Challenges of Multimodal Transport Services:  
The Case of Ethiopian Shipping and Logistics Service Enterprise  

*Ethiopia-Sweden-Denmark and UK trade routes operation*
Abstract

**Purpose:** is to identify the challenges of multimodal transport service of ESLSE in the Europe trade routes operation from origin up to destination and to analyze the contribution of network partners to ESLSE solving these challenges.

**Design\Data collection\Approach:** This thesis relied on qualitative research design in order to identify the key challenges of multimodal transport services and to show how the network partners contribute to solving these challenges. Moreover, to achieve the objective of the study, semi-structure interviews were used, and the responses from 14 experts were analyzed.

**Theoretical framework:** The theoretical base and concepts are used to determine the theoretical boundaries of the research. It provides an overview of the literature that exists in the challenges of multimodal transport services. The theoretical framework firstly encompassed the logistics performance and personnel, followed by the description of multimodal transport services, customs facilitation, ICT, infrastructure, network partner integration and port administration. Lastly, theoretical synthesis is developed that are identified from the theory to demonstrate the interrelationship between individual concepts.

**Findings:** The findings of this study revealed that multimodal transport service was impacted by a number of challenges even if the network partners contributed some solutions. The results of the study showed that the lack of skilled logistics personnel; poor ICT system; lack of integration between network partners; lack of effective infrastructure; inadequate and ineffective capacity of trucks; material theft; corruption; security risk; lack of prompt response in the operation between network partners; monopoly of the operation by ESLSE; and lack of quality of transported cargo are the main challenges for multimodal transport services.

**Managerial implication:** For managers of network partners, it is recommended that they should be aware that the challenge of multimodal transport service is the result of poor ICT systems; lack of integration between network partners; lack of effective infrastructure; lack of skilled logistic personnel; inadequate and ineffective capacity of trucks; material theft; corruption; security risk; lack of quality of transported cargo; and lack of prompt response in the operation between the network partners. Hence, they should take action to solve the
problems by integrating with shipping agents and steering committees such as customers office, transport minister, and maritime authority. Moreover, the shipping agents managers can use the results of the study to enhance their contribution in order to solve the challenges of multimodal transport services by communicating with the ESLSE.

Limitations: The small sample size without adequately diverse geographical spread and sample of shipping agents and dry ports since the study is only limited to Europe trade routes and it did not take in to consideration other continents like Africa and Asia which could have given additional information on the topic. The sample of shipping agent and dry ports was limited with 3 out of 11 and 3 out of 7 respectively.

Originality/Value: This thesis is one of the first to analyze the challenges of multimodal transport in the case of Ethiopia to Europe trade operation by interviewing both the ESLSE and shipping agents.

Key Words
Logistics, Multimodal Transport Service, Multimodal transport operator, Shipping Agents, Shippers, and Supply Chain.
Statutory Declaration

“I, Habtesilase Demse declare that this thesis entitled: Challenges of Multimodal Transport Services, the case of Ethiopia Shipping and Logistics Services Enterprise focusing on Ethiopia to Sweden-Denmark and United Kingdom trade routes operation is the outcome of my own effort and study and that all source of materials used for the study have been duly acknowledged. I have produced it independently except the guidance and suggestions of the research supervisor, Richard Owusu (PHD). This Master Thesis has not been submitted elsewhere for examination purposes.”

By: Habtesilase Demse
Date: 23\May\2018
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Tack så Mycket! Thanks a lot! Habtesilase Demse

Kalmar, Sweden May, 2018
“I have never presented. The logistics of that is a challenge”

-Michael Rithie

“We need a first-class transportation system”

-Dan Lipinski
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List of Abbreviation

AMTOI: Association of Multimodal Transport Operators of India
APL: American President Lines Ltd
ASYCUDA: Introduction of Automated System for Customs Data
CFS: Container Freight Station
CIA: Central Intelligence Agency
CMA CGM: Maritime Freighting Company-General Maritime Company
CTTS: cargo tracking and tracing system
CUNCTAD: United Nation Conference on Trade and Development
DPI: World Bank Doing Business Index
DPSE: Dry Ports Service Enterprise
EDI: electronic data interchange
EMAA: Ethiopian Maritime Affairs Authority
EMTS: Maritime and Transit Service Enterprise
ERC: Ethiopian Railway Corporation
ERCA: Ethiopia revenue and customer authority
ESL: Shipping line SC
ESLSE: Ethiopian Shipping and Logistics Service Enterprise

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ESW: Electronic Single Window
EU: European Union
FFC: Forwarding Company
FOB: Free on Board
GDP: Gross Domestic Product
ICC: International Chamber of Commerce
ICT: information and communication technology
ICT: information communications technology
IMF: International Monetary Fund
IMO: International Maritime Organization
L/C: letter of credit
LPI: Logistics Performance Index
ML: Maersk Line
MMT: Multimodal transport
MTOs: Multimodal Transport Operations
RSDP: Road Sector Development Program
SHS: Ship Husbandry Service
TOS: Terminal Operation Service
UNCTAD: United Nations Conference on Trade and Development
UNIDO: United Nation Development Program
MSC: Mediterranean Shipping Company
WEF: World Economic Forum
1. Introduction

In this chapter, the researcher dwells on the general overview of the challenges of the international shipping and logistics. Firstly, background information is provided to present the context of the research which shows how generally interesting, current and valuable the study is: The background of the Ethiopian Shipping and Logistics Service Enterprise (ESLSE) is introduced, and the logistics, supply chain, containerized cargoes, multimodal transport service, shipping transportation, shipper, and information technology are presented. Secondly, a research gap is found through the problem discussion, which leads to the research question and the purpose of the research. The chapter concludes with the delimitation of the study, definition of key terms, and thesis structure.

1.1 Background

History has shown that the first multimodal transportation system was developed in America, Canada, and Western Europe in the 1960's and 1970's (Mulugeta, 2017). The first full containerized cargo across the Atlantic brought Europe closer to the United States (Gezahgen, 2003). Christensen et al. (2013) made influential research on shipping and logistics services, and the author posits that the notion of logistics and shipping services in early times was executed predominantly in military institutions to ensure delivery of military supplies to war fronts. Bhat (2011) explains military logistics as the design and integration of all aspects of support for the operational capability of the military forces and their equipment to ensure readiness, reliability, and efficiency. According to Bowersox and Closs (2000), logistics has been forced to accommodate many more operational activities of the business in the supply chain management process. Due to this fact, the controlling and management endeavor in logistical operation become a key and an essential element for the successful completion of the missions of logistics activities in a supply chain process (ibid.).

Based on the ever-changing demands of the shipping and logistics sector for improved and quality services of logistics and shipping. Ross (2009) and Closs (2013), highlight the activities involved in logistics management in a more systematic manner where the concept of logistics consists of the integration of information, transportation, inventory, warehousing, material handling, and packaging. To provide effective and efficient logistics services, the operational areas stated in the definition must be interlinked and work as one and the same.

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Logistics is the management of the flow of things from the source to the point of consumption while satisfying customer needs. This involves several areas such as material handling, warehousing, packaging, inventory management and transportation (Cinar et al., 2017). The ultimate goal of logistics management according to Christopher (2011) is to service customers in most cost-effectively. Given this, in recent years, many businesses across the world have adopted different ways of providing efficient service as a way of meeting their customer needs efficiently and cost-effectively while gaining a sustainable competitive advantage. One way in which businesses are adopting these principles is through multimodal transportation.

All over the world, the transportation system is one of the key drivers in the freight distribution system. The multimodal transport services are being recognized for their dominant role in the globalized economy, and the operation will continue to affect the current international trade environment. Multimodal transport service commonly known as combined transport is the transportation of goods using at least two different means of transport from the point of receipt to the recipient's destination under a single contract. The carrier is legally liable for the entire carriage process, even though it is performed by several different modes of transport (Spanjaart, 2017). According to (UNCTAD, 1981), the notion of multimodal transport services encompasses the door to door movement of goods under the responsibility of a single transport operator. According to the information revealed by the ESLSE, Ethiopia as one of IMO (International Maritime Organization) members multimodal transportation system has been implemented since 2012 and currently near to 70 percent of imported cargoes is transported through multimodal transportation system (ESLSE, 2016). Hoeks (2009) states that through time shipping and logistics had shown remarkable improvement and continued to play its vital role in the development of international trade.

Most of the European countries can bring balanced transportation system to increase the transport volume and to minimize the dependability on the road transport because in Europe, the highest transport movement has been made through road transport (EUROSTAT Transport Logistics, 2013). However, nowadays most of the import and export of goods are carried by sea transportation.

The main international trade objective is reducing overall transport and handling costs through providing door to door cargo services and to achieve this, multimodal operation plays
an important and significant role (Chao, 2011). The IMF (2000) defines globalization as the "rising economic interdependence of countries internationally during increasing volume and multiplicity of cross-border transactions in goods and services, freer international capital flows, and additional speedy and common diffusion of technology." According to Kherbash and Mocan (2015), transportation plays a crucial role in linking the different import and export markets which are spread around the globe. They further explain that in order to survive the violent global contest, shippers have had to reorganize and particularly focus on their costs and efficiency. Globalization of complicated industrial production process has increased the importance of seaports in the global supply chain. To this end, the logistics service provision in an international context has become a core part of the business (Wang & Cullinane, 2005). In this situation, the most imperative aspects of logistics performance are logistics costs and reliability of supply chain. Therefore, the well-functioning logistics, both domestically and internationally, is a necessary precondition of national competitiveness (Arvis & Ojala 2014). On the other hand, the poor logistics facilitation takes a large toll on a country’s competitive advantage (Arvis et al, 2007).

Universal momentum towards efficiency has been developed through various factors, the introduction of container services enhances the standardization of transshipment of cargoes, reduce the damage of goods and enable cargo handling more efficiently and effectively. Due to this reason, most of the international trades rely on containerized shipments (Breda 2009). To this end, the world container fleet has been increasing continuously. To sum up, the import and export transit services are measured in terms of key logistics concepts and elements such as cargo handling, customer service, in-transit inventory cost, inland transportation, lead time, value-added activities, and total logistics costs (Ibid.).

Furthermore, besides the transportation services, information communications technology (ICT) has chief importance in the contemporary business world, since it is seriously assisting transportation operations and the whole supply chain process at large. The recent advancement is seen in technologies significantly supported the development of transportation and communication system by improving the efficiency and effectiveness of the supply chain process (Zhuravleva, 2013).
Ethiopia is the most populous landlocked country in the world. The main gateway of the import and export of the country's cargo is via Djibouti port. The government of Ethiopia implemented a multimodal transport system in 2012 to increase both the import and export expansion (Mulugeta, 2017). The Ethiopian Shipping and Logistics Services Enterprise (ESLSE) is one of government-owned business enterprise which was formed as a result of the amalgamation of three national companies.

Today, ESLSE is a vessel owner, charterer, liner operator and multimodal service provider. The company offers both shipping as well as inland transportation, dry port container depots, warehousing, forwarding and clearance activities for both import and export cargoes. Currently, the company is providing regular liner services to major directions of the world. These are Far East ports, Gulf and Middle East countries, Europe, and African ports (ESLSE, 2014).

For instance, the ESLSE moved 4,966,265 tons of import cargos in 2016 through the slot and own vessels, out of this imported cargo 75 percent is containerized cargoes (ESLSE, 2016). The containerization factor has grown faster than the general cargo import growth rate of the enterprise, the containerized cargo steady growth at 7.8 percent over the four years (1999/00-2003/4). Therefore, the expectation for more effective multimodal transport service is more demanded in order to: 1) minimize the average round time of the containers (because the containerized shipment has highest unit value and is the most time-sensitive), 2) to deliver the cargo under the responsibility of one carrier, 3) to avoid delays in the cargo transit in order, to avoid demurrage and storage costs at port, 4) to avoid additional payments and demurrage for inland transport, 5) to minimize excessive amount of paperwork, 6) to avoid the need for stripping container at Djibouti port and 7) to encourage containerized traffic for inland transport (Sebhatu, 2005). On the other hand, the long turn-round time for a substantial number of containers is attributed to the inefficient transport system and inadequate Container Freight Station (CFS) facilities at inland destinations, and then ultimately goes to the low level of customer services. Therefore, in relation to the current growth of world trade, the effective multimodal transport services are necessary to integrate international business or trade of the country, help improve trading efficiency and transform the relationship between international carriers and trading partners (such as carrier or operator, shipping agent, truck service provider, and shippers).
1.2 Problem Discussion
Multimodal transport and logistics are increasingly becoming a vital component for companies to becoming competitive in international trade. Hence, there has been an increase in the requirement for operators to meet the demand for faster, secure and more reliable deliveries to the market. However, most developing and landlocked countries have been left behind in accessing this service (Mulugeta, 2017).

Transportation infrastructure development is the primary task to be done by governments as a duty. Countries which have already developed their infrastructural facilities have managed to provide modern transportation and communication services with minimum cost and service time with noticeable differences in the international business arena. In contrast developing countries have not been able to support their international trade as needed because of their poor transport infrastructural facilities (Rodrigue et.al, 2006).

The infrastructural development in the transport and communication sectors in Ethiopia seem stagnated in the past decades, and its continued stagnation is manifested by the poor logistics facilities the country possesses. This poor infrastructural status cannot encourage transport service providers to invest in the sector and give time and cost-efficient services. Poor networks of road, poor telecom facilities, interrupted energy supply and unavailability of qualified experts and lack of commitment from government side all have played their role to worsen the quality of the logistics sector (Lemmi & Bogale, 2016). At the same time, multimodal transport service can generate practical benefits by saving goods transit time, reducing transportation and warehouse costs, minimizing the burden of documentation, security of goods, improving the competitiveness in the international market, increasing productivity, and enhancing the inward and outward freight transport effectiveness (Amentae & Gebresenbet, 2015).

This gave birth to the multimodal transport service which was started by (ESLSE) in 2012. Following the commencement of the new service, unexpected situations happened in the daily operation of the enterprise and ultimately affected the effectiveness of the service. For instance, lack of coordination of goods transport which creates the imbalance between the port transit and inland transit, inadequate fleets of freight vehicles due to the multimodal transport operation can avoid the intermediary paper works and clearance at port, some of the importers changed from multimodal transport to unimodal, lack of ICT and network
connectivity. As a result, the ESLSE failed to bring shipments to dry ports within a reasonable period. This trend posed a strong challenge to the economy at large (Lemmi & Bogale, 2016).

As described by the World Bank (2013), the trade cost and transit times in Ethiopia are very high, compared to neighboring countries like Kenya, Tanzania, and others. For instance, the report stated that importing a container in Ethiopia required additional costs of $1095 compared to Tanzania. On the other hand, the transit time takes to import and export is about twice as long as Kenya and other countries such as China and Vietnam (World Bank, 2013). Due to this fact, the importers were not getting their raw materials and merchandise goods in time, and a unimodal system was being used. As a result, the enterprise was forced to pay huge amounts of dollars to the container carriers such as Maersk Line (ML), Maritime Freighting Company-General Maritime Company (CMA CGM), American President Lines Ltd (APL) and Djibouti port for demurrage and detention fees accrued for cargoes stayed for months at the discharging port (Lemmi & Bogale, 2016). Besides, the problems are created extended waiting time to get the transportation services, length of the documentation process and getting the goods long after schedule (Legesse, 2014).

According to the results from the World Bank Logistics Performance Index (LPI) of trade logistics comparisons between countries indicated that Ethiopia ranks 126 out of 160 countries in 2016 (World Bank, 2016). Moreover, the chart of logistics competency of the World Bank in 2016 shows that after 2014 the Ethiopia logistics competencies continuously decline. These indicate that the logistics services in Ethiopia are not steadily improving over time (ibid.).

The network partners have played a major role in the logistics service and contributing for logistics competencies of the enterprise in the inward and outward transport operation. The network partners such as customer, multimodal transport operator, agents, and shipper have considerable attention in determining the effectiveness of multimodal transport (Chao, 2011).

The scope and quality of operational efficiency of the logistics concepts had shown remarkable progress with multimodal transport system playing a significant role in modern international trade through effective integrated transport operations with minimum transport cost and shorter transit time. Shippers also benefit in supplying their goods with shorter transit
time and ultimately the consignees; especially those who hold seasonal products, have the advantage of avoiding lag times between stock on hand and new orders arriving (Kallo, 2014).

The multimodal system avoids several transport service providers and assists shippers to come to a single contractual agreement with the carrier and render a door to door cargo delivery service (Berda, 2009). The ability to transport goods quickly, reliably, safely and economically is seen as vital to the international business success and multimodal transport service, which has significantly affected the current transport system, the trade with transport networks taking shape through a series of developments (Bhat, 2011).

The ESLSE agents are one of the main partners and contributors in the logistics services of the enterprise and multimodal transport operation. The major responsibilities of the shipping agents are: a) ensuring the principal's requirements are performed with the utmost efficiency and effectiveness through coordination and reporting of cargo booking with shipper or supplier on behalf of the Ethiopian receivers, b) in order to fully meet with Ethiopian's FOB (Free on Board) directives, preparing stowage plan, preparing cargo lists, ready to be used by ship's Master and stevedores, c) coordinating of the loading operation at all ports in close consultation with the Master and ESLSE head office, d) physical attendance during loading at all ports and assisting the Master and coordinating all stevedores' matters during the entire loading operation, e) meeting and consulting with the stevedoring prior to vessel arrival, f) supply of spare parts for avoiding delay of the shipping schedule, g) managing of delivery order, h) supplying and coordinating the (pre) loading survey and tallying, and i) preparing bill of lading, cargo and freight manifest (ESLSE, 2015).

Given that this is a multifaceted operation, if any of the various steps are affected in a negative or positive way, this will in turn have an impact on the entire network partners such as shippers, enterprise, customers, and the agents (Chao, 2011). Since, transportation operation becomes more integrated through a combination of various transport modes, methods, and networks, their impact on values will become more complex, and services provided by multimodal transport operator would be very competitive across the industry (UNCTAD, 2003).
The network partners play an important role to become competitive, to avoid complexity, and to give valuable service in the multimodal transport operation. To this end, the effective network with shipping agents assisting shippers in arranging their shipment to loading the goods in port and arrive at customer's destination within shorter transit times through multimodal transport operation is critical (Chao, 2011). While most of the former research has been focusing on and evaluating the challenges of multimodal operation is related to customers but, not considered the effect of the shipping agents in the multimodal transport operation. Moreover, most of the researcher's respondents are government officials. Hence, the result of those studies may not necessarily reflect the attitude of private companies, transistors and shipping agents (Teshome, 2017).

ESLSE has taken responsibility to manage the multimodal transport system to improve inward and outward trading activities in terms of low cost, maximum customer convenience and become an international carrier (Lemmi & Bogale, 2016). However, the multimodal transport system did not have the expected effect on customer satisfaction and the operational efficiency is low due to low level of experience the new concept of the multimodal transport system for ESLSE (Amentae & Gebresenbet, 2015).

The multimodal transport system is still lagging in achieving its starting aims; the gain from the operation is far less compared to the effort exerted starting from the first day of implementation (Maritime affairs Authority, 2013). It is obvious that efficient multimodal transport can generate practical benefits by saving goods transit time, reducing transportation and warehouse costs, minimizing burden of documentation, security of goods, improving the competitiveness in the international market, increasing productivity, and enhancing the inward and outward freight transport effectiveness since, effective multimodal transport service ensures the use of the most efficient mode of transport at each stage and ultimately reduces bottleneck, energy expenditure, and pollution dramatically (Legesse, 2014; Mohanty, 2005).

The shipping industry transportation costs are higher because of the services rendered via long distance in an international trade (Donald et al., 2002). ESLSE multimodal transport system operated through a single contract and at least two different mode of transport engages includes ship, truck, and train. In this operation, the ESLSE is responsible for the entire carriage from origin to destination. However, the integration of ICT, inventory, packaging
warehousing, and transportation system have faced the challenges to achieving the efficient multimodal transport services.

One of the key reasons that have been identified for declining international competitiveness is poor trade logistics. Several recent reports have drawn attention to the trade logistics sector in Ethiopia as being critical constraints to current trade flows and a bottleneck to further economic growth and development (World Bank, 2017). According to Debela (2013) and Lemmi & Bogale (2016), the logistics services of Ethiopia Shipping and Logistics Service Enterprise in Europe as well as in other trade routes are categorized by a low level of development of logistics service. The studies stated that the logistics services of Ethiopian Shipping and Logistics Service Enterprise are characterized by a lack of coordination of cargo transportation, lack of delivery of cargo both in quality and quantity, inadequate fleet of vehicles from discharging port/Djibouti to dry ports, lack of coordination in ICT, absence of qualified experts in the logistics services, lack of logistics infrastructure, unavailability of enough containers, poor logistics management, lengthy of the documentation process and monopolized the sea transport and logistics services. Agrawal (2013) and Kallo (2014) noted that inefficient logistical operation would result in delivery delay, a high cost of logistics, loss of customers, poor quality of service and discrepancy on quantity delivered, production interruption and extension of lead time, length of documentation process, ineffective ICT and inadequate dry ports. Therefore, it is important to assess the actual practice, identify the challenges of multimodal transport service, and illustrate how the network partners contribute to ESLSE solving these challenges by focusing on Ethiopia to Europe trade route operation.

1.3 Research Questions
To address the research topic, the following research questions are formulated:

1. What are the challenges of multimodal transport service of ESLSE in the Europe trade routes operation from origin to destination?
2. How do the network partners contribute to ESLSE solving these challenges?

1.4 Purpose of the study
The purpose of the study is to identify the challenges of multimodal transport service of ESLSE in the Europe trade routes operation from origin up to destination and to analyze the contribution of network partners to ESLSE solving these challenges. Therefore, the outcome
of the study can provide recommendations to Ethiopia Shipping and Logistics Service Enterprise (ESLSE) to improve how it manages the business. The recommendation will be useful for other shipping companies too. Furthermore, the findings obtained from the research can aid as reference material to other researchers on the same or related topics in the future.

1.5 Delimitation
The empirical study is limited to examining the challenges of multimodal transport service of Ethiopian Shipping and Logistics Enterprise. The study has been delimitated to 3 dry ports such as Gelan, Comet and Modjo dry ports. Furthermore, the study has been delimitated to 3 shipping agents in Europe trade route.

1.6 Definition of key terms
**Logistics**: - is an integrated flow of goods & services & information in the supply chain process.

**Multimodal Transport Services**: - it is a transportation service provided by using at least two or more modes of transport in a single chain of transport with a single transport contract and single multimodal transport operator.

**Multimodal Transport Operator**: - a multimodal transport company which provides integrated international freight transport services using different modes of transport.

**Agents**: A company/individual authorized to transact business in the name of another individual or company.

**Shipper**: An individual or company who is the owner of commodities shipped.

**Supply Chain**: The material and informational interchanges in the logistical process. All shippers, service providers, shipping agents and customers are links in the supply chain.
1.7 Thesis Structure

The Thesis consists of six chapters as follows:

Chapter 1: Introduction
- Deliberates on the introduction to the study, the background of the study, problem discussion, research questions, objectives of the study, the purpose of the study, delimitation, and definition of terms.

Chapter 2: Literature
- Reviews the literature on the challenges of multimodal transport services of the Ethiopian Shipping and Logistics Services enterprise. A literature study provided the conceptual framework underpinned by theoretical synthesis, and the empirical evidence section will give an analysis of other authors' research on the topic.

Chapter 3: Methodology
- Focuses on the research methodology and brings the research process to the research question, the research problems, and the research instruments. It describes the sample and explanations why this sample was selected. The chapter concludes by discussing the data collection techniques and the instruments, their validity, and reliability.

Chapter 4: Empirical Findings
- Discusses and presents the empirical findings of the study. The findings will be presented in a table.

Chapter 5: Analysis
- The empirical data will be analysed and discussed in line with the theoretical framework.
- Discusses the conclusions Chapter 5. Recommendations are made to the transport sector, the government, and academia. The limitation of the study, theoretical and managerial implication, general and policy implication and an area of further study will be presented in this chapter.

Chapter 6: Conclusion

Figure 1. Outline of the Thesis, Source: Own figure

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2. Literature Review

This chapter presents the theoretical base and concepts for the research and helps the author determine the theoretical boundaries of the research. In addition, it provides an overview of the literature that exists on the challenges of multimodal transport services of the Ethiopian Shipping and Logistics service enterprise. The main thrust of the chapter is to introduce the reader to the main theoretical concepts which will guide the authors throughout this thesis. Last, the theoretical synthesis will be developed at the end of this chapter to portray the author’s research model which demonstrates the interrelationship between individual concepts.

2.1 Theoretical perspective
Numerous arguments have been postulated by diverse authors in relation to the concepts and theories of practices of multimodal transport systems, challenges and its importance so far. The modern transport patterns and practices have been improved by the growth of containerized transportation together with technological development. This is improving the system for transferring cargo between different modes of transport. In response to new modes of production, in the context of globalization, and with respect to a highly competitive market environment integrated supply chain management has developed (Waters, 2010). The section summarizes and presents those concepts and theories only relevant to the topic under study.

2.2 International Logistics/Logistics Performance
According to Yang (2011), transportation today is all about logistics in international trade. The primary task of logistics is transportation which deals with moving the products from one place to another. The international transportation of finished goods from shipper site to customer destination is essential as that applies to domestic production and transportation to domestic market. However, there is a major difference between the two operations, the goods can be out of exporter control for a more extended period, and more documentation is required. The basics activities involved in the flow of good are transportation, warehouse and inventories, all of which, as we have emphasized should be integrated into a system's approach if the number if the warehouse is increased at more places. Similarly, if an attempt is made to decrease inventory costs by reducing the number of warehouse and inventory levels, transportation cost will be going up (Brown, 1985).
2.3 The concept of Multimodal transports systems
The introduction of international transport operation and container services had contributed to the development of trade in the world (Cullinane et al, 2005). The United Nations Convention on Trade and Development (UNCTAD, 1981) was defined the concept of ‘Multimodal Transport’ 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” (ibid.). Therefore, the concept of Multimodal transport, facilitates the origin-to-destination freight transport service under a single operator’s responsibility using more than one mode of transport, is a natural extension of containerization (Hayuth, 1987; D’Este, 1996; & Muller, 1999). However, the inland transport system element of international freight transport impedes international trade in many least developed countries, (UNCTAD, 1994). Transport companies involved in international trade have been developing for several years and creating modern technologies to enable more efficient distributions along multiple modes of transport.

The development of new transportation systems, such as containerized shipment and other unitization of goods led to modification in transport activities. Under one bill of lading or contract, once the product sailed in a container cannot be unpacked for verification, even the service given in different transportation modes such as a ship, road vehicles and railway (UNCTAD.ORG, 2001). Multimodal transport is the way of movement of cargo efficiently and faster from one place to another. To this end, more than one kind of vehicle necessary to deliver the goods from origin to destination by using trucks, trains, ships, and airplanes.

2.4 Challenges affecting the multimodal transport services
Notwithstanding the numerous benefits unveiled by the multimodal transport service, it is not uncommon to see the challenging situations in the system. In most cases, these challenges prevail in developing nations than the developed ones. Debela (2013) notes that differences in trade and investment policies and regulations, legal and political environment, infrastructural facilities and lack of professional human resources are the basic challenge posed by different authors as factors affecting the normal operation of the system. Bhat (2011) noted that multimodal logistics brings opportunities along several challenges. The areas sorted out by the author for the challenges are infrastructure, regulation, and technology, which demand quite an attention from stakeholders.
The author posits that multimodal transport service has to grow quickly, where the majority of stakeholders need to invest time and effort in its development. The multimodal transport activities are done through the integrated operation of people and organizations located in different areas, and this could also be another source of challenge again for the system. In this regard, Atallah (2015) underlined the absence of international rules governing the successive carriage of goods as a challenge to the system, which would result in crucial problems in the field of carrier's responsibility and the liability for loss or damage to the goods shipped under the multimodal system.

The multimodal transport system also has an environmental impact with the means of transport used in the multimodal transport operation. The system produces chemicals which can easily pollute the natural environment. According to Berry (2015) identified three sets of activities associated with transportation vehicle operations, equipment maintenance, and facilities operations which can have negative impacts on the environment. Further, the author noted that in addition, transportation infrastructure construction and expansion often generate pollutants or endanger natural resources.

All over the world choice of transport mode is not only a choice between the type of transport but between the system and a process of transportation. To maximize the usage of transport being offered, transport companies should be able to match and synchronize the market requirements which will then have a major influence on the choice of transport mode (Boweksok, 2003).

Various measurements are required for implementation of a multimodal transport system. The three major elements of this are; transport infrastructure, administrative practice and commercial practice (Banomyong, 2000). The successful implementation of multimodal transport requires information systems, know-how related to the logistics management, technology, government coordination and commitment, and infrastructure (Dewan et al, 2006).

The current Ethiopia laws require paper receipts to be issued for all transactions. In general, there is no legal framework in place to recognize documents exchanged electronically.
Moreover, most of the trade transactions are not automated. The documents and regulations are not always available online (UNCTAD, 2013).

The structure of Ethiopian imports has changed over time, from finished and lightweight products to a combination of light finished products and project-bound bulky cargo. The progress of road network important to link with the quantity and quality of the acquisitions of trucks. According to World Bank (2013), there are fewer private and enterprise-owned trucks are loading the container from the port of discharging up to the destination, in this operation the required weight of goods to be lifted and the number of trucks is not proportion. The total required number of trucks for transportation is 13500, but the available number of trucks range from 800 to 1500 (ibid.).

2.5 Enabling Environment for Multimodal Transport
Dewan et al (2006) described that government must ensure simple and flexible customs procedures to allow door-to-door movement of containerized cargo. Customs authorities have to develop a system or procedure to facilitate such movement. The introduction of Automated System for Customs Data (ASYCUDA) is improving the customs clearance system, but procedures should be simplified to facilitate quicker clearance of consignments (UNCTAD, 1996). To achieve an efficient multimodal system demands a concerted and integrated effort by all parties involved (Razzaque, 1997).

In the majority of developing countries, the policy to preserve transport rights for national flag carriers is misguided. According to UNCTAD (2003), cargo reservation for national flag carriers shields them from competitive pressures in the international ocean transport market, with the result that the cost of their services is higher than that of the international carriers. The loss to domestic importers and exporters is the difference between what they pay for the carriage of cargo and what they would have to pay in a free market (UNCTAD, 2003).

2.5.1 Infrastructures Role in Multimodal Transportation
The development of multimodal transport is inter-linked with the transport infrastructure facilitates. Means, the transport infrastructure is poor; the development of multimodal transport may not be easy (Banomyong, 2000). Infrastructure facilities such as seaports, railway, roads, and airports are supported the multimodal transport services in order to deliver the cargo safely and rapidly (Sanders, 1990). In most of the developing countries, inland transportation are not linking with the port of loading, and this is one of the main obstacles to
transport providers, the efficient multimodal transport requires the inter-connectivity between modes (UNCTAD, 2003).

2.5.2 Port Administration in Implementation of Multimodal Transport
The ports are the interchange points through the multimodal transport services and contribute to the seamless flow of goods. In interchange points, there is a need to coordinate several types of carriers such as ship operator, railway, and trucks. The interconnectivity between the ports and shipping operator has led to greater concentration of cargo moving through larger and fewer ports. On another side, the inland terminals are crucial like seaports (Wolfe, 2001).

2.6 Business Network
According to Ford and Håkansson (2011), every business is relationships because, all companies need other companies' resources and skills to operate their business, without relationships it cannot be produced and deliver the products. It is emphasized by Partanen and Möller (2012), in order to offer the best possible product or service to customers, it is significant for the firm to co-operate within a network Therefore, this all will be done through the relationships between the company and its suppliers, development partner, customers and other partners (ibid.). Holmlund and Törnross (1997) define the business relationship "An interdependent process of continuous interaction and exchange between at least two actors in a business network context." As per Ford and Håkansson (2011) those partners and business relationships described by nodes and threads respectively. Each node and thread has tied together in a variety of ways. The nodes and threads are filled with resources, knowledge, and understanding that each part will bring in to the network (ibid.).

Ford and Håkansson (2011) more emphasis on the inter-dependency in relationships and they described how the interaction with others lead to a business relationship. The relationship has created through the interactions with others partner outside the company in order to solve their own needs and problems as well as to meet the needs of the final customers. Moreover, this relationship can be reducing the operational costs and administration costs, increasing profitability, speeding transactions, attain new client, increasing opportunities like partnerships, asset sales, learn the success of others and expanding knowledge. Consequently, the companies become dependent on each other's, this inter-dependency of the business partners lead to business relationships. Therefore, these business relationships have provided an opportunity for companies to influence others. Hence, the business relationship will always
influence other relationships in the network. To this end, one partner can try to influence the role and relationships of other (ibid).

2.7 Content of Relationship
Ford and Håkansson (2011) described that relationships have substance not only related to negotiations and conversations, this substance is interacting (ibid.). There are three dimensions that are very important in order to interact. First, 'actors' refer who participate in the network, it can be different companies and organizations. Second, 'resources' are the assets used by the actors for instance in a customer to supplier relationships. Third, 'activities' are what they actors do for the relationship (Ford, 2006).

2.8 Conceptual Framework of the Study
Based upon the literature review the author has identified the basic requirements for addressing the challenges of the multimodal transport system of Ethiopian Shipping and Logistics Service. The model connects all the theoretical concepts together which ultimately represents the below conceptual framework. The theoretical model is aligned with the research questions; the model emphasizes the challenges on one side and the contribution of the network partners to solving the challenges of multimodal transport services on the other side as depicted by the arrows. The challenges and the contribution process are noted by the arrows with straight and broken arrows. The arrows represented by the straight and broken arrow for the challenges and contributions respectively. The challenges are: logistics performance and personnel's, multimodal operation, ICT, infrastructure, network partner integration, customs facilitation, and port administration. On the other hand, the contributions are: Cost minimization, time and document burden reduction, increase customer satisfaction, and congestion minimized.
Figure 2: Conceptual Framework of the Study 2018 (Own Model)

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3 Methodology

In this chapter, the research methodology will be developed in order to ensure that the research is conducted in accordance with appropriate design, approaches, strategy, method, principles, and instruments. Therefore, the aim of this chapter is to present the research design, research approaches, research strategy, research method, the model to be implemented and the type of data that will be used in this research. The methodology chapter ends with a discussion on the validity, reliability and analysis method of the study.

3.1 Research Design
The researcher will rely on qualitative research design to identify the key challenges of multimodal transportation services and to show how the network partners contribute to solving these challenges. Hence, the qualitative research can be conducted to obtain more in-depth data (Saunders, Lewis, & Thornhill, 2016).

3.2 Research approach
There are three types of research approaches, the deductive, inductive and abductive when conducting research. The deductive approach starting from the general to specific aspect, it is narrow and is concerned with testing or confirming hypotheses, the inductive approach starting from specific to general aspects, by its very nature, is more open-ended and descriptive, and the last approach is abductive, it is a combination result of both deductive and inductive approach (Bryman, 2016). The deductive approach is initiated based on theoretical conclusions or propositions before data collection and conclusion. On the other hand, the inductive method is initialized by specific observation in a data from which generalization is made, and it permits alternatives explanation for different phenomena (Stromgren, 2007). The study will rely on the inductive approach because the origin of the study is the researcher’s empirical observations, interest, and knowledge of the ESLSE. The researcher has used the conceptual framework only to guide the data collection and to relate the study to the existing research.

3.3 Research Strategy
The purpose of the research is to identify the challenges of multimodal transportation services and show how the network partners contribute to solving these challenges. The case study is one of the main tools for the qualitative study (Yin, 2014). Therefore, the case study is suitable for this qualitative research method. The main research strategy is to answer the ‘how'
question, and it is likely to lead to the use of case studies. A case study is also relevant to research strategy when focusing on a real-life situation (Engstrom & Johansson, 2001). The research will find the data from different network partners such as the carrier or operator, dry ports, and shipping agents. To this end, the case study is suitable to draw a comparison of multiple cases (Crewsell, 2013). Moreover, the case study is flexible to modify the design and data collection on the research (Easton, 2007).

3.4 Research Method
There are two ways of research method and methodological choice to differentiate the research method, which are the qualitative and quantitative methods. The quantitative research generates numeric data and uses for data collection techniques such as a questionnaire or data analysis procedure like graphs or statistics. Moreover, the quantitative method is typically associated with testing hypotheses. On the other hand, the qualitative method uses the non-numerical data which is collected with techniques such as interview, or data analysis procedure such as categorizing data (Saunders et al, 2016). The qualitative research is more exploratory in nature and an important means to build up the meaningful picture without compromising its richness (Leung, 2015). Therefore, to accomplish the objectives of the study, the researcher will be used the qualitative research methods because the research of this study aims to identify the challenges of multimodal transport services; the study seeks to find the network partners contribution in solving these challenges. To this end, the qualitative research method allows for a more descriptive way of researching that have not been previously uncovered.

3.5 Research Philosophy
According to Saunders et al. (2016), there are five major philosophies in business and management such as positivism, critical realism, interpretivist, postmodernism, and pragmatism. First, the positivism relates to the natural scientist and involves working with an observable social reality to product law-like generalizations, this use for universal rules and laws to explain and predict behavior and events in the organization. Second, the critical realism focuses on the explaining what we see and experience, regarding the underlying structure of reality that shapes the observable events. Third, the interpretivist research emphasizes to create new, interpretations of social worlds, and context. For business research, this means looking at the organization from the perspectives of different groups of people. Interpretive researchers try to take account of the complexity by collecting what is meaningful
to their research participants, with this focus on complexity, richness, multiple interpretation, and meaning-making. The interpretivist is subjectivist. Fourth, the postmodernism focus on the role of language and of power relations, seeking to question accepted ways of thinking and give a voice to marginalized alternative views. Postmodernist researchers find to expose and question the power relation that sustains dominant realities. Fifth, pragmatism philosophy indicates that the concept is only relevant where they support action. The pragmatism research is more interested in the practical outcome; the research may vary in terms of objectivity and subjectivity of the research (ibid.). To sum up, the qualitative research is associated with an interpretivist philosophy because of the researcher need to make sense of the subjective and socially constructed meaning expressed by those who take part in research about the phenomenon being studied. Accordingly, this research is used interpretivist research philosophy.

3.6 Data Collection
The data collection is a crucial part of the research process for the gathering of valuable information through primary and secondary sources (Smith, 2005). In order to ensure the most reliable outcome of the study, the appropriate data collection is important (Bryman & Bell, 2015). Accordingly, the study will rely on both primary and secondary data. The primary data of interview will be conducted via Skype, Email, and phone with the network partners such as shipping sector, maritime sector, dry ports, and shipping agents, those interview methods gives the benefits concerning cost and time (Crewsell, 2013). The email interview will be conducted by sending a series of questions to the interviewee(s) by which the interviewees simply answers by replying to the email, the same follow-up questions and response can be sent (Hewson, 2013).

The interview method is the most fundamental way of all qualitative methods, and it is claimed to be the best method for gathering information (Smith et al, 1991). Moreover, the interview instrument provides an opportunity to obtain qualitative knowledge (Kvale, 2013). The interview guide and schedule were developed, and the same a copy of our interview has been sent to the network partners before conducting the interview question. This allows familiarizing the context to the interviewee (Boeije, 2014). The interview will be semi-structured and open-ended questions. In qualitative research both the telephone and email interviews are more increasingly used in the research. Because, the telephone, as well as the email interviews seen as the cost and time effective than the face to face interview, the most
important aspect of in-depth interviewing, is accessing the right experts in related to the study (Michael et al, 2009). Moreover, Moha (2006) described that the interview question through email allows longer time for the interviewee to answer the questions and to insight answering before sending the answers, and also it is important to avoid misinterpretations. Moreover, due to timing and travel expense the researcher will not conduct the face to face interview question. (I.e. the network partners found in Ethiopia, Sweden, Denmark and the United Kingdom).

The secondary data is collected from websites and other documents; it can be collected before the interview in order to familiarize with the case companies and also after the interview to double-check some of the insights obtained. The secondary data indirectly relating to the purpose, collected through a theoretical study comprised of books, research thesis, scientific articles, website, manuals and annual reports (Yin, 2014). The secondary data will provide valuable background information about Ethiopian shipping and logistics service enterprises (ESLSE). Therefore, the secondary data will be collected from various sources; the major data source will be the enterprise procedure manuals (this manual were obtained from the enterprise before conducting the interview questions), website, books, reports, articles, and databases.

3.7 Sampling
The sampling technique is one of the components of research methodology. The following section describes the sampling techniques will be used in this study.

The researcher uses non-probability sampling techniques called purposive sampling. With purposive sampling, the researcher select participants because, they have information and experiences that the researcher seeks for the study (Cresswel, 1997).

The researcher is using purposive sampling method in order to choose and deliver required data to selected logistics experts and management, which helped the researcher to ask in-depth interview. The purposive sample taken from the population can be saving time, money and it gives access to a subset of people. Moreover, the purposive sampling method is vital for descriptive and qualitative studies to demonstrating a particular trait that will be occurring in the population (Malhotra & Birks, 2007). The non-probability sampling provides an alternative for selected samples, and the sample can be chosen based on personal judgment.
The purposive sampling is dependent on the objective of the study and research questions (Patton, 2002).

To sum up, the multimodal transport operation has including different network partners and experts. Accordingly, the researcher will use a purposive sampling method to select targeted logistics experts and managers in order to discuss different issues of multimodal transport operation. Therefore, purposive sampling provides the maximum possible variation in the data collection process (Patton, 2002). To this end, the purposive research technique is fitted with the purpose of the research objective, the research question, and choice of research strategy.

### 3.7.1 Sample Size
The researcher has adopted the purposive sampling techniques, the method helped to obtain data quickly, conveniently and economical (Kothari, 2004). The sample size is dependent on the research questions and objectives-in particular what will be useful and what to identify (Saunders, 2012; Patton, 2002). Therefore, the researcher targeted sample size for an interview from the shipping sector (head office, 6), maritime sector (3), and from each dry port (1*3=3). On the other side, the interview question will be distributed to enterprise agents (1*3=3). Currently, the ESLSE have 35 shipping agents in different ports and countries around the world, Such as the Far East, mainly on China ports (11), Middle East and India ports (7), Africa ports (6) and Europe ports (11) (ESLSE, 2018). Hence, the total number of agents in Europe trade routes are 11, out of this, the researcher selected purposively three shipping agents from Sweden, Denmark, and the United Kingdom. Because, they are the network partners, experts in the field and participated in the operation. Moreover, all of the agents have been already confirmed to gives the response before the research study. Therefore, as purposive sampling techniques, the researcher will be interviewed selected 3 logistics experts.

### 3.8 Operationalization
The researcher has used the conceptual framework to guide the data collection and to relate the study to the existing research. Operationalization was done to link the questions to the conceptual framework. The various categories and themes were compiled to capture the entire theoretical part which was built in the conceptual framework. This enables to show a clear line between the conceptual framework, data collection, and the empirical data analysis (Bryman, 2016).
In order to capture all the parts of the model, a different concept was categorized into various theories and then developed questions, the codes were made for ease of identification in the interview guide (Yin, 2014). The network partners such as shipping sector, maritime sector, dry ports, and shipping agents are links with concepts and theories, and it enables to adjust through the data collection process.

<table>
<thead>
<tr>
<th>Concepts</th>
<th>Major References</th>
<th>Categories</th>
<th>Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operation and Custom Facilitation</td>
<td></td>
<td>D</td>
<td>D1-4</td>
</tr>
<tr>
<td>ICT</td>
<td>Zhuravleva, 2013, Lemmi &amp; Bogale, 2016</td>
<td>E</td>
<td>E1-4</td>
</tr>
</tbody>
</table>
Table 1. Operationalization

The above table indicates under the first column labeled 'concepts' reflect the researcher's theoretical model, and it's developed through after theoretical reviewed. The second column labeled 'major references' reflect the theory that supports the conceptual frameworks created. The third column labeled ‘categories’ shows the interview guide which is coded into seven categories ranging from A-G in order to show a clear line between the conceptual frameworks, the data collection, and analysis. Moreover, it indicates the various question structures. The last column labeled 'questions' shows that how the questions directly related to the concepts in the theoretical model and indicate the number of question that was asked to the interviewees.

Appendix A: An interview guide is enclosed which shows all the interview questions and themes.

Appendix B: The interview schedule mentioned the case companies, country location, interviewee title, mode of interview, the length of the interview, and date of interview.

3.9 Quality of Research

The instruments of the quality of research are based on two concepts of validity and reliability of research (Heikkila, 2004).

3.9.1 Validity of Research

In the context of qualitative research, the validity of the research refers to the ‘appropriateness’ of the measures used, accuracy of the analysis of the result and generalization of the finding (Saunders et al, 2015). According to Maxwell (1992), descriptive, interpretive, and theoretical validities are the most important way to measure the validity of the study.
3.9.1.1 Descriptive validity
According to Maxwell, 1992 the descriptive study related to the ‘factual accuracy’ of the empirical data collected (Ibid.). It related to how correctly and accurately that conducted in the study will be reported. The researcher will be recorded using a smartphone together with the supplementary notes will be used for safety purpose because; if the recorder item mistakenly deleted the notes will be available to use. To this end, the researcher will use accurate literature, relevant and precise question to ensure both the internal and external validity. Therefore, the researcher will conduct the interview both in ESLSE and shipping agents to analyze the challenges of multimodal transport.

3.9.1.2 Interpretive Validity
The interpretive validity related to the researcher understanding and the way of reporting of the viewpoints of the study hence, the interpretive validity it’s linked to the object, events, and behaviors of the participants (Maxwell, 1992). The object, events, and behaviors during the research will be captured both through the vocal record, email box, and live notes. This all helps to analysis will be transcribed as empirical data.

3.9.1.3 Theoretical Validity
It is essential that the theoretical explanations match with the empirical data in order to get the theoretical validity. According to Maxwell (1992), the theoretical understanding is fundamental to describe and interpretation of the phenomena. The researcher has developed the operationalization based on the theoretical framework in order to ensure the theoretical validity and for utilized as the basis for the analysis of empirical data.

3.9.2 Reliability of Research
The reliability of research, the instrument is identified in terms of yields the consistency result on repeated trials (Carmines & Zeller, 1979). The researcher has used both primary and secondary data to identify the challenges of multimodal transport service. The study used a qualitative method. To collecting the information needed the researcher will be used interview and different secondary data. Therefore, the study yielded the consistency result and considered to be highly reliable.

3.10 Analysis Technique
In qualitative research, the results developed from images and words, not from numbers. Since the images and words may have multiple meaning, it is necessary to explore and clarify with the great care. This indicates that the quality of qualitative research depends on the
interaction between data collection and data analysis to allow meanings to be explored and clarified (Saunders et al, 2016).

The researcher will use the qualitative methods of analysis method through summarize some parts of data to condense them, code and categorized data in order to group them according to themes that begin to make sense of these data and then to link these categories and themes that provides structure to answer the research questions (Saunders et al, 2016). Hence, gathering data, organizing, and coding helps the researcher to compare the replication of various responses from the shipping sector, maritime sector, dry ports and shipping agents (Yin, 2014).

To sum up, after the data are collected from primary and secondary data sources the researcher’s turns to the task of analyzing them separately in order to identify the details challenges of multimodal transport service, the raw data will be presented through identification and examination according to the theoretical framework and empirical data of the cases companies in order to have conclusion, recommendation and to pinpoint out for further research (Creswell, 2013).
4. Empirical Data

In this chapter, the study presents the empirical results of the challenges of multimodal transport services. The empirical data hereby shown have been divided into two main parts: the ESLSE and shipping agents. The data were mostly collected through an email interview, phone, and Skype interview. There are six network partners were interviewed: Dry ports, shipping sector, maritime sector, Freightman AB, Scan Shipping and Cory Brothers. The first three network partners consolidate name is ESLSE. The results of the findings are presented in accordance with the theoretical model developed.

4.1 Ethiopia Shipping and Logistics Service Enterprise (ESLSE)

Ethiopia Shipping and Logistics Service Enterprise (ESLSE) is a firm established on November 21, 2011, by a merger of the former Maritime and Transit Services Enterprise (MTSE), Ethiopia Shipping Lines Share Company (ESL) and Dry Ports Service Enterprise (DPSE). By virtue of Legal Proceedings, Maritime and Transit Service of Djibouti which was the subsidiary of the Maritime and Transit Service Enterprise, has become the subsidiary of the newly established Ethiopia Shipping and Logistics Service Enterprise. And MTS Djibouti provides standard set quality services there is a need to have procedure manuals for the handling of its core and support services. The ESLSE is providing its services to many of the world continents that potential market and trade activities manifested. Currently, the company is providing regular liner services to major directions of the world countries import and export shipments. These are Far East and China ports, Gulf and Middle East countries and Europe and North African ports. ESLSE provides its liner service with 11 vessels, two of them are Tanker (oil carriers), and the rest 9 are multi-purpose dry cargo carrier vessels (ESLSE, 2016).

4.1.1 Objectives of ESLSE

The overall objectives for which the enterprise is established are:

- To render coastal and international maritime and internal water transport services.
- To render freight forwarding agency, multimodal transport, shipping agency, and air agency services.
- To provide the services of stevedoring, shore-handling, dry port, warehousing, and other logistics service for import and export goods.
- To provide container terminal services.
To engage in the development, management, and operation of ports.

To establish and run human resources development and training center in the field of maritime profession.

To study the country’s import and export trader demand and thereby develop technological capacity in order to render efficient maritime and transit transport services.

To engage in other related activities conducive to the achievement of its objectives.

The shipping sector (Europe and Africa trade routes, and ship operations departments) senior experts described in detail about the major activities being performed by ESLSE. Therefore, it would be better to see the four sectors separately (including the corporate sector) even if these sectors are under one company/ESLSE, they do their specified functions as follows:

1. Shipping sector; the major activities being done by this sector are:
   - Ship operation and chartering. Under this activity ESLSE, have 11 owned vessels and even if the majority of the cargo being imported and exported is by Slot carriers, i.e., Maersk, MSC (Mediterranean Shipping Company), CMA-CGM, etc. as per tender/agreement. And most breakbulk cargos are being imported through chartered vessels based on international tender too.
   - Fleet management
   - Ships Agency
   - Stevedoring and shore handling services

2. Maritime Sector; the major activities being done by this sector are:
   - Mainly on Multimodal transport services
   - Inland transportation service from discharge port/Djibouti to dry ports, i.e., Modjo/Comet/Gelan
   - Freight forwarding, Clearance and assessment service

3. Dry Port Service Sector
This is a Terminal where the cargo imported has been stored/handled till the respective customer has fulfilled documentation; clearing and payment issues are finalized. The major activities being done by this sector are:

- Warehousing
- Storage
- Cargo inspection with custom officers

4. Corporate sector; the major activities being performed under this sub-sector is;

- Human resources activities are i.e., recruiting, processing, selection of employees, etc.
- Finance and accounting activities, i.e., cash collection, payroll, and payment.
- IT division; system implementation, programing, support, ICT infrastructure etc.

Fig 3. Organizational Structure. Source: ESLSE profile (2015)
4.1.2 Multimodal Transport Operation Mission, Vision, Values and Core Competence
The ESLSE multimodal transport service has its Mission, Vision, Values, and Core Competencies are described as follows:

Mission
Implementing the multimodal transport system thoroughly, and upgrading the optimal capacity of its management, human resource business prices, and technological capability, providing shipping and logistics services meeting the international standards and excelling the demands of customers by reducing transit time and costs, and helping the nations developmental endeavors meaningfully.

Vision
Realizing the status of modern and attractive leading African Logistics Company that contributes a great deal to the development of its economic endeavors.

Values
- Determination\ Persistency of purpose
- Professionalism
- Honesty and geniality
- Respect for customers
- Welcoming changes
- Diligence in transparency and accountability

Core Competence
- Coordinating resource utilization
- ICT support system
- Quality and prompt services
- Team Spirit
- Participatory Leadership
- Working with stakeholders
The end to end detail flowchart of multimodal transport operation is enclosed on the appendix K.

4.1.3 Logistics Performance

Logistics performance is based on six key dimensions. To do this, the international score uses standard measurement to compare different countries logistics performance. The World Bank (2015) described the following six key dimensions to compare the logistics performance of the countries: “the efficiency of the clearance process, in this regard to allow door- to –door movement of containerized shipment, the government must ensure simple and flexible customs procedure, transport-related infrastructure and quality of trade, ease of arranging competitively priced shipment, competency and quality of logistics service, ability of truck and trace consignment and timeliness of shipment in reaching destination within the scheduled or expected delivery time.”

The World Bank logistics performance index (LPI) measure and compare the state to trade logistics in other countries. Ethiopia ranks 126 out of 160 countries in 2016 (World Bank, 2016) Moreover, the chart of logistics competency of the World Bank in 2016 shows that from 2012 up to 2014 the logistics competencies continuously increase However, after 2014 its logistics competencies reversely continually decline. This indicates that the logistics system in Ethiopia is not continually improving over time. (ibid.) Furthermore, based on the six key dimensions of logistics performance measure Ethiopia gets lowering performance compared to the neighboring country, such as Kenya ranks 42, Sudan 103, Tanzania 61, even the landlocked county of Rwanda, Zambia and Uganda ranked 62, 114 and 58 out of 160 countries respectively (World Bank, 2016).

The primary logistics task is transportation which deals with moving products from one place to another (Yang, 2011). Thus, the cargo from the manufacturing site to customer destination transporting and distributing at the right time, quality and quantity are critical. To this end, the shipping sectors senior experts agreed on the right quality and disagreed both at the right time and quantity, the first one is agreed on "the cargo is distributed at the right quality" since it is checked at different places, and cargo with default or remark are not acceptable second, "cargo is not distributed at the right time" due to poor coordination and lack of skilled
manpower third, "cargo is not distributed at the right quantity" because of theft happen in the time of distributed cargo. For instance, thefts of vehicle spare parts.

Furthermore, the Europe and Africa trade routes department experts stated that sometimes the cargo from the manufacturing site to customer destination is getting delayed because most cargoes are imported/exported via slot vessels (Most of Europe trade routes including Sweden, Denmark and United Kingdom used slot vessels). The reason behind is a transshipment or cancellation of the previous vessel schedule/ rebooking and discrepancy on documentation, or delayed delivery of the documents, inefficient stevedoring and other cargo handling materials outdated and lack of commitment of the responsible staff.

Most of the ESLSE experts stated that the status of information dissemination facilities have been serving well to reduce demurrage and storage costs because the shipment status information is disseminated well through telephone and emails. Therefore, all the time the information disseminated by all sector of ESLSE is reliable and dependable on the business decision since, it is disseminated by the responsible body and of course before that it is cross-checked from concerned department. On the other side some of the ESLSE experts disagreed with the above opinion they mentioned that "Due to lack of information dissemination shipment status facilities, customers are mostly liable to pay demurrage and detention costs."

In general, the ESLSE expert agreed that the logistics system in Ethiopia is not improving over time as planned and expected. This result is matched with the World Bank report (2015 & 2016), based on the six key dimensions of logistics performance and LPI (Logistics Performance Index) described by the World Bank the Ethiopia Logistics performance is not continuously improved. Even if there are some changes and improvements currently seen on the sector for instance, in recent time, other private logistics companies are allowed to do related services, but very small, and the ESLSE is used CTTS (cargo tracking and tracing system) to reduce the transportation logistics costs.

4.1.3.1 ESLSE Employee Logistics Performance
Most of the employees in the enterprise have years of experience in most of the logistics services. The operational personnel skills and knowledge regarding the transportation services were scaled out by network partners (not including the shipping agents) as follows:

- Dry ports, maritime sector and shipping sector given (5) or Medium
Most of the network partner described that the knowledge and skills of the personnel are increased day to day even if customers are not much satisfied by the services "gained from staff, either technically or ethically." In another side, one of the shipping sector senior experts stated that "the enterprise is poor in providing training and the officer's knowledge and skills are not adequate to provide the services" his attitude towards the knowledge and skills of personnel are very low and rating 1 out of 10.

4.1.4 Multimodal Transport Concepts and Practice
The Company has taken multimodal transportation as a key service to the country import and export trade. It saves the scarce hard currency the country paid to Djibouti port in the form of storage and avoids confiscation of cargo by Djibouti government if it is not cleared from the port areas within six months’ time. According to UNDP (2017) "The multimodal system was designed by ESLSE to address the long dwell times at the port of Djibouti and high demurrage costs incurred from the delays (in hard U.S: dollars currency). The concept was to use a through bill of lading so that containers were moved rapidly through the port of Djibouti to a dry port in Ethiopia where clearance would be conducted."

Accordingly, the company organized its Multimodal operation at Director Level and two divisions structured under the director office. These are the Customers Service Division and Transport Division. To provide this Multimodal Service the company arranged:

- Provide Dry port services at the different part of the country including Modjo, Gelan, Mekele by making a large investment.

- Made a contractual agreement with trucking companies to get inland transportation services, and recently get Cargo Train transportation service from Ethio-Djibouti Railway Corporation by linking Modjo Dry port with the main the railway line.

- Office also organized at Djibouti that coordinate the smooth flow of the cargo at Djibouti corridor and work for hand in hand with cargo transits association to minimize dwelling time at the port as much as possible even less than five days.
It tries to provide cargo tracking service information to the customers in some ways even if the level automation, accuracy, and timeliness of information are under question.

During the interview, the division manager Mr Dereje ‘Multimodal transport division manager’, Mr. Kibrnew Atnafu ‘Senior Shipping Officer’, Mr. Endalew Kasahun ‘Senior Shipping Officer’, Mrs. Marta Birhanu ‘Senior Shipping Officer’, Mr. Melkamu Awoke ‘Senior Shipping Officer’, Mr. Henok Hailu ‘Senior Shipping Officer’, Mr. Biniyam Fekadu ‘Chief Accountant I’, Mr. Mulugeta Bekle ‘Senior Economist’ and for confidentiality senior experts (name not mentioned), ‘Coordinator’ and Senior Experts ‘ Customer Service’ all are from maritime sector, shipping sector and dry ports reflected up on the multimodal transport system, concepts and practice whether communicated to all staff members or not, they don’t think it has been communicated in to all staff members about the benefits and the role expected from them. However, there are forms organized with customers and service providers like transporters about the problem faced while providing the service from ESLSE side and try to solve for smooth operation. There were approaches that try to solve problems with steering committees those composed from different stakeholder organizations like Custom office, Transport Ministries, and Maritime authority. According to multimodal transport division manager "the understanding of the employee is not equal" hence, the multimodal transport system, concepts, and practices cannot be communicated to all staff members. On the other side, the dry port senior experts described that the awareness of multimodal transport concepts and practice is much better than the unimodal transport system. However, the system is at its infant stage in the country, proper guidance and coaching are needed to create constancy of services and boost the understanding of employees.

4.1.4.1 Documentation Performance
The shipping sector senior experts described that the multimodal freight transport documents are not always issued and delivered to the customer on time because much of the activities done with a manual and autonomous island of systems. There is no way such integration among the systems to provide transportation documents to customers on time and at the required level. Furthermore, the shipping sector senior experts, especially from Europe and Africa trade route department described the situation is that " In fact, it seems somewhat improved from the previous documentation performance of the enterprise but, still there are some complaining heard from the customer due to a delay of documentation issues, and related bureaucracies". Since many of the documents are manually worked/ competitive IT
system is not yet implemented. Since most of the customers locally or overseas, recommend to apply the latest IT to be competitive. The reason behind for this big problem is related to the inefficiency of the management, or lack of commitment, or monopoly of the operation, and there is no as such a competitive shipping company allowed to organize shipments likely. On the contrary, the dry port expert from the Comet was agreed with the multimodal freight transport documents are always issued and delivered to the customer on time because "it is done through the bank and that allowed letter of credit (L/C)."

Some of the experts from shipping sector were stated that the overall ESLSE performance is well in related to the documentation performance because, it's showing improvement especially with the expansion of sea liner system, which is a web-based application with multiple modules to process shipping operations documentation and information exchange. The system smoothly coordinates documentation performance between agents scattered throughout the globe and principal (ESLSE) at the head office located in Addis Ababa, Ethiopia

Multimodal transport department provides the service to bonded warehouse service with permission and coordination with the customs office. The customs clearance is done mainly through hardcopy documents, this manual way of processing requires more documents and control to get the declaration. Declaration contains the description and quantity of the goods, fright, and tax to be paid for customs duty. After completing the clearance formality, one copy would have been sent to the customer to serve as a certificate of ownership of property. This manual processing service is taking more custom clearance hour and ultimately affecting the multimodal transport services. However, the simple and flexible custom procedures that allow the door to door movement of containerized cargo.

According to World Bank Doing Business Index (DPI) and Logistics Performance Index (LPI) (2015), there are seven documents for export operation, and nine documents for import operation are necessary as listed below:
Table 2. Import and export documents requirements, source World Bank DBI and LPI, (2015)

4.1.4.2 Clear Instructions and Procedures
The shipping sector senior experts dissatisfied on the clear instruction or procedure of the sectors providing during delivery times, they mentioned a problem of knowledge and communication gap among stakeholders. "There would be a lack of coordination and sense of urgency." Especially, the Europe and Africa trade routes senior expert stated that "what makes me a big mess is the inadequacy of procedures and clear instruction, due to this there is no responsibility, transparency for the costs incurred, for the discrepancies, and other hampering related to the process of shipments."

The ESLSE senior experts have agreed on the simple and flexible custom procedures that allow the door to door movement of containerized cargo. Since, the multimodal department provides the service to bonded warehouse service with permission and coordination of the customs office. However, till this time there is no door to door service to all customers. The Europe and Africa trade route department senior experts mentioned that "Since, two years back and now, there are some improvements related to flexibility and efficiency of custom works. However, it is not competitive enough regarding IT implementation, service to make it door-to-door, and clear procedures."
4.1.4.3 Loss / Accidents and Safety / Security

The accidents to multimodal cargo whether it is before loading to vessels or trucks, or on the road from discharging port to dry port and terminals, communicated to ESLSE head office via email, telecom or on other means of communication. Especially, if the loss / accident occurred during inland transportation, the incident will be communicated to the trucks association and same information will be forwarded to ESLSE and ultimately to customers about the conditions of the cargo. Therefore, the happening of any accidents or loses to the shipments are reported immediately under the multimodal freight transport system. Moreover, the overall shipping sector performance is well in terms of safety and security freight shipments against damage or loss because ESLSE tries to put in practice safety/security requirements sets by International Maritime Organization (IMO). Apart from fulfilling the statutory requirement, ESLSE tries to raise the knowledge and skill of its staffs both onshore and onboard through training in relation to freight security. The Enterprise also formed safety and security division that works with the emphasis on personal security to cargo shipment loss and damage avoidance. The dry ports and shipping sector senior experts explained about the accidents on cargo "the accidents immediately announce to owner and Insurance Company via phone" under multimodal transport operation. Furthermore, they are assured that the overall dry port performance is well in terms of safety and security against damage or loss. The Europe and Africa trade route department experts mentioned that "There are thefts of vehicle spare parts, due to the fact client's claim and sometimes the company make insurance, but sometimes the responsible one/ where and by whom the parts of the vehicle theft are not known, makes liable the customer or the company."

4.1.4.4 Loading / Unloading Service Charge

As per the shipping sector senior experts, the cost of loading and unloading under the multimodal freight transport operation are a bit higher than the industry average. The loading and unloading service charge at domestic dry ports seems reasonable since, it is built upon local currency (birr), and services are not highly profiting motive rather service oriented. On the other side, the loading/unloading operation in discharging and loading port (outside the country) made on hard currency (US Dollar) and it is a bit higher than the industry average, the senior experts from dry ports explained this case "Ethiopia is landlocked country" and there is a possibility to be a bit higher compared to the industry average.
The above-related interview question is a bit difficult for most of the senior experts because they are not seen themselves as an authorized body to answer this question. However, they stated that the overall shipment transit time and transaction costs have significantly reduced by multimodal transport operation because the majority of the importers were not clear their cargo from Djibouti before the introduction of multimodal transportation service. Multimodal transportation systems reduce shipment transit time and cost.

**4.1.4.5 Challenges of Multimodal Transport Service via Europe trade route operation**

As per senior experts of ESLSE, the company facing some challenges in multimodal transport services through Europe trade route operation, one of the main problem is lack of integrated information systems that enable smooth flow of information among stakeholders. This lack of coordination leads to inefficient utilization of resources like trucks. To give the solution to this problem some information systems have been put in place like the Container Tracking and Tracing System (CTTS), tries to coordination information in relation to multimodal shipments. As per the multimodal transport procedure manual (2015), the transport of cargo in the corridor should be based on CTTS, the update gate in information on the CTTS up on arrival of the truck at the dry port before it gates in to the terminal, the cargo manifest data from ship operation and charting department should confirm using CTTS. On the other hand, the requested bill of lading should become available in the CTTS.

As per the shipping sector senior experts, in order to coordinate the information in relation to multimodal shipments the steering committees from custom office, transport minister, road authority, maritime authority, and truck owner’s association has been formed to solve the problems, especially the operator of the multimodal operation (ESLSE) taken the initiatives to coordinate the stakeholders and solving the problems in the logistics chain.

The dry port senior experts explained the most challenges in their sector is that the weight error, consignee name, and final destinations problems are the main challenges in multimodal transport operation. Mostly, the problem is happening due to customer’s incorrect information given to the shipper or supplier of consignee name and final destination. On the other side, the problem may create by the shipping agent related to weight and final destinations. Therefore, those challenges would affect the network partners as well as the operation at large. This is one of the challenges and the inefficient service of multimodal transport operation.
4.1.5 Information Communication Technology (ICT)

The computer system ensures the sequence of loading/unloading operation in ship and shore side. Furthermore, it is controlling all the container movement. To this end, the system accelerates a ship to shore services and interconnected both sides (UNCTAD, 2013).

The increase of service coverage on the information communication technology (ICT) has become an important means for the efficient service of multimodal transport operation (Lemmi & Bogale, 2016). There are few information systems have been developed to meet specific needs in the sectors. For instance, CTTS (container truck and trace system) and sea liner system. Moreover, the ESLSE portal shows the status of cargo to customers in order to clear their cargo timely by which demurrage and storage costs minimized both for the enterprise and customers. On the other hand, the ESLSE have long-term investment in ICT to create the interconnectivity between network partners including Djibouti office however, the shipping sector experts explained that "there is a plan to invest on ICT but, not fully implemented for instance, Sea liner Modules Vendor, TOS (Terminal Operation Service) and SHS (Ship Husbandry Service)". It is obvious that such systems could add additional efficiency and enhance the inter-connectivity between the network partners (i.e., the network integration described in the next sections).

The contribution of the ICT system to the efficient service of multimodal transport operation is rating by MMT (Multimodal transport) division manager, senior experts, and officers as follows:

- Senior Shipping sector, 1 MMT division manager and 2 MMT officer from the maritime sector, 3 senior officers from dry ports: Medium (5) rating
- 1 Senior shipping sector experts: Low (2) rating

The experts have described that the ICT system has some contribution to the efficient services of multimodal transport services, and they feel that the service coverage on the ICT, capability, security, and safety, facilitation, and market access has become increasing time to time. Even though, there is one web-based information system with limited modules functionality used to manage cargo operation.
4.1.6 Infrastructure

Despite the recent infrastructural developments seen in certain sectors, poor infrastructural development remained an obstacle both for the manufacturing and service industry. As a result, the increased cost of doing business eroded competitiveness, and limit access to markets, both domestically and internationally (AfDB, 2011). The infrastructural development in transport and communication sectors seems stagnated in the past decades, and its continued stagnation manifested in poor logistics facilities which are not efficient in terms of cost and time. The poor network of road infrastructure has played its role in worsening the quality of the logistics sector. The Ethiopian government has made a significant investment in infrastructure over the last decade. It has made Ethiopia Airlines, a leading regional carrier, upgraded its network of trunk roads. However, according to the World Bank (2014), the Logistics Performance Index (LPI) report Ethiopia scored 2.6 out of 5 from top 10 low-income groups of countries.

According to the World Bank Report of (2011), the infrastructure contributed 0.6 percentage point to Ethiopia's annual per capital GDP growth over the last decade. Although Ethiopia's infrastructure indicators compare relatively well with low-income country peers, they remain well below levels found in Africa's middle-income countries. There are several challenges especially in the power and transport sector. Ethiopia needs to double its current power capacity to 8,700 megawatts of generating plant over the next decade to improve infrastructure endowment to region’s middle-income countries. This will increase the infrastructure contribution growth by additional 3 percent. The transportation sector also faces challenges of rural accessibility and inadequate road maintenance. Ethiopia launched an ambitious investment program to upgrade its trunk network and established a modern funding mechanism for road maintenance to improve ground transportation (ERC, 2013).

The infrastructure development in terms of transportation facilities is highly important for the efficient service of multimodal transport services. According to Amentae & Gebresenbet (2015), the transportation sector of Ethiopia is less performing as per the African standard. The senior experts of ESLSE have explained the importance of the infrastructure facilities in the interview "multimodal transport operation plays a great role in enabling transportation service by saving time and manpower." There are a lot of challenges facing the multimodal transport services in related to infrastructure:

- Poor infrastructure facilities
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- Poor management of infrastructural facilities
- Lack of capital (Finance) to provide standardized infrastructural facilities

However, the service coverage of the infrastructure has become increasingly over time for this a good example is the Ethio-Djibouti railway, which was the only route from Djibouti to Ethiopia has been already started the service.

Ethiopia is a landlocked country; the country domestic freight transport is insignificant means there is non-navigable rivers and dispersed lakes are used in the country. Therefore, in an international import and export trade operation, the sea\water transport is critical mainly for landlocked countries like Ethiopia. To do this, own commercial vessels is important, however, most of the European trade route including Sweden, Denmark, and the United Kingdom, the ESLSE used the slot vessels (renting of others shipping line vessel space) instead of own vessel. This is the major flow of hard currency (USD) from the country via outward payment to other countries commercial shipping lines.

According to UNIDO (2017) "The multimodal system was designed by ESLSE to address the long dwell times at the port of Djibouti and high demurrage costs incurred from the delays (in hard U.S: dollars currency). The concept was to use a through bill of lading so that containers were moved rapidly through the port of Djibouti to a dry port in Ethiopia where clearance would be conducted."

To sum up, according to the ESLSE experts the importance of infrastructure in multimodal transport is critical, and they underline the challenges of the road on multimodal transport services because the drivers and truck owners are complaining about the road from Djibouti to Ethiopia. Especially, some 30 km are highly damaged that increases truck maintenance costs and doubled tires expenses.

4.1.7 Network Integration
Many of the ESLSE senior experts stated that it would be good if there is efficient ICT for better integration among the network partners such as customers, dry ports, maritime sector, shipping sector, shipping agents, and shippers. A feeling of responsibility and belongingness of the related network partners with facilitating the activity and system which coordinate all

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actors. Most of the network partners do not have a feeling of belongingness in the process of resolving the challenges in the multimodal transport operations.

4.1.8 Port Administration
Ports have a great role in the flow of goods and coordination of different type of carriers. Even if the corruption, theft, security risk, and regulations at the port of loading can be affecting the loading/unloading operations. The same problem related to corruption, theft and security risk facing at dry ports and it’s the one means for storage and demurrage costs to the customers.

4.2 Shipping Agents
One of the main network partner or backbone of the enterprise is the shipping agents at various ports. Hence, the agent of the enterprise is one of the core contributors to the efficient operation of multimodal transport services.

The Freight Man AB (Sweden), Scan Shipping (Denmark) and Cory Brothers (United Kingdom) are the agents of ESLSE. They are providing the core shipping agency services on behalf of the enterprise at different ports. For instance, preparing the bill of lading, receiving the goods from shipper and loading at the ship, discharging, loading both empty and full container, the supply of spare parts for avoiding delay of the shipping schedule, managing of the delivery order, and supply of cash to Master of the vessel.

As per ESLSE procedure manual (2015), the main shipping agency services, core process, and ship husbandry services are presented below:

4.2.1 Main Shipping Agency Services
The main shipping agency service provides to the ships and its cargo which include the following services:

The core process of Shipping Agency Services
- Pre-arrival activities services
- Service at anchorage and berthing arrangement
- Supervision of Vessel while at berth
- Outward clearance and post sailing service
- Management of Disbursement account and prepared statement of account

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Ship Husbandry Services
These are services provided upon request subject to owners standing instruction and/or case by case authorization which includes the following services:

- Supply of spare parts
- Supply of Cash to the Master
- Crew Mutation Service
- Supply of Bunker and Fresh Water
- Engine Immobilization

4.2.2 Network Partners
Efficient business networks between partners are very important to the operation of multimodal transport services. The shipping agent has more responsibility to connect the shipper or supplier to the multimodal transport operator because; the shipping agent is the intermediary between the ship operator, shipper, and customer. However, it is not only one network partner is responsible but also other network partners within the network have their role and responsibility to the efficient service of multimodal transport operation. Without linking each other, the network partners could not achieve their international business and efficient multimodal transport services. (The detail description about the network partners depicted on figures under Appendix J)

The interview with shipping agents was more focused on the multimodal transport from manufacturing site, port of loading to discharging port because the shipping agents are not involved with the local procedures in handling multimodal shipment in Djibouti to Ethiopia. As an agent to ESLSE, they book the cargo and issue documents (Bill of lading and manifest) upon the shipment, after shipment they can track the container to Djibouti only. After discharging in Djibouti, the inland transport to dry ports or customs warehouse is entirely ESLSE own operation, and the shipping agents have no influence or insight in this part of the transport services. For instance, the multimodal transport from Denmark, door to door...
shipment via Danish port is often arranged by Scan-Shipping but not shown in the ESLSE bill of lading. The ESLSE bill of lading only described the port of loading, port of discharge, and the final destination of delivery, in our case Modjo, Gelan, and Comet, all as per letter of credit (L\C) requirements. Moreover, on behalf of the shippers the Scan shipping arranging the total scope from the door (ex-works) to Danish load port including trucking of containers, customs documentation, FOB (free on Board) arrangements, etc.

4.2.3 Scan Shipping (Denmark)
Scan Shipping, a part of Scan-group was founded in 1969 by Mr. A. Simonsen. The main service of the group was the agent of shipping lines and freight forwarding. Currently, the service covers all aspects of the freight industry. The scan shipping is offering a complete shipping and logistics services regardless of the cargo size and type and specialized in the transport of all type of port and terminal handling equipment's (Scan Shipping, 2016). The scan shipping fulfilling all the freight needs and enhance the business through the cost-effective operation and efficient services. The scan-group represented with its own offices in more than 70 cities whereas the Scan- Shipping is representing with its own office in 25 cities, there are 2500 employees working in the company. To sum up, the company rendering door to door freight forwarding and project management services. As per the Line and Project Division Manager of the company, within the liner sector about 50% of shipment are multimodal whereas for project shipments about 60% is multimodal (Overall and including ESLSE).

4.2.3.1 Multimodal transport practice and advantage
The scan shipping has been working with multimodal transport since, initiated by ESLSE, all staff members are familiar with all aspects this end. The Line and Project Division Manager believes that the multimodal transport services are an effective way for the landlocked countries because it gives seamless cargo transportation from one country to another.

4.2.3.2 The transit time of cargo
The transit time of cargo from manufacturing site or shipper (ex-works) and loading port up to discharging port are distributed at the right time, quality, and quantity are the main reflections for effective multimodal transport services. As per the line and project division manager, when the shippers advise cargo readiness and based on letter of credit (L\C) details the company book on first possible sailing from Denmark, the Scan Shipping using slot carriers as per the instructions from ESLSE, and if any problem with lack of equipment, fully booked vessels or quality of containers (foodstuff shipments), the Scan Shipping is in dialogue with
ESLSE Addis Ababa, Ethiopia to solve the problems. In general, shipments are performed by first available sailing. If one carrier not able to perform the Scan Shipping uses second carriers after approval from Addis Ababa, Ethiopia but again, this practically never happens.

4.2.3.3 ICT contribution
One of the key systems used by the Ethiopia shipping and logistics service enterprise (ESLSE) is the sea liner software. The system has different modules and some of them still not implemented. The sea liner software system has three module named Terminal operations system (TOS), Ship husbandry service (SHS) and Vendor those systems still not fully implemented. The terminal operation activities are defined in advance for each port, based on the voyage record maintained in other modules. The terminal operations applied to a specific voyage and port, and the system has incorporated terminal operation and ship husbandry costs. The system can extract the loading and discharging details of a voyage using booking information. With arrival and departure information the system populated the appropriate terminal activity. The Ship husbandry service is mainly related to the expenses of the vessel. Hence, the system can generate the expenses using the SHS tariffs that defined to the port, the loading and discharging detail of voyage using booking information. The system can attach the SHS cost with the corresponding TOS cost. The vendor sea liner system is used for the settlement of commission for shipping agents, and the vendor system is very important for shipping agents as well as to ESLSE by avoiding paperwork, delays in payments, and settle the accurate payments.

Currently, the Scan Shipping is in the process of implementing sea liner system, up to now the company sent the documents \manifests via E-mail or outlook.

4.2.3.4 Port of Loading
The convenience of loading and unloading at loading port is very crucial for the effective multimodal transport service. As per the liner and division manager, the Scan- Shipping using slot carriers nominated by ESLSE, the last three years basically MSC\CMA. Both are offering weekly service from Danish ports, and the scan shipping doesn't face any complication in respect of port operations in Denmark.

4.2.3.5 Network Partner Contribution
The network partner's contribution one to another is a daily task in their business operation, however, the input is depending on the efficient service of each network partner. The scan shipping line and project division manager considered their contribution as a very important
in respect of arranging timely shipments and preparing correct documents to client and ESLSE. This is the main task of the Scan Shipping as an agent of ESLSE. On the hand, the multimodal transport service between the two network partners are effective as per the line and project division manager, after discharging in Djibouti the company have no means of tracking however, in all the years the company had very few complaints from the company clients/shippers. To this end, the Scan Shipping attitudes towards contribution are very positive and rate the importance of their network partner very highly (10 out of 10).

4.2.4 Cory Brothers (United Kingdom)
Cory Brothers Shipping Agency Limited established in 1842 in United Kingdom (head office in London), the company has been solid, continuous growth, based on experience developed across three centuries, it provides a complete range of logistics and maritime services for ship-owners, charterers and traders worldwide. The company is a leading logistics and maritime service provider, providing a seamless solution for all transportation services. It offers both on board and shore supports, warehousing, inventory management, export packing, cargo serving, port, and liner agency services. As port agency covering from shipper and crew transfer to customs documentation and as a liner agent the company gives unrivaled market coverage through strategically located offices. Moreover, it offers independent liner agency services. The company embraces the latest system and technology which is web-based software enabling real-time access to vessel operation information. On behalf of UK shippers, Cory brothers undertake all services utilizing the ESLSE nominated slot carrier, UK transport, UK terminals, UK export formalities and issuance of ESLSE bill of lading to whichever ESLSE nominated dry port. Currently, 250 employees are working in the company, and operate in the UK, Holland, Gibraltar, Singapore, and USA.

Cory Brothers have a significant international presence with the office in key locations around the globe as shown in below figure.

Figure 4. Cory Brothers International Offices, Source: Mapbox, open street map, 2018
4.2.4.1 Operational Personnel
The operational officer's knowledge and skill regarding multimodal transporting services very critical, the general manager of Cory Brothers attitude towards the company operational officer's knowledge and skills are very positive and rating 8.5 out of 10. Because, there has been a significant improvement in terms of receiving responses to cargo, and answer to customer inquiries.

4.2.4.2 Transit Time and cargo accidents
The cargo transit from the manufacturing site to customer destination is crossing different main ports such as loading port, discharging port, and dry ports. To this end, the effective transit time, quality and quantity of goods are required under effective transport service. The company general manager was described that up to the port of export the transit time is good because the company booked the cargo on the first available vessel (ESLSE nominated carrier). Once the UK customers confirm, the cargo is ready for shipment. However, the company does not control the cargo from the point of discharge, Djibouti to dry ports. Regarding the cargo accidents, the company general manager has no experience of such issues in the UK.

4.2.4.3 Information communication technology (ICT)
The basic advantage of information communication technology (ICT) enhances the interconnectivity between the network partners such as shippers, shipping agent, the shipping sector, maritime sector, Djibouti office, and dry ports. Cory Brothers have a dedicated ICT division with on-going development and investment of the internal company systems that can be linked if compatible for all parties. To this end, the company ICT system is efficient and contributes to the efficient service of the multimodal transport operation, in this regard the company general manager rating 9 out of 10 and he explained the reason he gave for the score "Our systems are efficient, maintained and developed to a high standard with continual investment made to improve". On the other hand, the service coverage on ICT, capabilities, security, and safety, facilitation, and market access have become increasing over time as described by the general manager because the company has more availability to open social media and web-based access. The Electronic Data Interchange (EDI) simplifies the business procedure and contribute for the efficient service of multimodal transport operation. To this end, the EDI would be great facilities however, as per the general manager this can only work if all worldwide ESLSE agents have this capability.

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4.2.4.4 Infrastructure

The infrastructural facilities in the multimodal transport service are critical. Even though, there are various challenges facing multimodal transport service in related to infrastructure. The continual improvement of infrastructure is essential to enhance the efficient service of the operation. In this regard, the Ethio-Djibouti railway services contribute for efficient multimodal transport operation. As per the general manager response, "this is a major and very important addition to overall transport capabilities and improvement of delivery times to receivers." Hence, the service coverage of the infrastructure has become increasingly over time. The general manager described as "while we have no facts on this we believe service coverage has improved significantly."

4.2.4.5 Network partner Integration

There is a lot of operation being performed between Cory Brothers and ESLSE. As described by the general manager, the UK General Agent representing ESLSE for container and RO\RO traffic from the UK. Providing UK customers\shippers\forwarders with freight quotations, all the export shipping procedure, UK customs formalities, documentation, and marketing. The general manager was described in related to the network partner integration and service quality as "A difficult one to answer, not all are integrated and each shipper has its own focus as to the level of service they provide to their specific receivers. We, as ESLSE agents, endeavor to bring all parties together through the ESLSE service". As per the general manager point of view, Cory Brothers providing quality of service concerning multimodal transport. Moreover, the company performed with the utmost efficient and effective way through coordination and reporting of cargo booking with shipper on behalf of the Ethiopian receivers. To sum up, Cory Brothers are satisfied with the UK to Ethiopia trade route activities related to multi-modal transport service. In this regard, the general manager attitude towards their network contribution to solving those challenges is very positive and rating very highly (10 out of 10). The reasons were described by the general manager "We provide ESLSE with a dedicated team able to carry out and respond efficiently to all general inquiries, UK shipments thereby giving the UK shippers and receivers the best possible quality of service to maintain ESLSE required expectations."

4.2.5 Freightman AB (Sweden)

Freihgtnan AB is a privately owned transport service provider founded in 1973 as shipbroker and liner agency. The company offers ship-brokerage, liner agency service, full container break-bulk and project cargo services. The company provided reliable transport services and
arranged the daily transports by vessel, railway, trailers, trucks, and air. The major activities performed in the company in regards to multimodal transport services is arranging container haulage for customers, assisting them with the different item such as export clearance, stuffing of containers and arranging the required weight certificates. Currently, the company operates in Sweden, Finland, Estonia, Latvia, Lithuania, and Russia.

4.2.5.1 Challenges and contribution on Multimodal transport
The major challenges of multi-modal transport service in this trade routes lie in timing, partner carriers in Sweden have fairly short free times at least in comparison with how much free time is available to the receivers at the destination. The Freightman AB contribute to ESLSE to solving these challenges, as per Henrik Bengtsson ‘Customer Service-Export' described that providing the shipper have done their part with regards to the relevant permits and documentation required at the destination (proforma invoice, packing lists, etc.). The company assists the shipper in all practical moments required to finalize the shipment and get it loaded on board the vessel for Djibouti.
5. Analysis

This chapter deals with the analytical discussion of the empirical findings. It consists of 5 main sections based on the theoretical model: Logistics and personnel, multimodal transport operation, ICT, infrastructure, network partner integration, and port administration. First, the summary comparison of empirical data is done, and the analysis then presented. The analysis is presented separately for both ESLSE and shipping agents.

5.1 Summary of Interview Findings

The table below represents the main overarching findings, offering a comparative view of the network partner to aid in progressing into the analysis of research found in the next section. Therefore, in order to do discuss, concepts related to important findings from the network partners are depicted in table 3.

<table>
<thead>
<tr>
<th>Concepts</th>
<th>ESLSE (ESL, MTS and Dry Ports)-Ethiopia</th>
<th>Cory Brothers Agent of ESLSE in United Kingdom</th>
<th>Scan Shipping Agent of ESLSE in Denmark</th>
<th>Freightman AB Agent of ESLSE in Sweden</th>
</tr>
</thead>
<tbody>
<tr>
<td>Logistics Performance &amp; Personnel</td>
<td>• Very low &amp; Medium Operational personnel knowledge and Skill</td>
<td>• Fully trained &amp; proficient</td>
<td>• Adequately communicated to all staffs.</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>• In general, cargo can’t distribute at the right time, quality &amp; Quantity</td>
<td>• Significant improvement in terms of receiving responses to cargo, customer inquiries</td>
<td>• Arranging timely shipments and preparing correct documents to clients and ESLSE</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Accident/loss reported immediately to owner &amp; insurance company via phone</td>
<td>• Good transit time</td>
<td>• Using slot carriers as per instruction from ESLSE</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Dry port &amp; terminal are not well equipped- Comet Dry Port</td>
<td>• Improvement of logistics services</td>
<td>• Dialogue with ESLSE personnel in Addis Ababa to solve the</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Enough dry ports &amp; terminals are available</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• High waiting time at Dry port-Comet</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Well unstaffing service</td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>• Reduced transaction logistics costs, e.g., through using Sea liner, CTTS, etc.</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>• Increased truck round trip from Djibouti to Dry Ports</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Truck supply problem &amp; uses sub-contracting</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Currently, reduced transportation logistics costs</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Author: Habtesilase Demse
Masters Level: Business Administration with specialization in International Business Strategy
<table>
<thead>
<tr>
<th>Multi Modal Transport Operation and Custom Facilitation</th>
<th>Problems regarding to lack of equipment, quality of container etc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organized at Director level &amp; 2 division structured</td>
<td>• Book the cargo on the first possible sailing from Denmark when shippers advise cargo readiness and LC detail</td>
</tr>
<tr>
<td>Organized at Djibouti Port</td>
<td></td>
</tr>
<tr>
<td>Organized with customers and service provider</td>
<td></td>
</tr>
<tr>
<td>Some progress in custom time to time, still custom procedure is not as flexible as required, the implementation problem</td>
<td></td>
</tr>
<tr>
<td>Lack of efficient coordination and sense of urgency</td>
<td></td>
</tr>
<tr>
<td>Solve problems with steering committees</td>
<td></td>
</tr>
<tr>
<td>Concepts have been communicated and implemented, but there is no equal understanding-Maritime sector</td>
<td></td>
</tr>
<tr>
<td>Good capacity regarding human and physical resource</td>
<td></td>
</tr>
<tr>
<td>Made a contractual agreement with trucking companies</td>
<td></td>
</tr>
<tr>
<td>Providing cargo tracing services</td>
<td></td>
</tr>
<tr>
<td>No door to door services to all customers</td>
<td></td>
</tr>
<tr>
<td>A higher cost of loading/unloading at Discharging port compared to the industry average</td>
<td></td>
</tr>
<tr>
<td>Reasonable loading/unloading charge at Dry Ports</td>
<td></td>
</tr>
<tr>
<td>Safety/Security as per IMO requirements</td>
<td></td>
</tr>
<tr>
<td>Clear &amp; precise communication flows.</td>
<td>• Very few complaints from clients/shippers</td>
</tr>
<tr>
<td>Clearly defined &amp; adhered custom procedure</td>
<td>• Effective and necessary for landlocked countries</td>
</tr>
<tr>
<td>Prompt feedback not always provided</td>
<td>• In general, simplified customs procedures will be extremely helpful in every sense</td>
</tr>
<tr>
<td>Lack of prompt response to freight inquiries, special / out of gauge cargoes</td>
<td>• Costs are paid by receivers on basis freight collect</td>
</tr>
<tr>
<td>Improved tracking of cargoes due to access through ESL website</td>
<td>• Clients are not affected, the company solve the problems</td>
</tr>
<tr>
<td>The potential loss of business to UK shippers/customers &amp; receivers in Ethiopia</td>
<td>• Shipments are performed by first available</td>
</tr>
<tr>
<td>Safety/Security as per IMO requirements</td>
<td></td>
</tr>
<tr>
<td>Challenges lie in the timing</td>
<td></td>
</tr>
<tr>
<td>Fairly short free time</td>
<td></td>
</tr>
<tr>
<td>Assist the shippers</td>
<td></td>
</tr>
<tr>
<td>Arranging inland transport to customers</td>
<td></td>
</tr>
<tr>
<td>Assisting with export clearance, stuffing of container &amp; arranging the required weight certificate</td>
<td></td>
</tr>
</tbody>
</table>

**Author:** Habtesilase Demse  
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• But the risks are inevitable.
• Takes the initiatives to coordinate stakeholders
• Reduce shipment transit time & cost
• Good compared to uni-modal transport
• MM freight transport documents are always issued and delivered to a customer on time with very few exceptions.
• Occasionally, document delay through Europe trade routes-Maritime sector
• The contribution of the maritime sector to solve the problems-Planning the logistics and information flow, communicating with stakeholders, and evaluating

<table>
<thead>
<tr>
<th>ICT</th>
<th>Manual &amp; autonomous islands of system- Shipping Sector, Maritime Sector</th>
<th>Dedicated ICT division</th>
<th>Process on implementing sea liner system</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Lack of IS leads to inefficient utilization of resource like a truck.</td>
<td>On-going development &amp; investment of our internal systems that can be linked if compatible for all parties.</td>
<td>Sent Manifest by E-Mail\Hard copy</td>
</tr>
<tr>
<td></td>
<td>Sea liner system improved-Web based system (only one web)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Status of cargo used through company portal-not web-based</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Long-term investment in ICT to create interconnectivity between network partners, e.g., sea liner in the Shipping sector</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Long-term investment in ICT, e.g., ERP in the Maritime sector</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Some are put in place like CTTS</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Medium or 5 points out of 10 on ICT system efficiency-Comet Dry port</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Very low or 1 out of 10 on ICT system efficiency in a Maritime sector, But increasing over time.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>No EDI- Maritime sector</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Process on implementing sea liner system**

- **Dedicated ICT division**
- On-going development & investment of our internal systems that can be linked if compatible for all parties.
- More availability to open social media & web-based access.
- EDI would be a great facility however this can only work if ALL worldwide ESL agents have this capability.

<table>
<thead>
<tr>
<th>Infrastructure</th>
<th>Bridge and roadway is not well constructed</th>
<th>Critical to have good infrastructure</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Infrastructure change from time to time</td>
<td>Continual improvement of</td>
</tr>
<tr>
<td></td>
<td>The high importance’s of the Ethio-Djibouti railway-Reduced dual time in Djibouti, many</td>
<td>N/P</td>
</tr>
</tbody>
</table>

**Author:** Habtesilase Demse

**Masters Level:** Business Administration with specialization in International Business Strategy
<table>
<thead>
<tr>
<th>Network Partner Integration</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>To some extent integrated (Not fully)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low level of awareness</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Required huge investment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ESLSE have a lot of import cargos from Europe</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Container infrastructure</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Improves transit time, minimize cost, contribute to door to door service</td>
<td>Very important addition to overall transport capabilities &amp; improvement of delivery times to receivers</td>
<td></td>
</tr>
<tr>
<td>Truck (transport) supply problem</td>
<td>Service coverage has improved significantly.</td>
<td></td>
</tr>
<tr>
<td>Not supported by modern IT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increasing Service coverage on the infrastructure</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- ESLSE have a lot of import cargos from Europe.
- UK General Agent is representing ESLSE for container & ro/ro traffic from the UK. Providing UK customers/shippers/forwarders with freight quotations, all export shipping procedures, UK customs formalities, documentation & marketing.
- Not all are integrated & each shipper has its own focus as to the level of service they provide to their specific receivers.
- When Shipper advice on Cargo readiness and L/C details the company book on first possible sailing from Denmark by using slot carriers as per the instructions from ESLSE.
- Dialogue with ESLSE to solve the problems such as lack of equipment, quality of container, etc.
<table>
<thead>
<tr>
<th>Port Administration</th>
<th>N/P</th>
<th>Closing Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Dry port and terminals are not well managed and efficient</td>
<td>• No face any complication in port operation in Denmark</td>
<td></td>
</tr>
<tr>
<td>• Overall, current management practice is satisfactory-Comet Dry Port</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Dry ports efficiency enhanced the MMT operation and reduced demurrage and storage costs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Corruption, theft, and security risk at Dry Ports affect the MMT services</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Medium Network contribution to ESLSE solving those challenges. 5 out of 10</td>
<td>• Overall, the company satisfied with the UK to Ethiopia trade route activities related to multi-modal transport service</td>
<td></td>
</tr>
<tr>
<td>• There is no efficient system to avoid those challenges</td>
<td>• High Network partner contribution to ESLSE solving those challenges. 10 out of 10</td>
<td></td>
</tr>
<tr>
<td>• An electronic system is critical</td>
<td>• Provide ESLSE with a dedicated team able to carry out &amp; respond efficiently to all general inquiries, UK shipments thereby giving the UK shippers &amp; receivers the best possible quality of service to maintain ESLSE required expectations.</td>
<td></td>
</tr>
<tr>
<td>• Overall, the company satisfied with the UK to Ethiopia trade route activities related to multi-modal transport service</td>
<td>• Arranging timely shipments and preparing correct documents for client and ESLSE.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• High Network partner contribution to ESLSE solving those challenges. 10 out of 10</td>
<td></td>
</tr>
<tr>
<td>Table 3. Summary of interview findings with network partners</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
5.2 Ethiopia Shipping and Logistics Service Enterprise (ESLSE)

5.2.1 Logistic Employee Performance
It is known that for the success of any business the efficient logistics service is important. As explained by Yang (2011), the transportation today is all about logistics. Besides with logistics the human resources or personnel's are essential to enhance the logistics services. The research result indicates that ESLSE operational personnel knowledge and skill is medium (Considering almost all of the senior experts were given 5 out of 10 but, 1 senior expert from the shipping sector were given 1 out of 10, the reason behind the majority of the operational officers are not trained in transportation and logistics in related to the multimodal transport operation. It indicates that there is a lack of capability to visualize the whole logistics chain and trying to discharge responsibilities however, it is obvious that the level of knowledge differs from one person to another. This result is matched with Teshome (2017), “in relation with logistics management almost all of the respondents responded that there are no logistic professionals working in the enterprise, experts are doing their job by experience not only to the enterprise but also the problem is at a national level.”

5.2.2 Time, Quality and Quantity of Cargo
Containers are transported with less time in MMT from\to Ethio-Djibouti corridor. That increase the round trips of trucks from the port of discharging up to the destination (dry ports), even though the cargo cannot distribute at the right time, quality & quantity as per the shipping, maritime and dry ports interview responses. There are various reasons can be seen in this challenges: 1) there is not enough and well-equipped machinery at the dry ports in the loading and unloading operation, 2) the truck capacity is insufficient to transport containers, 3) shortage of transport trucks and lack of coordinating, 4) loss of items from cargo parts (spare parts) especially vehicle shipments 5) the truck drivers take two days from discharging port to dry ports and sub-contract is engaged with individual trucking companies to fill the gap. Due to this reason, the logistics costs are increased, and the customers are required additional storage cost and demurrage cost, and high waiting time for receiving the goods from dry ports. Arvis & Ojala (2014) stated that the most imperative aspects of logistics performance are logistics costs. To this end most of challenges raised from discharging port to destinations port instead of loading port (Denmark and United Kingdom ports) to discharging port, indirectly it indicates that the Denmark and United Kingdom trade routes performed their duty and responsibility is good and contribute to the fastest round trips of trucks and efficient multimodal transport services.
The cargo from the manufacturing site to customer destination transporting and distributing at the right time, quality and quantity are critical in the efficient service of multimodal transport services. Most of the ESLSE import and export service in Europe trade route (including Sweden, Denmark and United Kingdom) operated via slot vessels, which is one of a means for delayed transport cargos because of transshipment or cancelation of the previous vessel schedule/rebooking and discrepancy on documentation, or delayed delivery of the documents, inefficient stevedoring and other cargo handling materials outdated. Moreover, lack of commitment on the responsible staff.

Based on the six key dimensions of logistics performance and LPI (Logistics Performance Index) stated by the World Bank as well as the empirical results the Ethiopia Logistics performance is not continuously improving due to lack of efficient skill and knowledge of personnel, competency and quality of logistics service, the ability of truck and trace consignment.

5.2.3 Availability of Dry Ports
As described by Arvis & Ojala (2014), the well-functioning logistics, both domestically and internationally, is a necessary precondition of national competition. In ordered to achieve the well-functioning of logistics, the dry port and terminals are very critical. The benefits of a dry port are summarized by UNCTAD (1991) and mentioned the points as follows:

- Increased trade flows
- Benefited to see the port
- Gives lower door-to-door freight rates
- Avoid storage, demurrage, and late documentation fees
- Provide better utilization of capacity
- Lower custom staff cost
- Greater use of a container

The dry port could be inland terminals within a country or located in adjacent land-locked countries like Ethiopia in the hinterland of one or more seaports. The maritime sector and dry port experts were agreed on the availability of dry ports and terminals in Ethiopia, and that is enough for both export and import transporting containers. Hence, both sectors have a positive attitude on the availability of ports and terminals, it is very important to minimize the demurrage and storage costs at the dry port as well as discharging port, increasing the efficient...
freight distribution, integrating different network partners, temporarily storage containers, connecting to different transport modes. For instance, the train loading container from discharging port to Modjo destination, then it transfers to customer destination by using the Modjo ports as a bridge.

The accident or loss has a positive answer, and the enterprise is reported immediately to the owner and insurance company by phone and email because there is the issue of insurance that needed to be reported timely.

5.2.4 Multimodal Transport Operation
ESLSE has taken multimodal transportation as a key service to the country import and export trade. It’s minimizing the demurrage and storage costs both at the dry ports and discharging ports.

The multimodal transport system, concepts, and practice are an infant to the country as well as the staff members of ESLSE. Most of the staff members believe that the role and benefited expected from them are less in multimodal transport operation due to lack of knowledge and skills in the field. To this end, the concept, system, and practice of multimodal transport are not communicated to all staff members. To this end the steering committee like Customers Office, Transport Ministries, and Maritime Authority have a big responsibility to solve those problems through training and ESLSE management should take the initiatives.

5.2.5 Documentation Performance
The overall multimodal transport documentation performance in terms of proper issuance and delivery of transport documents is improved from time to time. Hence, the expansion of the sea liner can smoothly coordinate documentation performances within and outside the enterprise. However, the multimodal transport freight transport documents are not always issued and delivered to the customer on time. The reason behind is most of the operations are done with a manual and autonomous island of the system. Therefore, it is difficult to integrate among the system to provide transportation documents in time and at the required level. This deficiency is lead to the customer complain, that is why the customers locally and overseas are recommended for applying the latest IT system. Moreover, the inefficiency of the management or lack of commitment is contributed to the lack of documentation performance.
According to World Bank Doing Business Index (DPI) and Logistics Performance Index (LPI) (2015), there are seven and nine documents necessary for export and import operations as described in the empirical study, one of them is the customs clearance. The customs clearance is done mainly through hardcopy documents, this manual way of processing requires more documents and control to get the declaration. This manual processing service is taking more custom clearance hour and ultimately affecting the multimodal transport services.

5.2.6 Accidents and Safety\Security
The study result shows that all the respondents have the same feeling on the accidents of cargo or losses immediately reported under the multimodal transport operation. In this regard, ESLSE tries to put in practice safety\security requirements sets by International Maritime Organization (IMO). On the other hand, ESLSE tries to raise the knowledge and skill of its staffs both onshore and onboard through training concerning freight security. Moreover, the Enterprise also formed safety and security division that works with the emphasis on personal security to cargo shipment loss and damage avoidance. This all are contributing to solving the challenges of multimodal transport service.

If the accidents or loss occurred during inland transportation, the incident would be communicated to the trucks association and the same information will be forward to the ESLSE and ultimately informed to customers about the status of the cargo. If the accidents or losses happen before loading to vessels or trucks it's directly reported to head office through email or phone. To this end, the enterprise is well performed. In terms of product safety and security, the experts agreed that the enterprise has no latest technology to protect the product from theft without guard, key, and sealing. Due to the absence of security and safety, the ESLSE is receiving complaints from customers especially, relating to the vehicles spare parts, in this case, the enterprise is willing to link the case with insurance instead of solving the problem hence; it is increasing the theft attitude within the employees.

5.2.7 Loading \Unloading Service Charge
As described by World Bank (2013), the trade cost and transit times in Ethiopia are very high, compared to neighboring countries like Kenya, Tanzania, and others (ibid.). As per the study result, the cost of loading and unloading under the multimodal freight transport operation are a bit higher than the industry average. The loading \unloading service at domestic dry ports seems reasonable since it is built upon local currency (birr) and services are not highly profit motive rather service oriented. On the other hand, as described by the World Bank, the
loading/unloading operation in discharging and loading port (outside the country) made on hard currency (US Dollar) and it is a bit higher than the industry average. Most of the experts believe that Ethiopia is a landlocked country and there is a possibility to be higher cost compared to the industry average.

The above-related interview question is a bit difficult for most of the senior experts because they are not seen themselves as an authorized body to answer this question. However, they stated that the overall shipment transit time and transaction costs have significantly reduced by multimodal transport operation because the majority of the importers were not clear their cargo from Djibouti before the introduction of multimodal transportation service.

5.2.8 Challenges of Multimodal Transport Service
The ESLSE is facing various challenges in multimodal transport service through Denmark and United Kingdom trade routes operation. One of the main problems is the lack of integrated information systems that enable a smooth flow of information among stakeholders. This lack of coordination leads to inefficient utilization of resources like trucks. To give the solution to this problem some information systems have been put in place like the Container Tracking and Tracing System (CTTS), tries to coordination information in relation to multimodal shipments.

To coordinate the information in relation to multimodal shipments the steering committees from the custom office, transport minister, road authority, maritime authority, and truck owner's association have a great responsibility, especially the operator of the multimodal operation (ESLSE) should takes the initiatives to coordinate the stakeholders and solving the problems in the logistics chain.

The weighted and destination error is one of the challenges of Multimodal transport operation. This challenge would affect the network partners as well as the operation at large. This is one of the challenges and the inefficient service of multimodal transport operation. Through this problem, the customers cannot be clear the documents and collect freights on time, paid demurrage and storage costs due to the wrong consignee name and final destination.

5.2.9 Information Communication Technology (ICT)
The multimodal transport services without information communication technology are difficult to achieve the best result in operation. Since, information is vital in the shipping
industries to integrate the network partners from the manufacturing site to the destination and in order to give efficient and effective services to the customers. Because, to ensure effective service, the companies need to conduct information sharing with customers and stakeholders. In fact, ESLSE does not reach the current technology level, and it is trying to give information about the status of the cargo through the company's portal in order to inform the cargo arrival date to its customers. It helps a customer to clear their cargo timely and minimized the demurrage and storage costs. However, to give focused customer service, the enterprise needs to put in place web-based tracking system that can access from anywhere through internet services. Besides, the same as the company portal, there is another information system has been developed to meet specific needs in the sectors instead of ingrates an entire system (including others network partners or shipping agents). For instance, CTTS (container truck and trace system) meets specific tasks and specific sector interest in related to container truck and trace and not integrating with the shipping agent's operations and between the sectors. Hence, there is a lack of system integration between the sectors. However, the ESLSE have a long-term investment in ICT to create the interconnectivity between network partners including Djibouti office. To this, the three sea liner modules are very important to enhance the enterprise interconnectivity with other network partners. This are Vendor, TOS and SHS described as follows:

5.2.9.1 Sea liner Modules

**Vendor:** Is the system that integrates with the shipping agent operation. For instance, to settle the commission for Denmark and United Kingdom trade routes, the vendor system is easily linked the freight amount from the respecting ports and calculated automatically as per the agency agreement rate. It’s minimized the burden of documentation and related to cost both the enterprise and shipping agents.

**Terminal Operation Service (TOS):** The primary aims to control the movement of cargo in and around terminal or ports. In this regard, the TOS system enhances the operational efficiency of container terminals and dry ports. It’s efficiently minimizing the demurrage and storage costs both at discharging and dry ports.

**Ship Husbandry Service (SHS):** The system can easily integrate all the service operated in the ship. Hence, a service to be delivered to the ESLSE represented vessel upon the request
from the master of the vessel which including cash advance, crew mutation, spare part delivery, bunker, and fresh water, and ship chandler and engine immobilization.

The ESLSE have a long-term plan to implement three sea liner modules to achieve the cost-effective, reliable service and to integrate each service. Even though this plan still not fully implemented and takes over a long time without implementation. Moreover, there is one web-based information system with limited modules functionality that used to manage cargo operation. The enterprise has the plan to implement the enterprise system that expected to bring operational efficiency, derive operational satisfaction of employees and customer positive response.

5.2.10 Infrastructure
The review indicated that there were incrementing in the infrastructural facilitates mainly in terms of Ethio-Djibouti railway and Addis–Adama Expressway. The road transport which contributes to more than of all transportation mode in Ethiopia. The recent infrastructural development of the transportation sector seems stagnated, and it creates a huge obstacle both for the service industries and manufacturing sectors. As a result, it increased the cost of doing business and limited access to market both domestically and internationally. To this end, the poor network of road infrastructure has played its role in worsening the efficient service of multimodal transport operation.

According to the World Bank Report of (2011), the infrastructure contributed 0.6 percentage point to Ethiopia's annual per capita GDP growth over the last decade. Ethiopia launched an ambitious investment program to upgrade its trunk network and established a modern funding mechanism for road maintenance to improve ground transportation (ERA, 2013).

The infrastructure improvement regarding the expansion of dry ports at a different part of the country is increasing over time. Mainly, the Modjo dry port is expanded through time and becoming the largest dry ports in Ethiopia because, the enterprise has planned to make it an East Africa logistics hub by 2025 (ESLSE, 2015). Teshome (2017), argues that "the number of inland container depots are not enough if multimodal is going to be fully implemented because, we do have only six inland container depots which are currently used for containerized shipment and RORO."
5.2.11 Network Partners Integration

Network partners in this research refer to who participate in the multimodal transport operation from origin to destinations. The main network partners are divided into two; the first network partner is the principal or the Ethiopia Shipping and Logistics service Enterprise (ESLSE), the second network partner is the shipping agents. The main participants of the multimodal transport operation in ESLSE are dry ports, maritime sector, and shipping sectors, on the other hand, the shipping agents in this research are Scan shipping from Denmark and Cory brothers from the United Kingdom. Therefore, those network partners integration is very critical for the efficient service of multimodal transport services. It seems difficult to say they are well integrated and working in a harmonized fashion. It needs a modern information system and communication technology among network partners to bring a real change. To this end, the enterprise multimodal transport network within Denmark and United Kingdom trade routes not effective.

The service quality has improved from time to time through the network partners however, if it is seen from customer perspective a lot ESLSE need to work. For instance, the ESLSE needs to address its customer’s specific needs and preferences. Hence, the quality of service derives from customer satisfaction.

5.2.12 Port Administration

In terms of availability of the necessary equipment's at the dry ports, most of the network partners agreed on that, the capacity of the dry ports have a big problem concerning to the shortage of equipment and tools. Therefore, the dry ports cannot fully utilize their capacity due to lack of equipment's, and it leads to the inefficient service of multimodal transport. Moreover, there is lack of well-organized information communication technology, even if the CTTS is applied because, its limited to only the container track and trace activities. Moreover, there is no well-organized management system, and most workers knowledge and skill are not fully compatible with the multimodal transport services.

5.3 Scan Shipping (Denmark)

According to revised procedure manuals of ship operation and commercial (2015), the agents are carrying out their duties and responsibilities in line with agreed terms and condition or agency agreements. To this end the Agents providing proper service to ESLSE customers, ships, and crew and protects and promotes ESLSE interest properly. The shipping agency service means a Ship Agent establish by the council of minister regulation No 190\1994 to
represent the ship owner, charterers or operator of a ship to provide cargo and ship related
service at Port and Hinterland (ESLSE procedure manual, 2015).

The scan shipping (Denmark) offered complete shipping and logistics services regardless of
the cargo size and type and specialized in the transport of all type of port and terminal
handling equipment's. The scan shipping has the capability to enhance the business through a
cost-effective operation and efficient services. These capabilities are contributing to the
efficient service of multimodal transport operation through Ethiopia to Denmark trade routes.
The company is rendering door to door freight forwarding and project management services.
As per the Line and Project Division Manager of the company, within the liner sector about
50 percent of shipments are multimodal whereas for project shipments about 60 percent is
multimodal (Overall and including ESLSE). To this end, most of the shipments are linked
with the multimodal operation, especially, project shipments. Hence, Ethiopia to Denmark
trade routes gives more focus for multimodal transport operation that meets the ESLSE
objective. Because, ESLSE has taken multimodal transportation as a key service to the
country import and export trade hence, 70 percent of imported cargoes are transported
through multimodal transport system (Overall and including Denmark and United Kingdom).
According to Hoeks (2009), through time shipping and logistics had shown remarkable
improvement and continued to play its vital role in the development of international trade.

5.3.1 Multimodal Transport Practice and Advantage
The ESLSE multimodal transportation system has been implemented since 2012, and
currently, most of the cargoes are transported through the multimodal transportation system.
The Scan Shipping has been working with multimodal transport since, initiated by ESLSE. To
this end, all staff members are familiar with all aspects of the operation. Here, the difference
in familiarity between the staff of ESLSE (in related to multimodal transport) and Scan
Shipping is huge. Training to the staff is the best way to solve the problem. Hence, Scan
shipping staffs have enough knowledge and skills therefore, ESLSE has an opportunity to
cooperate with the network partner and solve the problem.

The faster transportation of goods is made possible through multimodal transport service
especially for landlocked countries like Ethiopia. The Line and Project Division Manager
from Scan Shipping described that the multimodal transport services are an effective way for
the landlocked countries because; it gives seamless cargo transportation from one country to
another. The advantage of multimodal transport can be described variously, it minimizes time loss at transshipment and transit time, reduced the burden of documentation and formalities (considering one Bill of lading), save costs (like demurrage and storage), and improve competitiveness.

5.3.2 Transit Time of Cargo from the Manufacturing Site
The study result shows in two different perspectives from ESLSE and shipping agents in related to the transit time of cargo from the manufacturing site to discharging port. The Europe and Africa trade route senior expert Mr. Melkamu Awoke ‘Senior Shipping Officer’ stated that sometimes the cargo from manufacturing site is getting delayed due to most cargo is imported/exported via slot vessels hence, they due a transshipment, or cancelation of the previous vessel schedule/ rebooking, and discrepancy on documentation, or delayed delivery of the documents. According to Mr. Claus Winding ‘Line and Project Manager’ of Scan Shipping, when the shippers advise cargo readiness and letter of credit (L/C) details, the company book on first possible sailing from Denmark, the Scan Shipping using slot carriers as per the instructions from ESLSE, and if any problem with lack of equipment, fully booked vessels or quality of containers (foodstuff shipments), the Scan Shipping is in dialogue with ESLSE Addis Ababa, Ethiopia to solve the problems. In general, shipments are performed by first available sailing. If one carrier not able to perform the Scan Shipping use the second one, carriers after approval from Addis Ababa, Ethiopia but again, this practically never happens.

Currently, ESLSE provides its liner service with 11 vessels. Two of them are Tanker (oil carriers), and the rest 9 are multi-purpose dry cargo carrier vessels. Most of ESLSE own vessels are rendering its service within China, India, Dubai, and Turkey black sea trade routes ports. To this end, the enterprise most Europe trade routes (including Denmark and the United Kingdom) services used the slot vessels by renting of others shipping line vessel space. This show that the own enterprise vessels cannot be addressed and provide its services through most of the European trade routes. Due to this, the enterprise faced different challenges through its multimodal transport operation. First, the transshipment containers from one vessel to another vessel, cancelation of the previous vessel schedule/ rebooking, and discrepancy on documentation, or delayed delivery of the documents. Second, this is the major flow of hard currency (USD) from the country via outward payment to other countries commercial shipping lines. However, one of the major objectives of ESLSE is saving the hard currency.
5.3.3 Information Communication Technology (ICT)
The automated means of information used to trace goods during through our transit time. Transport operator or users both in domestic and outside the countries can get any online information related to the operation. According to Beresford et al. (2006), the application of ICT enhances the integration of different modes of transport.

In terms of ICT among network partners, most of the experts from ESLSE agreed on the absence of an integrated information system, and it is a huge problem for the multimodal transport operation. Due to this reason, ESLSE not providing online multimodal transport freight rate information, online booking services, and online cargo information. That is why the stakeholders from domestic and foreign recommended to the latest international ICT service to the enterprise. According to Lemmi & Bogale (2016) "Multimodal Transport System was the challenges of network connectivity, the problem of ICT usage…” To this end, the information communication between the enterprise and shipping agent are very poor. The communication tools depend on the personal mail and telephone. The Line and project manager of Scan Shipping stated that currently, the Scan Shipping is in the process of implementing sea liner system, up to now the company sent the documents\manifests by E-mail or outlook. This process brings the delay in payment of commission to the shipping agent, lack of accuracy in payment, and increasing the usage of paperwork. It is obvious that the hard copy documents efficiency cannot compare with the sea liner system.

5.3.4 Port of Loading
The main shipping agency core services delivered through the port of loading. The agent is providing its service on behalf of the enterprise. Every cargo handled at loading ports and facilitating by shipping agent. To this end, the convenience of loading and unloading at loading port is very crucial for the effective multimodal transport service. The scan shipping using slot carriers nominated by ESLSE. According to Line and Project Manager, basically the last three years Scan Shipping used MSC\CMA container carriers, both are offering weekly service from Danish ports, and the company does not face any complication in respect of port operation in Denmark. This is one part of the contribution to solving the multimodal transport challenges. Because, any delay and complication will be affecting the rest part of multimodal transport operation (Considering MMT is a seamless transport system).
5.3.5 Network Contribution
As explained in theories and empirical results the multimodal transport is all about integrations. This transport system integrates various modes of transport and forming a big chain of the transport industry. According to Amentae & Gebresenbet (2015), the movement of cargo from one country to another country transported through the integration between different stakeholders such as carriers, shippers, agents, seaports, and others. The integration of services among network partners has a contribution for the success of efficient multimodal transport service. However, the network partner’s contribution is depending on the efficient service of each actor. The Line and project division manager considered their contribution as very important in respect of arranging timely shipments and preparing correct documents for a client as well as ESLSE. On the hand, the multimodal transport service between the two network partners is effective from the port of loading to discharging port (Djibouti), considering the company has no means of tracking after discharging port however, in all the years the company had very few complaints from the company clients/shippers. To this end, the Scan Shipping contribution to solving that problem is very positive.

5.4 Cory Brothers (UK)
The same as Scan Shipping, the service providing by Cory Brothers is based on the agency agreement of the ESLSE and Cory Brothers. The company achieved continuous growth in the shipping industry. To this end, Cory Brothers is a leading logistics and maritime service providers for all transportation service. The performance of Cory Brothers regarding inventory management, cargo serving, port agency services, independent liner agency services, and latest ICT contribute to the efficient service of multimodal transport operation through United Kingdom trade routes. Moreover, Cory Brothers give unrivaled market coverage through strategically located offices around the globe.

5.4.1 ICT and Operational Personnel
The company holds the latest web-based information communication system (ICT) including Sea liner system. This latest system is enabling to access real-time operational information and facilities the operation between the ESLSE and Cory Brothers.

The service provided by Cory Brother on behalf of the enterprise is enormous. To another end, on behalf of UK shippers, Cory brothers undertake all services utilizing the ESLSE nominated slot carrier, UK transport, UK terminals, UK export formalities and issuance of ESLSE bill of lading to whichever ESLSE nominated dry port. Each activity performed by
the shipping agent can be affecting the operations of multimodal transport services. To this end, Cory Brother performed well and contributed to solving the challenges of multimodal transports services.

The same as Scan Shipping, Cory Brothers operational officer's knowledge, and skills regarding multimodal transport service are higher. The company was given this score due to significant improvement in terms of receiving responses to cargo and gives a solution to customers.

5.4.2 Transit Time and Cargo Accidents
According to Mulugeta (2017), the transit time is related to cost, how fast the loading\unloading can make higher or fewer costs in operation. Cory Brothers facilities the cargo from manufacturing site up to discharging port, the transit time is as per the scheduled, and it is good. The company booked the first available vessels as per ESLSE nominated carrier, once the UK customer gives a confirmation the cargo always is ready for shipment. The main responsibility of Cory Brothers is to control the cargo up to discharging port (Djibouti). The above issues indicate that the multimodal transport operation transit time under UK ports (Cory Brothers operations) area up to Discharging ports performed efficiently. On the other point, the company has no experience with cargo accidents. The result of the empirical study shows that issue of cargo accidents rose from the transportation services through Djibouti to Dry Ports.

5.4.3 Information Communication Technology (ICT)
The increase of ICT usage has become an essential way for the competitiveness of multimodal transport services in an international market (UNCTAD, 2003). Currently, Multimodal transports require modern technology to substantially enhance the efficiency of the operation. For instance, the cargo tracing and tracking service can be enhancing through the latest ICT software, the interconnectivity between the network partners can developing through ICT. To this end, Cory Brothers have a dedicated ICT division with on-going development and investment of the internal company systems that can be linked if compatible for all network partners. As the empirical result shows that the ICT capability of ESLSE needs improvement and need to implement the sea liner modules in order to compatible with the network partner.
Cory Brothers market access has become increasingly over time due to the service coverage on ICT. Besides, the company broadens its availability through social media and web-based access. According to Kim & Ko (2012), the social media facilitates global communication and has become an integral part of the world. On the other hand, the web-based system of the company enables to access online data and to integrate network partners if all worldwide network partners have this capability. For instance, the Electronic Data Interchange (EDI) system can simplify operation procedure and formalities in multimodal transport operation. However, it is requesting other network partner capability in order to get a great facility from the system.

5.4.4 Infrastructure
The physical infrastructure plays a significant role in the multimodal transport operation. According to Amentae & Gebresenbet (2015), the multimodal transport is motivating by European country in order to bring balanced mode of transport to avoid the dependability on one mode of transportation service. On the other side, in Ethiopia the same multimodal transport stimulating by the government however, the usage of infrastructure is unbalanced, 93% of the Ethiopia road transport used for mobility of freight and 95 % for passengers which is above all Africa average (ERA, 2012).

Even if the issue above related after discharging port (or to ESLSE), the researcher was requested the shipping agents about the infrastructural facilities within Ethio-Djibouti railway in order to know the contribution for the multimodal transport operation. As per Cory brother, the Ethio-Djibouti railway contributes to the overall transport capabilities and improvement of delivery times to receivers. To this end, the service coverage has improved over time.

5.4.5 Network Partner Integration
According to Razzaque (1997), to achieve an efficient multimodal system demands a concerted and integrated effort of all parties needs to involve. Hence, the integration between the network partners is very important because, there is a lot of operation performed by the network partners each other. In this regard, Cory Brother dedicated in the integration of network partner (‘We, as ESLSE agents, endeavor to bring all parties together through the ESLSE service') and facilitated all the export shipping procedure, UK customs formalities, documentation, and marketing. As per the result, all partners not integrated, and each shipper has its own focus as to the level of service they provided to their specific receivers. However,
Cory Brothers performed in the most effective way to coordination and reporting of cargo booking with shipper on behalf of the Ethiopian receivers.

5.5 Freightman AB (Sweden)
The close relationship between the network partners between ESLSE and Freightman AB is the cornerstone which their business is based on. One of the main services performed between the network partners is multimodal transport operation which takes the highest percentage of the transaction. The service providing by Freight Man AB is based on the agency agreement signed by both parties and renewed every year.

5.5.1 Challenges and Contribution on Multimodal Transport
One of the main responsibilities of the shipping agent is to protect the interest of the principal (ESLSE) and control the cargo up to discharging port (Djibouti). In multimodal transport service, the transit time is very critical to enhance the efficiency and satisfy customers need. The major challenges of multimodal transport service in Ethio-Sweden trade routes lies in timing, partner carriers in Sweden have fairly short free times at least in comparison with how much free time is available to the receivers at destination so, it's vital that all documents are finished promptly and simultaneously (within reason) and that all cargo is ready and available for stuffing to enable customer to meet the closing deadlines. The company contributes to solving these challenges by assisting the shipper in all practical moments required to finalize the shipments and get it loaded on board the vessel for Djibouti. This assistance can be minimized the transit time and enhance the efficient service of multimodal transport operation.
6. Conclusion

This final chapter ties together with the preceding segment of the thesis in order to answers the below two research questions.

6.1 Addressing the Research Question and Objectives

6.1.1 Research Questions 1

‘What are the challenges of multimodal transport service of ESLSE in the Europe trade routes operation from origin to destination’? This was dealt with by using both theoretical and empirical investigation. The answers to the first question are presented as follows:

- Many achievements have been registered since the initial stage of implementation of the multimodal transport system. One of these achievements is the reduction of cargo dwell time at Djibouti Port which saves substantial spending both for customers and the country. However, this system is at its infant stage in the country, proper guidance and coaching are needed in order to create constancy of services and boost the understanding of employees.

- The ESLSE efficiency on the ICT system to the efficient service of multimodal transport operation is medium. This means that the ESLSE needs improvement on the ICT to enhance the efficient service of multimodal transport services in terms of coverage, capability, facilitation, and integration. In this regard, Cory Brothers (UK) has an efficient ICT system. This is an opportunity to ESLSE to improve their information system through cooperation with the network partner.

- Electronic Data Interchange (EDI) simplifies business procedure and formalities of the multimodal transportation system in the international operation. To this end, EDI would be very valuable. Hence, the entire network partner needs to have a capability to fit with the system.

- The infrastructure of multimodal transport is critical; the road from Djibouti to Ethiopia needs to improve in order to enhance the service provided under multimodal transport operation. Because, some 30 Km of the road is highly damaged, it forces vehicles to stay for extended period of time on the road that leads to cargo delay in addition to the truck maintenance costs and double tiers expenses.

- The knowledge and skills in relation to logistics and multimodal transport service between the ESLSE and shipping agents are very different. The lack of knowledge and
skill in ESLSE can be solved with training and education. To this end, the ESLSE needs support from shipping agents in terms of training.

- The information communication between the enterprise and shipping agent (Scan Shipping) are very poor. The communication tools depend on the personal mail and telephone. Up to now, the company has sent the documents \ manifests by E-mail or outlook. However, it is obvious that the documents efficiency through email cannot be compared with the sea liner module documentation system. (In terms of security, storage capacity, accuracy, output, searching (fast), and integration the network partners, etc.)

- Cory Brothers have a dedicated ICT division with on-going development and investment of the internal company systems that can be linked if compatible for all network partners. As the empirical result and analysis, the ICT capability of ESLSE needs improvement and there is the need to implement the three sea liner modules (Vendor, SHS, and TOS) in order to be compatible with other network partners within and outside the enterprise.

- The main responsibility of shipping agents is to control the cargo up to discharging port (Djibouti). After discharging port, the operation is entirely controlled by ESLSE. Through multimodal transport operation, the transit time and loss\accidents are higher within discharging port to dry ports. In this regard, the ESLSE needs to improve both the transit time and losses\accidents. On the other hand, the transit time and loss\accidents from manufacturing site, loading port to discharging port performed well.

- Cory brothers not affected by cargo accidents and the company operation performed well from UK ports to discharging port (Djibouti port). The result of the empirical study shows that the issue of cargo accidents has happened from the route of discharging port up to dry ports operations.

- For Freightman AB (Sweden) the major challenges on multi-modal transport service in this trade routes lies in timing, partner carriers in Sweden have fairly short free times at least in comparison with how much free time is available to the receivers at the destination.

- The cargo from a manufacturing site to customer destination is getting delayed because most cargo is imported/exported via slot vessels (Most of Europe trade routes

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operation including Sweden, Denmark, and United Kingdom used slot vessels). Hence, due to transshipment or cancellation of the previous vessel schedule/rebooking, discrepancy on documentation, delayed delivery of the documents, inefficient stevedoring and other cargo handling, materials get outdated. Therefore, the ESLSE is better to use its own vessel in order to avoid such problems and save the hard currency. In addition, lack of commitment of the responsible staff affects the service.

- Cost of loading and unloading under the multimodal freight transport operation is higher than the industry average. The loading and unloading service charge at domestic dry ports seems reasonable since it is based on local currency (birr). On the other side, the loading/unloading operation in discharging and loading port (outside the country) made on hard currency (US Dollar) and it is higher than the industry average. It increases the outflow of hard currency and affecting the customers and ultimately the country at large.

- The inefficiency of the management or lack of commitment, the monopoly of the enterprise to rendering multimodal transport services has its own negative effect on multimodal transport services (i.e., there is no competitive shipping company allowed to organize shipments in Ethiopia). Currently, the Ethiopia Prime Minister Dr. Abiy Ahmed announced in the parliament that under 50% of ESLSE will be sold to a private company in order to solve this problem. However, the majority of the share will hand by the government.

6.1.2 Research Question 2
‘How do the network partners contribute to ESLSE solving these challenges’ and this was addressed through a combination of theoretical and empirical research. In the first research question, the study identified the challenges and the second research question identified the contribution. Therefore, the answers to the second questions are presented as follows:

- The ESLSE overall documentation performance is good and enhances the efficient service of multimodal transport services. Hence, one bill of lading enables ease of a multimodal transportation system.

- Cory brothers have achieved significant improvements in terms of receiving responses to cargo and answer to customer inquiries.
Scan shipping booked the cargo on the first available vessel (ESLSE nominated carrier) which avoids the delay of receiving cargo by customers.

No experience of accident issues raised in Cory brothers services under UK operation which is from the port of loading to discharging port. These enhance the efficient services of multimodal transportation services and deliver the cargo to customers within the scheduled time period. Furthermore, it shortens the average round time of the containers.

Dedicated ICT division within Cory Brothers side with on-going development and investment of internal systems that can be linked if compatible for all parties.

Freightman AB contributes to solving the challenges in all practical moment required to finalize the shipment and get it loaded on board the vessel for Djibouti. It is vital that all documents are finished promptly within a reasonable time period. This activity can enhance the efficient service of the multimodal transport service.

ESLSE applies the Sealiner system and CTTS (cargo tracking and tracing system) to reduce the transportation logistics costs and an excessive amount of paperwork. To this end, the ICT service coverage has become increasingly over time and contributed to the efficient services of multimodal transport services.

ESLSE has Sea liner system or module, which is a web-based application with multiple modules to process shipping operations documentation and information exchange. The system smoothly coordinates documentation performance between agents scattered throughout the globe. On the other hand, the ESLSE provided the portal access to customers in order to show the cargo status by which the customers can easily clear the cargo in a timely manner. To this end, the possibilities of demurrage and storage costs are minimized.

Cory brother have arranged timely shipments and prepared correct documents for the client. Furthermore, they provided to ESLSE dedicated team able to carry out and respond efficiently to all general inquiries concerning, UK shipments thereby giving the UK shippers and receivers the best possible quality of service to maintain ESLSE required expectations.

Planning the logistics and information flow, communicating with stakeholders, and evaluating.
• Scan shipping receiving services from container carriers (MSC\CMA) on a weekly basis from Danish ports, offers complete shipping and logistics services regardless of the cargo size and type, rendering door to door freight forwarding and project management services. Furthermore, fulfilling all the freight needs and enhancing the business through the cost-effective operation and efficient services.

• ESLSE announced the accidents\losses immediately to the owner of the cargo and insurance company.

• Cory brothers improved trading efficiency and transformed the relationship with international carriers and trading partners. To this end, it coordinating of the loading operation at various ports in close consultation with ESLSE head office.

• ESLSE organized its multimodal operation at Director Level and two divisions structured under the Director’s office. These are the Customers’ Service Division and Transport Division. It is simplifying the multimodal transport operation.

• Approaches that try to solve problems with steering committees those composed from different stakeholder organizations like Customer office, Transport Ministries, and Maritime authority.

• ESLSE takes the initiatives to coordinate with stakeholders. The approaches that try to solve problems with steering committees those composed from different stakeholder organizations like Customer office, Transport Ministries, and Maritime authority which are very critical to solve the challenges.

• Reasonable loading\unloading charge at dry ports because the payment is made in local currency.

• All the network partners contribute for seamless multimodal transport service by which the transit time, burden of documentation and formalities, costs like demurrage and storage are minimized.

6.2 Theoretical Implication
Currently, there is a range of existing literature focusing on challenges of multimodal transport service and logistics performance (Yang, 2011 & Brown, 1985), infrastructure (Sanders, 1990, Banomyong, 2000 and Aschenaki, 2004), ICT (Zhuravleva, 2013), custom facilitation (Dewan, et al, 2006), and port administration (Wolfe, 2001). However, the analysis
demonstrates a lot of challenges that influence the service such as monopoly of the service, lack of commitment and training, weight error that created the delay in receiving of the cargo in time, accidents or losses, slot vessels, high loading and unloading costs extra. Even though the challenges are different in developing and developed countries as well as one shipping operator to another in general, the shipping and logistics industries or the network partners are affected by those challenges either directly or indirectly. For instance, the problem of ICT and infrastructure in developed countries are much less than in the developing countries. In theory, several scholars have emphasized on challenges instead of the contribution to solve the problem. In this regard, the study has identified several contributions made by the network partner which is very important to know how the service can be improved to become efficient.

This thesis provides insights into the challenges of multimodal transport services by analyzing in different perspectives: logistics and personnel performance, time of distribution cargo, quality and quantity of cargo, dry port and terminal, truck supply problem, sea liner module implementation, coordination and sense of urgency, documents, loading\unloading cost at discharging port, manual and autonomous islands of system, information system, EDI in maritime, which result aligned with (Zhuravleva, 2013 & Lemmi and Bogale, 2016), partner integration which aligned with (Razzaque, 1997). Furthermore, the monopoly of the service, lack of training and commitment, weighting error, accidents\loss, high cost of loading\unloading, and slot vessels problems in the operation are a challenge of multimodal transport services, despite it was not mentioned in the literature analyzed and it was found through empirical findings which could considerably a challenge in the operation. Due to the detailed analysis based on the empirical results, some challenges and contribution are drawn and depicted below in figure 4. This figure is the revised framework for challenges and contribution of the multimodal transport services developed after theoretical and empirical study. Which is shown on the + sign in the model. Therefore, those challenges should be considered for further researches on the topic.

To the best of researcher knowledge, this thesis has systematically defined the concept of multimodal transport. The study has first presented logistics literature before presenting multimodal transport which is a form of logistics. The terminology was first defined by the United Nation Convection on Trade and Development (UNCTAD) in 1981. This definition described the combination of mode choice, international transport operation, and about one
single operator. With a combination of academic journal articles, the general concepts of logistics and multimodal transport based on these main points was attempted.

The theoretical contribution made in this study was the attempt to operationalize the concept of multimodal transport operation in a general way and describe it based on the logistics and personnel performance, multimodal transport operation, ICT and infrastructure, network partner’s integration, custom facilitation, and port administration through own modal, the various categories and themes were compiled to capture the entire theoretical part which was built in the conceptual framework. This enables me to show a clear line between the conceptual framework, data collection, and the empirical data analysis (Bryman, 2016). Building on academic journals the multimodal transport operation construct was empirically developed and can be taken into account for further multimodal transport related research.

This study contributes to the multimodal transport literature by demonstrating the significant influence of the concepts and also provides empirical evidence in explaining challenges of the multimodal transport services. With the empirical finding the study identified that the monopoly of the service, lack of training and commitment, weight error, accidents/loss, high loading and unloading costs and slot vessels as challenges.

Through examining the role of logistics and multimodal transport integration the thesis has shown how operational constraints can limit the development of the service, thus challenging the success of minimizing documentation performance and time of delivery, customer satisfaction, completing shipping and logistics services.

The figure below is the revised framework for challenges and contribution of the multimodal transport services developed after the study. The +sign of quality and quantity of the cargo shows that the transportation of cargo from the manufacturing site to discharging port is mostly delivered without damage or loss, and this is the contribution of the shipping agent. On the other hand, the +sign of accidents/loss and weight error in the challenges side of the figure indicate that the transportation of cargo from discharging port to dry port is affected by the accident/loss and weight error of the cargo. Hence, the land transport brings more challenges to the multimodal transport services compared to the sea transport. This indicates that the shipping agents such as Cory Brothers (UK), Scan Shipping (Denmark), and Freight
Man AB (Sweden) have contributed towards the multimodal transport operation. On the other hand, ESLSE needs to solve the challenges mainly after discharging ports because the agents have not been involved or familiar with the local procedures in handling multimodal shipments in Djibouti to Ethiopia. The agent is responsible to book the cargo and issue documents such as bill of lading and manifest upon shipment. After shipment the agent of ESLSE tracks the container to Djibouti only hence, after Djibouti the inland transport to dry port or customs warehouse is entirely ESLSE’s own. The cancellation of vessel schedule and discrepancies in the document mainly happen in slot vessels whose challenges are listed in the revised figure and shown as +slot vessels. The same monopoly of the service, lack of training and commitment, and high loading and unloading costs are listed under challenges to the multimodal transport operation and shown in the revised figure below. On the other side the implementation of sea liner system, completing shipping and logistics services are the contributions and listed in the revised figure.

+Quality and Quantity= From manufacturing sites to discharging ports
+Accidents\loss= From discharging port to Dry ports,
+Monopoly of the service= related to ESLSE
+Lack of training= related to ESLSE
+Slot Vessel= More used in European trade routes
Figure 5. Revised framework challenges and contributions to the multimodal transport services. Source: Own figure based on literature review and empirical data.

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6.3 Managerial Implication

In addition to the academic contributions, this thesis can provide relevant advice to the network partners both for ESLSE and Shipping agents from a more practical standpoint. Based on the research conducted, managerial implications can be provided. The finding of the study leads to conclude that the challenges of multimodal transport service mainly rose due to the inefficient service of ESLSE instead of shipping agents. The inefficient service is the result of poor ICT system, lack of integration between network partner, lack of effective infrastructure, lack of skilled logistic personnel's, inadequate and ineffective capacity of trucks, material theft, corruption, security risk, lack of quality of transported cargo, lack of prompt response in the operation between the network partners especially from ESLSE side to shipping agent, and monopoly the operation by ESLSE are the obstacles to the operation. Therefore, ESLSE managers need to be aware of those challenges now facing the service directly as well as indirectly. It is crucial to gain an understanding of how challenges can affect the operation as well as the network partners. The researcher believes that with these identified results the network partners especially the ESLSE managers as the operator should taking action to solve the problems by integrating with shipping agents. Moreover, the shipping agents managers can use the results of the study to enhance their contribution in order to solve the challenges of MMT services by communicating with the ESLSE.

ICT is the most critical element in the operation of multimodal transport services. In order to improve the system, the enterprise has to fully implement the web-based sea liner module such as TOS, SHS, and Vendor in order to link and simplify all shipping operation. Because, multimodal transport service is given in a fragmented way in different departments, it should be linked by information communication technology (ICT). Due to the absence of ICT ESLSE cannot keep cargo security and integration among the network partners. On the other side, the enterprise can install the Global Positioning System (GPS) to control the theft of transporting cargo and to follow the progress of the cargo.

Most of the import and export cargo from Ethiopia to Europe trade routes including Sweden, Denmark, and the United Kingdom are transported using the slot vessels. To some extent, the cargo from the manufacturing site to customer destination is getting delayed due to a transshipment, or cancellation of the previous vessel schedule/ rebooking, discrepancy on documentation, or delayed delivery of the documents, inefficient stevedoring and other cargo handling materials outdated. Therefore, the management of ESLSE needs to think about how
to use its own vessel in order to avoid such problems and save the hard currency. Furthermore, the managers need to solve the problems by discussing with the shipping agents on their meeting.

ESLSE management needs to understand how the business is affected and should searching the solution to solving those challenges. Besides, they should think about what expected of themselves, what kind of support is needed from shipping agents, and why the vision, mission, and goal of the enterprise is not successful. For instance, the three sea liner modules such as TOS, SHS and Vendor are not fully implemented; this highly affected the operation in a negative way. To this end, the management of ESLSE should take both the responsibility and immediate action for implementation of the sea liner module. This system has the potential to interconnect the terminal operation to ship husbandry services and easily avoid the paper load.

The lack of capacity of the freight transport companies in terms of number and capacity of vehicles will result in inefficiency of multimodal transport services. The better round trip of the vehicles can be avoided the dummarge and storage costs at the dry ports. Therefore, increasing the truck round trip using modern fleet management and replacing the old trucks with the new one is the manager's responsibility.

The manager has the important role in adjusting the freight cost of the importing container which is high compared to the neighboring countries like Kenya and Tanzania. The study result shows that for importing a container, the customers incur high costs compared to the neighboring countries even with the same land-locked countries. Therefore, the manager should be careful in balancing what is a good price for the enterprise with what price is required by the international market.

The systematic training and development program is an essential means of improving the services in the multimodal transport operation. The ESLSE can maintain open channels of communication with the enterprise shipping agents especially on their agency meeting on the issue of training of the enterprise employees. The training can be containing the practical operation at loading port and academic way. Therefore, the ESLSE manager's must need the plan to avoid the lack of skill in the enterprise. Furthermore, the ESLSE managers by-itself
need to providing practical oriented training and upgrading the employee's professional qualification. On the other hand, the management can create a relation with foreign\local universities in order to produce qualified professional workers in the area. To this end, the enterprise can be able to out dedicated and skilled personnel at each level of the service.

To overcome on the challenges and become competitive in an international shipping and logistics market, ESLSE management needs to build the quality of management system into their processes that enabling them to avoid the challenges of multimodal transport operation and delivering a quality of services at expected time and quality.

To sum up, the management of ESLSE should co-operating from custom office, transport minister, road authority, railway authority, maritime authority, and truck owners in order to solve the lack of knowledge and skills of logistics personnel, lack of training, lack of commitment, lack of ICT and infrastructure, truck supply problem, lack of coordination or integration, accident\losses, high loading\unloading costs at discharging port, lack of equipment at dry port, and custom facilitation.

6.4 General and Policy Implication
The steering committees composed of different stakeholder organizations like Custom office, Transport Ministries, Maritime authority and the ESLSE have a big responsibility to provide a solution for the lack of knowledge and skills of logistics personnel, lack of training, lack of commitment, lack of ICT and infrastructure, truck supply problem, lack of coordination or integration, accident\losses, high loading\unloading costs at discharging port, lack of equipment at dry port, custom facilitation and others. In addition, the policymakers should identify the problems and create awareness to the government as well as to the business community that can be used as a backup with rule and regulation for the multimodal transport services. On the other hand, the policymakers need to see separately the challenges of multimodal transportation services and the network partner contribution in order to identify and focus on the remaining challenges and to solve those problems.

The weak network partners created the loss\accident of the cargo, weight error, consignee name error, lack of ICT and others. Therefore, policymaking institutions are advised to establish procedures to facilitate the network partner’s value chain processes in order to prevent the challenges of multimodal transport service and integrate the network partners.
The monopoly service of multimodal transport operation in the country does not give a chance for private sectors to engage in the sector and create competitiveness. To this end, it is crucial to develop a policy framework that co-opts the private sector. This creates an option for customers to select the best service provider and will encouraging the competition between private companies and the government-owned one. Therefore, it is vital to consider a new proclamation. To this end, it is crucial to develop a policy framework that attracts the private sector in order to engage in the operation.

6.5 Limitations
The limitation of the study refers to the fact that the sample of shipping agents and dry ports was limited. Since, within Europe trade routes there are 11 shipping agents of ESLSE and the researcher selected 3 shipping agents. Moreover, there are 7 dry ports in Ethiopia, and the researcher was used 3 dry ports. These decisions were due to resource limitations including the deadlines of the MSc thesis. Furthermore, the study only limited to the Europe trade routes and the study did not take into consideration any other continents like Asia and Africa which could have given additional information on the topic. Since, challenges of multimodal transport services might present different results in each continents trade route. Furthermore, a more diverse sample could have added more credibility and validity.

In relation to interview questions, most of the interviews were conducted through email, and it was difficult to asked every detail question to the interviewee and impossible to capture non-verbal aspects. Besides, the interview questions for interviewees were several to answer each question and few of them are skipped by the respondents.

6.6 Future research
The study has presented the challenges and contribution of multimodal transport services in the context of Ethiopia to Europe trade routes, but in order to increase the validity and generalization of the finding, the future study could be conducted by considering other continents to find the different results. Furthermore, the research could be broadened by including Forwarders, Transporters, Djibouti corridor\Port, other shipping agents and dry ports. Since, the researcher only considered three dry ports and three shipping agents. On the other hand, this research used only the qualitative approach, and the future study could be used in the quantitative method by using the identified variables as dependent and independent.

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Appendix A- Interview Questions with Shipping Sector

Interview Guide
The interview question prepared separately for each network partner such as the Shipping sector, Maritime Sector, Dry Ports (ESLSE), and Shipping Agents.

ESLSE is a result from the merger of three autonomous public companies: Ethiopian Shipping Lines, Maritime and Transit Service Enterprise and Dry Port Enterprises. The researcher will interview several senior experts and top managements at various positions and experiences. The researcher sample dry ports are: Modjo, Gelan, and Comet Dry ports.

The researcher sample Shipping Agents are: Fright Man AB (Sweden), Scan Shipping (Denmark), and Cory Brothers (United Kingdom).

Network partner refers to the participants in multimodal transport operation such as dry ports, maritime sector, shipping sector, and shipping agents.

The interview guide developed for the interviews to be conducted in relation to the challenges of multimodal transport services by focusing Ethiopia to Europe trade routes operation is based on the themes below.

A- Biographical Data
B- Logistics performance and personnel
C- Multimodal transport Services
D- Information communication technology (ICT)
E- Infrastructure
F- Network Integration
G- Port administration
H- Closing questions

Over all, I would like to know the challenges of multimodal transport service of ESLSE in the Europe trade routes operation from origin up to destination and to analyze the contribution of network partners to ESLSE solving these challenges.

A. Biographical Data
   • Name?
B. Logistics performance and personnel

1. How do you evaluate your operational officer’s knowledge and skill regarding to multimodal transporting services?
   Please rate on a scale from 1 to 10. 1 refers to poor, 5 refer to medium and 10 refer to excellent. (NB. you can use the range 1-10)

   a) Can you please explain why you given this score?

2. Do you think the cargo from manufacturing site or shipper, to loading port, discharging port, dry port to customer destination are distributed at the right time, quality, and quantity?

   a) If yes, can you explain it how can possible to distribute at the right time, quality and quantity?
   b) If no, why?

3. Do you think any accidents to shipments of cargo reported immediately?

   a) If yes, can you explain it with practical situation?
   b) If no, why?

4. Do you think ESLSE’s shipment status information dissemination facilities have been serving well to reduce shipment transit time, demurrage and storage costs?

   a) If yes, how?
   b) If no, why?

5. Do you think all the time the information disseminated by all sector of ESLSE is reliable and dependable for business decision?
a) If yes, how?
  b) If no, why?

6. What do you think the enterprise has enough capacity, quantity and quality of trucks to render effective and efficient transportation service?

7. What is your opinion, the logistics system in Ethiopia is improving over time?

8. What kind of system currently used in your office to reduce transportation logistic costs?

C. Multimodal transport Service or Operation

1. What are the major activities being perform in your company in related to multimodal transport services?

2. What is your opinion; the multimodal transport system concepts and practice have been adequately communicated to all staff members?

3. Do you agree that multimodal fright transport documents are always issued and delivered to customer on time?
   a) If yes, how?
   b) If no, why?

4. Do you think there is clear procedure for delivery of cargo?
   a) If yes, how?
   b) If no, why?

5. Do you think there is simple and flexible customs procedure to allow door-to-door movement of containerized cargo?
   a) If yes, how?
   b) If no, why?

6. What do you think the cost of loading\unloading is fair?
   a) If yes, how?
   b) If no, why?

7. Do you think the overall shipment transit time and transaction costs have been significantly reduced by multimodal transport operation?
   a) If yes, how?
   b) If no, why?
8. What do you think about documentation performance?
9. What is the practical situation when the accidents or losses happen?
10. What is your opinion regarding to the safety and security of cargo against damage or loss?
11. What were the challenges your company facing in multimodal transport services through your company Europe trade route operation?
12. What kind of challenges has been solved?
13. What is your company contribution to solve those problems?
14. Is there any a problem or challenges still not solved?
   a) If yes, what are they? And why not solved?
   b) In what way those challenges affect the network partners such as Customers, Dry ports, Maritime sector, Shipping sector, Shipping Agent, and Shippers?
15. What is your recommendation of solution to avoid or minimize the above problems?

D. Information communication technology (ICT)

1. Can you explain, does your company have long term investment in ICT to create the interconnectivity between shippers, shipping agent, shipping sector, maritime sector, Djibouti office, and dry ports?
2. Do you think your ICT system is efficient and contribute to the efficient service of the multimodal transport operation?
   Please rate on a scale from 1 to 10. One refers to not efficient (poor), 5 refer to medium and 10 refer to highly efficient (excellent). (NB. you can use the range 1-10)
   a) Can you please explain why you given this score?
3. Do you feel that the service coverage on the ICT, capabilities, security and safety, facilitation and market access has become increasing overtime?
   a) If yes, how?
   b) If no, why?

4. Electronic Data Interchange (EDI) is available in your international operation?
E. Infrastructure
1. How important the infrastructure facilities in the multimodal transport service?
2. What are the challenges of multimodal transport services in related to infrastructure facilities?
3. Do you think the service coverage on the infrastructure has become increasing overtime?
   a) If yes, can you explain it?
   b) If no, why?
4. How do you get the Ethio-Djibouti railway contribute for multimodal transport operation?

F. Network Partner Integration
1. Do you think the shipping agents, shipping sector, maritime sector and dry ports and customers are integrated?
   a) If yes, how?
   b) If no, why?
2. Do you think the enterprise has effective multimodal transportation network within Sweden, Denmark and UK trade routes?
   a) If yes, how?
   b) If no, why?

G. Port administration
1. Do you agree that the loading/unloading operations at loading ports are convenient?
   a) If yes, how?
   b) If no, why?
2. What is your opinion on the contribution of ports for multimodal transport operation, flow of goods and coordination of different types of carriers?
3. Do you think the corruption, theft, security risk and regulations at port of loading affected the multimodal transport operation?
   a) If yes, how?
   b) If no, why?

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H. Closing questions

1. How important do you consider your network contribution to solving those challenges? On a scale from 1 to 10
   1 refer not important at all, 5 medium and 10, high important. (NB. you can use the range 1-10)
   a) Can you please explain why you have given this score?
   b) Do you think having the right network would have contribution to ESLSE solving those challenges? How?

2. In general, what is your recommendation of solution to avoid or minimize the above mentioned problems?

3. Is there anything about multimodal transport and logistics you want to tell us which were not mentioned in our interview questions?

Confidentiality and Secrecy

The information that will be given to me during the interview will be treated as confidential and the company name will be used only if allowed.
Appendix B- Interview Questions with Maritime Sector

A- Biographical Data
B- Logistics performance and personnel
C- Multimodal transport Services
D- Information communication technology (ICT)
E- Infrastructure
F- Network Partner Integration
G- Port administration
H- Closing questions

Over all, I would like to know the challenges of multimodal transport service of ESLSE in the Europe trade routes operation from origin up to destination and to analyze the contribution of network partners to ESLSE solving these challenges.

A. Biographical Data
   • Name?
   • Gender?
   • Level of education?
   • What is your position?
   • What is your role at the company?
   • How long have you been serving your company?
   • When was the company established?
   • In which country’s the company established?
   • What countries do you currently operate in?
   • How many employees working in your company?

B. Logistics performance and personnel
   1. How do you evaluate your operational officer’s knowledge and skill regarding to multimodal transporting services?

   Please rate on a scale from 1 to 10. 1 refers to poor, 5 refer to medium and 10 refer to excellent. (NB. you can use the range 1-10)
a) Can you please explain why you given this score?

2. Do you think the cargo from manufacturing site or shipper, to loading port, discharging port, dry port to customer destination are distributed at the right time, quality, and quantity?

3. Do you think any accidents to shipments of cargo reported immediately?
   a) If yes, can you explain it with practical situation?
   b) If no, why?

4. Do you think ESLSE’s shipment status information dissemination facilities have been serving well to reduce shipment transit time, demurrage and storage costs?
   a) If yes, how?
   b) If no, why?

5. Do you think all the time the information disseminated by all sector of ESLSE is reliable and dependable for business decision?
   a) If yes, how?
   b) If no, why?

6. What do you think the enterprise has enough capacity, quantity and quality of trucks to render effective and efficient transportation service?

7. What kind of system currently used in your office to reduce transportation logistic costs?

8. What is your opinion, the logistics system in Ethiopia is improving over time?

C. Multimodal transport Service or Operation

1. What are the major activities being perform in your company in related to multimodal transport services?

2. What is your opinion; the multimodal transport system concepts and practice have been adequately communicated to all staff members and the business community?

3. Do you think the maritime sector has the capacity to facilitate the multimodal transport services in terms of human and physical resources?
   a) If yes, how?
   b) If no, why?
4. Do you agree that multimodal freight transport documents are always issued and delivered to customer on time?
   a) If yes, how?
   b) If no, why?

5. Do you think there is simple and flexible customs procedure to allow door-to-door movement of containerized cargo?
   a) If yes, how?
   b) If no, why?

6. What do you think the charge of loading/unloading cargo under the multimodal transport service is fair?
   a) If yes, how?
   b) If no, why?

7. Do you think the overall shipment transit time and transaction costs have been significantly reduced by multimodal transport operation?
   a) If yes, how?
   b) If no, why?

8. What do you think on the overall maritime sector performance is well with regard to documentation performance?

9. What is your opinion about shipment of cargo in terms of safety and security?

10. What is the practical situation when the accidents or losses happen?

11. What were the challenges your sector facing in multimodal transport services through Europe trade route operation? Mainly on Sweden, Denmark & United Kingdom trade routes?

12. What kind of challenges has been solved?

13. What is your sector contribution to solve those problems?

14. Is there any problem or challenge still not solved?
   c) If yes, what are they? And why not solved?
   d) In what way those challenges affect the network partners such as Customers, Dry ports, Maritime sector, Shipping sector, Shipping Agent, and Shippers?

15. What is your recommendation of solution to avoid or minimize the above problems?

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D. Information Communication Technology (ICT)

1. Can you explain, does your company have long term investment in ICT to create the interconnectivity between shippers, shipping agent, shipping sector, maritime sector, Djibouti office, and dry ports?

2. Do you think your ICT system is efficient and contribute to the efficient service of the multimodal transport operation?
   Please rate on a scale from 1 to 10. One refers to not efficient (poor), 5 refer to medium and 10 refer to highly efficient (excellent). (NB. you can use the range 1-10)

3. Can you please explain why you given this score?

4. Do you feel that the service coverage on the ICT, capabilities, security and safety, facilitation and market access has become increasing overtime?
   a) If yes, how?
   b) If no, why?

5. Electronic Data Interchange (EDI) system is available in your international operation?

E. Infrastructure

1. How important the infrastructure facilities in the multimodal transport service?

2. What are the challenges of multimodal transport services in related to infrastructure facilities?

3. Do you think the service coverage on the infrastructure has become increasing overtime?
   a) If yes, can you explain it?
   b) If no, why?

4. How do you get the Ethio-Djibouti rail way contribute for multimodal transport operation?

5. Do you use the new Addis –Adama Express way as part of your trade route?
   a) If yes, what is the advantage for multimodal transport service?
   b) If no, why?
F. Network Integration

1. Do you think the shipping agents, shipping sector, maritime sector and dry ports and customers are integrated?
   a) If yes, how?
   b) If no, why?

2. Do you think the enterprise has effective multimodal transportation network with in Sweden, Denmark and UK trade routes?
   a) If yes, how?
   b) If no, why?

G. Port Administration

1. Do you agree that the loading\unloading operations at dry ports are convenient?
   a) If yes, how?
   b) If no, why?

2. Do you think the corruption, theft, security risk and regulations at dry port affected the multimodal transport operation?
   a) If yes, how?
   b) If no, why?

H. Closing Questions

1. How important do you consider your network contribution to solving those challenges? Use a scale from 1 to 10
   1 refer not important at all, 5 medium and 10 refer high important. (NB. you can use the range 1-10)

2. Can you please explain why you have given this score?

3. Do you think having the right network would have contribution to ESLSE solving those challenges? How?

4. In general, what is your recommendation of solution to avoid or minimize the above-mentioned problems?

5. Is there anything about multimodal transport and logistics you want to tell us which were not mentioned in our interview questions?

Confidentiality and Secrecy

The information that will be given to me during the interview will be treated as confidential and the company name will be used only if allowed.

Author: Habtesilase Demse
Masters Level: Business Administration with specialization in International Business Strategy
A. Biographical Data

- Name?
- Gender?
- Level of education?
- What is your position?
- What is your role at the company?
- How long have you been serving your company?
- When was the company established?
- In which country’s the company established?
- What countries do you currently operate in?
- How many employees working in your company?

B. Logistics Performance and Personnel

1. How do you evaluate your operational officer’s knowledge and skill regarding to transporting services?
   Please rate on a scale from 1 to 10. 1 refers to poor, 5 refer to medium and 10 refer to excellent. (NB. you can use the range 1-10)
   a) Can you please explain why you given this score?

2. Do you think the cargo from manufacturing site or shipper, to loading port, discharging port, dry port to customer destination are distributed at the right time, quality, and quantity?
   a) If yes, can you explain it how can possible to distribute at the right time, quality and quantity?
   b) If no, why?

3. Do you think any accidents to shipments of cargo reported immediately?
   a) If yes, can you explain it with practical situation?
   b) If no, why?

4. Do you think ESLSE’s shipment status information dissemination facilities have been serving well to reduce shipment transit time, demurrage and storage costs?
   a) If yes, how?
5. Do you think all the time the information disseminated by all sector of ESLSE is reliable and dependable for business decision?
   a) If yes, how?
   b) If no, why?

6. Do you agree that the inland transport service cost for multimodal transport operation is fair?
   a. If yes, how?
   b. If no, why?

7. What do you think the charges being requested for dry port, terminal and warehouse services are reasonable?

8. What is your opinion the dry ports and terminals are well equipped with all the necessary equipment’s and facilities used for loading/unloading?

9. What do you think the dry port and terminal facilities are well accessed throughout the country?

10. Do you have enough dry ports and terminals available space and capacity to accommodate all incoming and outgoing cargoes even in peak periods?

11. Do you think dry ports and terminal service are provided easily with acceptable waiting time?
   a. If yes, how?
   b. If no, why?

12. What do you think the cargoes are easily located in identifiable way and their safety is well ensured in any movement?

13. What is your opinion the Cargo unsnuffing service is well provided in your dry ports?

14. What is yours believe about time waiting for truck to loading and discharging at the terminal area is efficient?

15. What do you think the enterprise has enough capacity, quantity and quality of trucks to render effective and efficient transportation service?
   a. If yes, how?
   b. If no, why?

16. Do you think a timely refund is made for container deposit?

17. What do you think the information disseminated by all sector of ESLSE is reliable and dependable for business decision?
   a) If yes, how?
   b) If no, why?

Author: Habtesilase Demse
Masters Level: Business Administration with specialization in International Business Strategy
18. Do you think the trucks round trip is increased from Djibouti to dry ports?
   a. If yes, how?
   b. If no, why?

19. What is your opinion, the logistics system in Ethiopia is improving over time?

C. Multimodal Transport Service or Operation
1. What are the major activities being performed in your company in relation to multimodal transport services?
2. What is your opinion; the multimodal transport system concepts and practice have been adequately communicated to all staff members?
3. Do you agree that multimodal fright transport documents are always issued and delivered to customer on time?
   a) If yes, how?
   b) If no, why?
4. Do you think there is simple and flexible customs procedure to allow door-to-door movement of containerized cargo?
   a) If yes, how?
   b) If no, why?
5. What do you think the cost of loading\unloading is fair?
   a) If yes, how?
   b) If no, why?
6. Do you think the overall shipment transit time and transaction costs have been significantly reduced by multimodal transport operation?
   a) If yes, how?
   b) If no, why?
7. What do you think on the overall Comet Dry port performance is well regarding documentation performance?
8. What is the practical situation when the accidents or losses happen?
9. What do you think the overall Comet Dry Port performance is well in terms of safety and security against damage or loss?
10. What were the challenges your company facing in multimodal transport services through the Europe trade route operation? (Mainly via Sweden, Denmark, and UK)
11. What kind of challenges has been solved?
12. What is your company contribution to solve those problems?

13. Is there any problem or challenge still not solved?
   a) If yes, what are they? And why not solved?
   b) In what way those challenges affect the network partners such as Customers, Dry ports, Maritime sector, Shipping sector, Shipping Agent, and Shippers?

14. What is your recommendation of solution to avoid or minimize the above problems?

D. Information Communication Technology (ICT)
1. Can you explain, does your company have long term investment in ICT to create the interconnectivity between shippers, shipping agent, shipping sector, maritime sector, Djibouti office, and dry ports?

2. Do you think your ICT system is efficient and contribute to the efficient service of the multimodal transport operation?
   Please rate on a scale from 1 to 10. One refers to not efficient (poor), 5 refer to medium and 10 refer to highly efficient (excellent). (NB. you can use the range 1-10)
   a) Can you please explain why you given this score?

3. Do you feel that the service coverage on the ICT, capabilities, security and safety, facilitation and market access has become increasing overtime?
   a) If yes, how?
   b) If no, why?

E. Infrastructure
1. How important the infrastructure facilities in the multimodal transport service?

2. What are the challenges of multimodal transport services in related to infrastructure facilities?

3. Do you think the service coverage on the infrastructure has become increasing overtime?
   a) If yes, can you explain it?
   b) If no, why?

4. How do you get the Ethio-Djibouti rail way contribute for multimodal transport operation?
F. Network Integration
1. Do you think the shipping agents, shipping sector, maritime sector and dry ports and customers are integrated?
   a) If yes, how?
   b) If no, why?
2. Do you think the enterprise has effective multimodal transportation network with in Sweden, Denmark and UK trade routes?
   a) If yes, how?
   b) If no, why?

G. Port Administration (Dry Port)
1. Do you agree dry port and terminal operations are well managed and efficient in their service?
2. Do you think the overall management practice of dry port and terminal sector is satisfactory?
3. Do you agree that the unloading operation at Comet port is convenient?
   a) If yes, how?
   b) If no, why?
4. What is your opinion on the contribution of Dry ports for multimodal transport operation, flow of goods and coordination of different types of carriers?
5. Do you think the corruption, theft, security risk and regulations at Dry ports affected the multimodal transport operation?
   a) If yes, how?
   b) If no, why?

H. Closing questions
1. How important do you consider your network contribution to solving those challenges? On a scale from 1 to 10
   1 refer not important at all, 5 medium and10, high important. (NB. you can use the range 1-10)
2. Can you please explain why you have given this score?

3. Do you think having the right network would have contribution to ESLSE so XVI those challenges? How?

6. In general, what is your recommendation of solution to avoid or minimize the above-mentioned problems?

7. Is there anything about multimodal transport and logistics you want to tell us which were not mentioned in our interview questions?

**Confidentiality and Secrecy**

The information that will be given to me during the interview will be treated as confidential and the company name will be used only if allowed.

**Appendix D- Interview Questions with Shipping Agents**

**A. Biographical Data**

- Name?
- Gender?
- Level of education?
- What is your position?
- What is your role at the company?
- How long have you been serving your company?
- When was the company established?
- In which country’s the company established?
- What countries do you currently operate in?
- How many employees working in your company?

**B. Logistics performance and personnel**

1. How do you evaluate your operational officer’s knowledge and skill regarding to transporting services?

   Please rate on a scale from 1 to 10. One refers to poor, 5 refer to medium and 10 refer to excellent. (NB. you can use the range 1-10)

   a) Can you please explain why you given this score?
2. Do you think the transit time of cargo from manufacturing site or shipper, to loading port, discharging port, dry port to customer destination are distributed at the right time, quality, and quantity?
   a) If yes, can you explain it how can possible to distribute at the right time, quality and quantity?
   b) If no, why?
3. Do you think any accidents to shipments of cargo reported immediately?
   a) If yes, can you explain it with practical situation?
   b) If no, why?
4. Do you think ESLSE’s shipment status information dissemination facilities have been serving well to reduce shipment transit time, demurrage and storage costs?
   a) If yes, how?
   b) If no, why?
5. What is your opinion, the logistics system in Ethiopia is improving over time?

C. Multimodal transport Service or Operation
1. What are the major activities being perform in your company in related to multimodal transport services?
2. What is your opinion; the multimodal transport system concepts and practice have been adequately communicated to all staff members?
3. Do you agree the multimodal transport service networks between your trade route and the enterprise is effective?
   c) If yes, how?
   d) If no, why?
4. Do you think there is simple and flexible customs procedure to allow door-to-door movement of containerized cargo?
   c) If yes, how?
   d) If no, why?
5. What do you think the charge of loading\unloading cargo under the multimodal transport service is fair?
   e) If yes, how?
   f) If no, why?
6. What were the challenges your company facing in multimodal transport services through your company trade route operation?

7. What kind of challenges has been solved?

8. What is your company contribution to solve those problems?

9. Is there any a problem or challenges still not solved?
   e) If yes, what are they? And why not solved?
   f) In what way those challenges affect the network partners such as Customers, Dry ports, Maritime sector, Shipping sector, Shipping Agent, and Shippers?

10. What is your recommendation of solution to avoid or minimize the above problems?

**Information Communication Technology (ICT)**

1. Can you explain, does your company have long term investment in ICT to create the interconnectivity between shippers, shipping agent, shipping sector, maritime sector, Djibouti office, and dry ports?

2. Do you think your ICT system is efficient and contribute to the efficient service of the multimodal transport operation?
   Please rate on a scale from 1 to 10. One refers to not efficient, 5 refer to medium and 10 refer to highly efficient. (NB. you can use the range 1-10)
   a) Can you please explain why you given this score?

3. Do you feel that the service coverage on the ICT, capabilities, security and safety, facilitation and market access has become increasing overtime?
   a) If yes, how?
   b) If no, why?

4. Electronic Data Interchange (EDI) is available in your international operation?

**D. Infrastructure**

1. How important the infrastructure facilities in the multimodal transport service?

2. How do you get the Ethio-Djibouti rail way contribute for multimodal transport operation?

**E. Network Integration**
1. What are the major activities being performed between your shipping company and ESLSE?

2. Do you agree the shipper, shipping agents, shipping sector, maritime sector and dry ports and customers are integrated and providing quality of service?
   a) If yes, how?
   b) If no, why?

3. Do you performed with the utmost efficient and effective way through coordination and reporting of cargo booking with shipper on behalf of the Ethiopian receivers?

F. Closing Questions
1. Overall, are you satisfied with Ethiopia to Sweden trade route activities in relation to multi modal transport service?

2. How important do you consider your network contribution to ESLSE solving those challenges? On a scale from 1 to 10
   1 refer not important at all, 5 medium and10, high important. (NB. you can use the range 1-10)
   a) Can you please explain why you have given yourself this score?
   b) Do you think having the right network would have contribution to ESLSE solving those challenges? How?

3. In general, what is your recommendation of solution to avoid or minimize the above-mentioned problems?

4. Is there anything about multimodal transport and logistics you want to tell us which were not mentioned in our interview questions?

Confidentiality and Secrecy
The information that will be given to me during the interview will be treated as confidential and the company name will be used only if allowed.
# Appendix E-Interview Schedule

<table>
<thead>
<tr>
<th>Case Companies</th>
<th>Country Location</th>
<th>Interviewee Name</th>
<th>Interviewee title</th>
<th>Mode of Interview</th>
<th>Length of Interview</th>
<th>Date of Interview</th>
</tr>
</thead>
</table>
| **Shipping Sector** | Ethiopia | • Kibrnew Atinafu  
• Endalew Kasahun  
• Melkamu Awoke  
• Henok Hailu  
• Marta Birhanu,  
• Asmayit Tekeste  
• Biniyam Fekadu | • Senior Shipping Officers  
• Chief Accountant 1 | • Email  
• Phone  
• Skype | 1 to 2.5 hr each | Apr 27 & 28  
Apr 30  
May 1  
May 3  
May 5 |
| **Maritime Sector** | Ethiopia | • Dereje  
• Bezawit  
• Sisay | • MMT Division Manager  
• Customer Service  
• Customer Service | • Email  
• Phone  
• Skype | 1-2hr each | May 2  
Apr 27 |
| **Modjo Dry Ports** | Ethiopia | • Mulugeta Bekele | • Senior Economist | Phone & Email | 2hr | Apr 28, May 2 |
| **Glean Dry Ports** | Ethiopia | Confidential Coordinator | Email | 30 Min | May 2 |
| **Comet Dry Ports** | Ethiopia | • Kedir Aragie | Operational manager | Email | 30Min | May 2 |
| **Sweden Shipping Agent** | Sweden | Ingela Jangtolf  
• Henrik Bengtsson | - Customer Service -Export | Email  
Email | - 1hr | Mar9-Apr  
Jun 21 |
| **Denmark Shipping Agent** | Denmark | • Claus Winding (CC to Winding) | Line & Project Manager | Email | Appx 1-2 | Apr 12-May 4 |
| **UK Shipping Agent** | UK | • Michael Crager (CC to Ronnie Wickins) | General Manager | Email | Appx 1-2 | Apr 12-May 9 |
### Profiles of the Companies Interviewed

<table>
<thead>
<tr>
<th>Organization</th>
<th>Year Founded</th>
<th>Founded in</th>
<th>Service Offered</th>
<th>Number of Employees</th>
<th>Number of Countries or cities operate in</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Shipping Sector</strong></td>
<td>1964</td>
<td>Ethiopia</td>
<td>Company has taken multimodal transportation as a key service to the country import and export trade.</td>
<td>4000 on board and onshore</td>
<td>35 Countries</td>
</tr>
<tr>
<td><strong>Maritime Sector</strong></td>
<td>1968</td>
<td>Ethiopia</td>
<td>Booking, as an agent at port of loading, sea port service, multimodal transport services.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Modjo Dry Ports</strong></td>
<td>2009</td>
<td>Ethiopia</td>
<td>Port services at dry ports</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Glean Dry Ports</strong></td>
<td></td>
<td>Ethiopia</td>
<td>Port services at dry ports</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Comet Dry Ports</strong></td>
<td></td>
<td>Ethiopia</td>
<td>Port services at dry ports</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Freight Man AB</strong></td>
<td>1973</td>
<td>Sweden</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Scan Shipping</strong></td>
<td>1969</td>
<td>Demark</td>
<td>Liner service about 50% of shipment are multimodal &amp; for project shipments about 60% is multimodal.</td>
<td>2500</td>
<td>70 Cities</td>
</tr>
<tr>
<td><strong>Cory</strong></td>
<td>1842</td>
<td>UK</td>
<td>On behalf of UK</td>
<td>250</td>
<td>5 Countries</td>
</tr>
</tbody>
</table>
Brothers

shippers, we undertake all service utilizing the ESLSE nominated slot carrier, UK transport, UK terminals, UK export formalities, & issuance of ESLSE bill of lading to whichever ESLSE nominated dry ports.
Dear [Insert Name],

Greeting to you!

I, Habtesilase D. a master’s student studying International Business Strategy at Linnaeus University (Kalmar, Sweden). Currently, I’m conducting a research study on “Challenges of Multimodal Transport Services” in the case of Ethiopia Shipping and Logistics Service Enterprise by focusing on Ethiopia to European (Sweden, Denmark & UK) trade route operation.

I believe you would be the perfect fit for the studies because, you have information and experiences that the researcher seek for the study. Hence, the experts in the field and who participated in the multi-modal operation process can provide the input to our study.

I would like a quick interview through Skype or Email. If the Email interview applied, the email interview will conduct by sending a series of question to interviewee(s) by which the interviewees simply answers by replying to the email, the same follow-up questions and response then can be sent.

Therefore, I hereby kindly requesting to spend some minutes of your time to be interviewed. Your participation is completely voluntary, and I can assure you that the information obtained will be kept confidential.

The response would have analyzed after getting your interview answers.

Mobile#: [Insert Number] Habtesilase

Thank you in advance for your cooperation!

Regards

Habtesilase D.
Appendix H- Sample invitation email after confirmation with more detail information

Dear [Insert Name],

Greeting to you!

Thanks for your confirmation. Here by, I would like to express my gratitude to your dedicated cooperation. It will be impossible to conducting the research without the participation of expert from ESLSE.

Research Purpose
The purpose of the study is to identify the challenges of multimodal transport service of ESLSE in the Europe trade routes operation from origin up to destination and to analyze the contribution of network partners to ESLSE solving these challenges. Therefore, the outcome of the study can provide recommendations to Ethiopia Shipping and Logistics Service Enterprise (ESLSE) to improve how it manages the business. The recommendation will be useful for other shipping companies too.

Research Question
[Insert research Question]
I have a plan to conduct the interview on 28th or 29th of April, 2018 at any time. (Only if it is works for you, let me know your conducive date and time)

Data Collection
We have conducting a qualitative research, through a case study interview. Therefore, we will send a copy of interview guide before conducting the interview question (It will be sent on Friday, 27th of April, 2018 at 9-10AM) hence; it will allow you some time to familiarize yourself with our interview questions.

Mobile#: [Insert Number] Habtesilase

Thank you in advance for your cooperation.

Regards

Habtesilase D. XXVI

Author: Habtesilase Demse
Masters Level: Business Administration with specialization in International Business Strategy
Dear [Insert name]

Here by, I would like to express my gratitude to your dedicated cooperation. It will be impossible to conducting the research without your participation.

I, Habtesilase D. a master’s student studying International Business Strategy at Linnaeus University (Kalmar, Sweden). Currently, I’m conducting a research study on “Challenges of Multimodal Transport Services” in the case of Ethiopia Shipping and Logistics Service Enterprise by focusing on Ethiopia to European (Sweden, Denmark & UK) trade route operation.

I believe you or (relevant representative) would be the perfect fit for the studies because; you have information, experiences, and network with Ethiopian Shipping and Logistics Service enterprise (ESLSE) as a liner agent in Europe trade route that the researcher seek for the study. Hence, the experts in the field and who participated in the multimodal operation process would be the input to the study.

I would like a quick interview through Skype, telephone or Email. If the Email interview applied, the email interview will be conducted by sending a series of question to interviewee(s) by which the interviewees simply answers by replying to the email, the same follow-up questions and response then can be sent.

Therefore, I’m kindly requesting to spend some minutes of your time to be interviewed. I will send a copy of interview guide before conducting the interview question (It will be send on Friday, 27th of April 2018 at 9AM) hence; it will allow you some time to familiarize yourself with the interview questions. Your participation is completely voluntary, and I can assure you that the information obtained will be kept confidential.

Finally, I have a plan to conduct the interview on 28th or 29th of April, 2018 at any time. (Only if it is works for you, let me know your conducive date and time)

The response would have analyzed after getting your interview answers.
Author: Habtesilase Demse  
Masters Level: Business Administration with specialization in International Business Strategy
**Procedure of Shipping Agency Service**

Customer (Principal)

1. Ship owner receive vessel berthing report
   - Receive confirmed cargo booking and obtain list of stuffed containers
   - Prepare loading list and send to stevedore for loading and receive loading list

2. Master
   - Contact master on arrival at anchorage and arrange with port for vessel berth
   - Resolve original interchange issues/ refused
   - Receive shipping instruction
   - Receive stuffing report

3. Inland Shipping Agency Service
   - Issue release and follow up return of empty container
   - Receive clearance for discharge and stevedore

4. Head office Interface (clearing and forwarding + Finance)
   - Finance collect charge and clear and forwarding collect G/L
   - Finance receive final D/A

5. Port Interface (Stevedoring + clearing and forwarding)
   - Stevedoring arrange facility to commence shark duty
   - Stevedore load cargo and advice detail

Other parties (Stakeholders)

6. Port authority make vessel to berth
   - Quarantine service provide free padding to vessel
   - Shipper provide shipping instruction
   - Prepare loading cargo, freight manifest, and other expense
   - Finance collect expense
   - Finance collect D/A
   - Collect D/A
   - Prepare and release D/A
   - Consolidated draft D/A
   - Finance collect charge and clear and forwarding collect G/L
   - Receive cargo, freight manifest and copy B/L to the next port
   - Send final B/L
   - Receive final short and long certificate
   - Port authority provide clearance and moving out vessel

**Ethiopian Shipping and Logistics Service Enterprise**

Port Shipping Agency Service

- Receive loading cargo detail
- Receive authorization
- Prepare G/L, cargo, freight manifest, and other expense
- Prepare D/A check attach supporting documents and dispatch to head office
- Finance receive final D/A

Inland Shipping Agency Service

- Receive loading cargo detail
- Prepare G/L, cargo, freight manifest, and other expense
- Finance receive D/A

Head office Interface (clearing and forwarding + Finance)

- Finance collect charge and clear and forwarding collect G/L
- Finance receive final D/A

---

**Author:** Habtesilase Demse

**Masters Level:** Business Administration with specialization in International Business Strategy
Figure. Procedures of Shipping Agency Services. Source: Revised shipping Agency Manual of ESLSE, 2015

Appendix K- Multi modal Transport End to End detail Flow Chart

Figure. Multimodal transport procedure manual, Source: ESLSE, 2015

Author: Habtesilase Demse
Masters Level: Business Administration with specialization in International Business Strategy
The end to end detail flowchart of multimodal transport operation of the ESLSE procedure manual are enclosed at the appendix

Appendix L - Multi modal Transport High Level Map

Figure. Multimodal transport procedure manual, Source: ESLSE, 2015