዋል የሚያስፈልጉ ደንቦችን ሊያውጣ ይችላል፡፡ ፪/ ሚኒስቴሩ ይህን አዋጅና በዚህ አንቀጽ ንዑስ አንቀጽ (፩) መሠረት የወጡ ደንቦችን ለማስፈጸም የሚያስፈልጉ መመሪያዎችን ሊያውጣ ይችላል፡፡	11. Power to Issue Regulation and Directive 1/ The Council of Ministers may issue regulations necessary for the proper implementation of this Proclamation. 2/ The Ministry may issue directives necessary for the implementation of this Proclamation and regulations issued pursuant to sub-article (1) of this Article.
፲፪. አዋጁ የሚፀናበት ጊዜ ይህ አዋጅ በፌዴራል ነጋሪት ጋዜጣ ታትሞ ከወጣበት ቀን ጀምሮ የፀና ይሆናል፡፡	12. Effective Date This Proclamation shall enter into force on the date of publication in the Federal Negarit Gazette.
አዲስ አበባ ታህሳስ ፱ ቀን ፳፻፩ ዓ.ም ዶ/ር ሙሉቱ ተሾመ የኢትዮጵያ ፌዴራላዊ ዲሞክራሲያዊ ሪፐብሊክ ፕሬዝዳንት	Done at Addis Ababa, this 18th day of December, 2013. MULATU TESHOME (DR.) PRESIDENT OF THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA
ብርሃንና ሰላም ማተሚያ ድርጅት	