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Assessment of the Impact of Logistic Performance on Trade in Ethiopia

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Submitted to; Tesfaye Wolde (PHD)

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DECLARATION

The undersigned declare that this thesis is my original work and has not been presented for a degree in any other university, and that all sources of material used for the thesis been dully acknowledgment.

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This Thesis has been submitted for examination with my approval as a university advisor.

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TABLE OF CONTENTS

ACKNOWLEDGEMENTS

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF ANNEXES

ACRONYMS AND ABBREVIATIONS

ABSTRACT

CHAPTER 1: INTRODUCTION.....	1
1.1 Background of the Study	1
1.2 Problem Statement	3
1.3 Research Questions.....	5
1.4Objective of the Study	5
1.5Significance of the Study.....	5
1.6 Scope and Bound of the Study.....	5
1.7 Limitations of the Study	5
1.8 Organization of the Study	6
CHAPTER 2: LITERATURE REVIEW	7
2.1 Theoretical Literature Review.....	7
2.1.1 Logistics and Infrastructure.....	7
2.1.2 Logistics and Institutions.....	8
2.1.3 Logistics and Landlockedness.....	9
2.2 Empirical Literature Review.....	11
2.2.1Overview on Freight Transport Infrastructures in Djibouti.....	12
2.2.2 Other Ports in the Region.....	13
2.2.3 Logistic Performance and Trade Costs.....	14
2.3 Conceptual Framework.....	15

CHAPTER 3: RESEARCH METHODOLOGY	16
3.1 Research Philosophy	17
3.2 Research Design	17
3.3 Population and Sampling Techniques	18
3.4 Procedures of Data Collection	18
3.5 Tools and Techniques of Data Analysis	18
3.6 Reliability and Validity	19
3.7 Ethical Issues	19
 Chapter 4: Data analysis	 20
4.1 Diagnosis of Ethiopian Logistic System.....	20
4.2 Import Logistic Performance Analysis	21
4.2.1 Bank Process for Import	21
4.2.2 Shipping for Import.....	23
4.2.2.1 Shipping Time.....	25
4.2.3 Port Operation	26
4.2.3.1 Organization of Port Services	26
4.2.3.2 Port Operation Time	27
4.2.3.3 Cargo Port Dwelling Time.....	29
4.2.3.4 Port Cargo Handling Tariff.....	30
4.2.4 Freight Transport	31
4.2.4.1 Freight Transport Time	32
4.2.5 Inland Dry Ports	33
4.2.5.1 Organization of Terminal Services	33
4.2.5.2 Dry Port Processing and Dwelling Time	34
4.2.6 Customs Process for Import.....	35
4.2.6.1 Customs Process Time and Cost for Import	35
4.3 Export Logistics Performance Analysis.....	36
4.3.1 Bank Process Time and Cost.....	36
4.3.2 Customs for Export	37

4.3.2.1 Customs Process Time and Cost for Export	37
4.3.3 Export Freight Transport.....	38
4.3.3.1 Transport Time	38
4.3.4 Port Operation for Export	39
4.3.4.1 Port Operation Time and Cost	39
4.3.5 Shipping for Export.....	40
4.4 Measures Taken by the Ethiopian Government.....	40
Chapter Five: Summary, Conclusion and Recommendation	43
REFERENCES	46
ANNEX	49

LIST OF TABLES

Table 1 Bank Process Time for Import	22
Table 2 World's Top Ten Liner Carriers	24
Table 3, Advertized Frequency of Sailings and Transit Time	25
Table 4, Logistic Performance Indicators for Shipping Service.....	26
Table 5, Ports Share of Ethiopian Cargo Handled.....	27
Table 6 Comparison of Port Charges for Import Container in the Region.....	30
Table 7 Freight Fleet Characteristics	32
Table 8 Freight Transportation Time for Different Types of Import.....	33
Table 9 Processing Time and Dwelling Time (Days) at Modjo Terminal	34
Table 10 Customs Processes Time (Days) for Imports	35
Table 11 Bank Process Time (Days) for Export Logistics	36
Table 12 Customs Process Time for Export Cargo	37
Table 13 Export Freight Transport Time and Cost (Container and Bulk).....	38
Table 14 Export Freight Handling Time (Days) at Djibouti.....	39
Table 15 Average Export Sea Freight Rate from Djibouti to Various Destination Ports.....	40

LIST OF FIGURES

Figure 1 Conceptual Framework of the Research.....	15
Figure 2 the Sequence of SC Process In the Export Import Shipment	21
Figure 3 Uni-modal Vs Multimodal Import Cargo Port Transit Time	28
Figure 4 Port Dwelling Time for Uni-modal and Multimodal Cargo at Djibouti	29
Figure 5 Comparison of Average Port Dwelling Time (Days) from East Africa Ports.....	30
Figure 6 Export Handling Cost (USD) at Djibouti	39

LIST OF ANNEXES

Annex 1 List of LLDCs and Transit Countries.....	49
Annex 2 Logistics Performance of LLDCs (1-5 scale).....	50
Annex 3 Logistic Performance Index of Coastal and Land Locked Countries.....	52
Annex 4 Questionnaires.....	53

ACRONYMS AND ABBREVIATIONS

CAD- Cash against Document

CBB – Construction and Business Bank of Ethiopia

DBE- Development Bank of Ethiopia

DWT- Dead weight Ton

EMAA- Ethiopian Maritime Affairs Authority

ESLSE- Ethiopian shipping and Logistics service Enterprise

FCY- Foreign Currency

FDRE- Federal Democratic Republic of Ethiopia

FOB- Freight on board

GDP- Gross Domestic Product

GNI – Gross National Income

ICT- Information Communication Technology

L/C- Letter of Credit

LLDC- Land Locked Developing Countries

LPI- Logistics Performance Index

NBE- National Bank of Ethiopia

Ro/Ro- Roll on/Roll off operation, rolling equipment makes use of ships ramps

SC- Supply Chain

SCM- Supply Chain Management

SDTV- Societe Djiboutienne du Terminal Vraquier

TA- Transport Authority

TEU- Twenty Feet Equivalent Unit

UN- United Nation

ABSTRACT

The ability to transport goods quickly, economically and reliably is vital to a nation's prosperity and capacity to compete in global market. Ethiopian logistics system is characterized by poor logistics management system and lack of coordination of good transport, low level of development of logistics infrastructure and inadequate fleets of freight vehicles in number and age, damage and quality deterioration of goods while handling, transporting and in storage. This coupled with lack of sea port resulted in poor market and non-competitiveness of Ethiopian goods on global market, which compromised livelihood of the people and economy of the country. Efficient and effective logistics system needs to be put in place to solve these socio-economic problems. The objective of this work is to assess the current status of logistics practices in Ethiopia with the aim of identifying the gaps, potentials and constraints for development of effective and efficient logistics system and trade competitiveness. To meet this objective, both qualitative and quantitative assessment of the components of freight logistics and transport companies, organizations dealing with documentation of import and export goods, Banks, inland dry ports, shipping organizations and customs authority are made. Information from both primary and secondary sources is used to carry out the assessment. Presence of road of high density and quality makes efficient distribution of goods easy. Customer orientation, low level bureaucracy at customs and trade facilitations expedite goods flow. Availability of skilled manpower, conducive labor regulations and business environment, co-ordination between institutions, development of ICT promotes economic activities. On most of these criteria, Ethiopian logistics system is found to be poor. There is urgent need for research on the problems, and the government needs to work on building the capacity of institutions and create the integration needed between them. It should also start to look other available port options so that to minimize the economic dependence and excessive cost incurred from Djibouti port. Furthermore usage of ICT, adaptation of modern logistics activities and investment on research on such issues should also be seen as a mechanism to improve the logistic performance and trade competitiveness of the country.

CHAPTER I

INTRODUCTION

1.1 Background of the Study

The origin of the term logistic is the Greek word *logistikos*, meaning 'skilled in calculating'. It was initially developed in the context of military activities in the late 18th and early 19th centuries and it launched from the military logistics of World War II. It was initially a military activity concerned with getting soldiers and munitions to the battlefield in time for flight. Military typically incorporate the supply, movement and quartering of troops in a set. The main background of its development is that the recession of America in the 1950s caused the industrial to place importance on goods circulations. Now it is seen as an integral part of the modern production process (T. Srinivas and M.Sreenivas, 2009).

Logistics is one of the trade facilitating factors in the global trade. It is a multidimensional factor in trade operation focusing on process, skills sets and technologies. Specifically, logistics affects trade performance of a country in terms of cost, time, reliability and predictability and customer services, which further affect overall competitiveness of the export in the international market other things being constant Arvis et.al (2007). As countries of the world becomes more and more integrated through trade and struggle for the achievement of their developmental goals, calls for the need for efficient logistic system; development of a plan, implementing, and controlling the efficient cost effective flow and storage of raw materials, in-process inventory, finished goods and related information from point of origin to point of consumption for the purpose of meeting customers' requirements.

Quality logistic services play an important role in facilitating the transportation of international trade in goods; inefficient logistic services impede trade by imposing an extra cost in terms of time as well as money. As developed nations shift from traditional manufacturing and agriculture and are increasingly engaged in international vertical specialization, the need for efficient logistics services becomes ever more important. High quality logistics services improve the competitiveness of a country's export by reducing the cost involved in transporting goods-especially for countries that are disadvantaged by being far from major markets (Fekadu M.Debela, 2013).

There are many components of logistics that interact to impact supply chains and ultimately influence trade flows. Transport is the single most expensive component of logistics and adequate infrastructure is required to facilitate transportation. Whether these logistics providers supply their own transportation or whether they rely on transport services provided by third parties, the quality of transport infrastructure is critical.

A well developed information system and information flow is also a significant component of logistics services. The need for a high standard of telecommunication services is imperative to permit the timely and reliable flow of information. If economies, and in particular, developing economies, are to participate fully in global production and supply of intermediate and finished goods, their ability to do so will be affected by the standard of their ICT infrastructure as an important component of trade and transport facilitation.

Time delays in logistics create indirect costs and can take several forms. They also increase the cost of firms that are then passed on to consumers. The cost of holding inventory and depreciation is higher for ocean shipped goods. Lower shipping times are associated with higher volume of trade, and there is some evidence that shipping time rather than distance is a more accurate reflection of shipping costs since it better captures the time-sensitivity of certain goods. Time delays at the border due to inefficient and lengthy administrative procedures related to importing and exporting can also have detrimental effect on trade volumes. In addition, time delays may affect firms that rely on just-in-time deliveries of critical components to their manufacturing process as well as firms who require short lead times between placing an order and getting it to market (e.g. fashion items, technology items).

Logistics is one of the trade facilitating factors in the global trade. The importance of logistics, trade facilitation and other non policy barriers has increased in significance mainly because trade policy barriers have increasingly accounted for a smaller proportion of overall trade costs (Anderson and Van Wincoop, 2004). More recently, logistics, trade facilitation and infrastructure have been found to be significant determinants of trade. Specifically, logistics affects trade performance of a country in terms of cost, time, reliability and predictability and customer services, which further affect overall competitiveness of the export in the international market other things being constant Arvis et.al (2007). The World Bank's Logistics Performance Index (2010: III) indicates that 'countries at the same level of per capita income with the best logistics performance experience additional growth of 1% in Gross Domestic Product (GDP) and 2% in trade'. Improving logistics performance has therefore become a major policy objective due to its beneficial impact on the economy.

The costs of trade associated with logistics in the global trade accounts for more than 18% of developing countries' GDP, whereas it accounts for 8-10% of developed nations' GDP (Arvis et.al, 2010). Ethiopia as a developing country recognized the significance of Trade Logistics before a decade after experiencing a bottleneck when importing heavy machineries to fulfill the demand of the industry and service sector. Similarly, the export market began to demand instant delivery and cost efficiency. Since Ethiopian economy is largely dependent on Exportable agricultural products mainly Coffee and oilseeds, logistical efficiency is very crucial. As a result, the Ethiopian government practiced many reforms in response to changes in the economy and makes the logistic activities to be regulated under the Ministry of Transport. Specifically, the country issued proclamations,

deregulated the transport sector, merged logistics enterprises, restructured customs Authority and established dry ports which are the major move in the country that gave recognition to trade logistics.

As mentioned earlier, the current global trade demands an instantaneous and cost efficient trade logistics. Whether or not a successful logistics–trade cycle is created will however ultimately depend upon the extent and pace of government measures to liberalize the supply of logistics (De Sousa & Findlay, 2007: 245), including appropriate infrastructure investments (World Bank, 2010: 23).

1.2 Problem Statement

The ability to transport goods quickly, economically and reliably is vital to a nation’s prosperity and capacity to compete in global market and if these could not be realized it can also be a major trade cost driver.

Ethiopia being a landlocked country in East Africa with a land area of about 1.13 million square kilometers and a population of about 96.5 million as of July 1, 2014, has set the goal of becoming a middle income country by 2025 (GNI per capita between \$1036 and \$4085). To advance this goal, the government of Federal Democratic of Ethiopia (FDRE) identifies the freight logistic as one of the key economic sectors for the realization of national poverty reduction strategy and increasing trade competitiveness. To this end, various efforts have been exerted by the government of FDRE to improve the freight logistics system there by increasing the trade competitiveness of the country. Despite these efforts, the logistic system of the country is characterized by poor logistics management system and lack of coordination of good transport, low level of development of logistics infrastructure and inadequate fleets of freight vehicles in number and age, damage and quality deterioration of goods while handling, transporting and in storage. In general, the Ethiopian freight logistics does not cope-up with either the nation’s present economic development or falls short of the global best practices. However, there is no common agreement on the salient factors that influence the performance of the logistic system; different researchers put different findings for instance, Ciuriak and Preville, (2010) stipulate complex process of exporting and importing, sluggish and expensive transport, lack of seamless transport and cumbersome customs procedure which leads to high trade cost and low trade performance . On the other hand by using a comparison of landlocked and coastal countries, using the Logistics Performance Index (LPI) developed by the World Bank Jean-François Arvis, Gaël Raballand, and Jean-François Marteau (2010), argues that The transport infrastructure of landlocked countries in Sub-Saharan Africa represents a significant penalty—7 percent worse than for coastal countries it is not the worst component among the dimensions of the LPI compared to being land locked which represents a larger penalty—on average about 10 percent worse than for coastal countries. In support of this Ernest, (2008) generalizes that landlocked developing countries face higher restrictive freight cost than tariff barriers, which in other

word means that land locked countries remain at logistics disadvantage when compared to their transit developing countries. Contrarily, the world bank report, (2013) which is based on logistic performance index (LPI) that measures performance of countries on six dimensions(indicators) on trade related logistics performance, from 1 to 5, with a higher score representing better performance shows that from the comparison of logistic performance of landlocked and coastal countries by region, it appears that between 2007 and 2012 LLDCs have experienced the largest increase in LPI (13percent), which significantly exceeds the increase in LPI for coastal countries (7 percent) which shows that the disadvantage from being landlocked is declining over time. Coastal countries with the exception of South Africa, experienced serious problems with port congestion, which leaves them with no particular advantage over land locked countries. Hence, there is no common agreement on the causes for the low level logistic performance of LLDCs including Ethiopia as some agree that the problem is on the process (Bank, Customs, Shipping etc) and there excessive bureaucratic procedures and costs while some agree that the problem is mainly related to the country's being landlocked which makes the country vulnerable and dependant for the costs imposed by the neighboring country's ports, institutional and infrastructural development. Therefore, the major factors affecting the logistics service quality should be identified, and the degree of the effect should be tested. Similarly, this research will be aimed at identifying which of these factors have significant impact on the country's trade competitiveness.

1.3 Research Questions

The research questions of the study will be

RQ No.1. How is the logistic activity undertaken in Ethiopia?

RQ No.2. What are the major factors affecting the logistic performance?

RQ No.3. How logistic performance is related to improving the country's trade competitiveness?

RQ No.4. What are the measures undertaken by the government of Ethiopia to improve the country's

Logistic performance and trade competitiveness?

1.4 Objective of the Study

The general objective of this research is to assess the current status of logistics practice in Ethiopia and its impact on the country's trade competitiveness with the aim of identifying the key gaps, potentials and constraints for development of effective and efficient logistics systems.

The specific objectives are to carry out assessment of the status of:

1. Logistics infrastructure of the country
2. The efficiency of organizations dealing with logistics like customs office, Banks, Dry ports enterprise, Freight Transporters, Shipment organizations and Port utilization.
3. Application of multimodal transport system.
4. Key factors that influence the logistic performance of the country.

1.5 Significance of the Study

In this dynamic and fast growing world economy, holding strong ground of competitiveness is essential and one way of having this comparative advantage is through establishing a well established and efficient logistic system so as to minimize logistic costs. In addition to these, in developing countries, the need to improve logistics performance in order to increase trade flows is increasing overtime since it is becoming one of the most important factors in determining the volume of trade between countries. Ethiopia as being a developing and land locked country; its logistics system is characterized by poor logistics management system and performance which further hampers the countries competitiveness in the global market.

Hence, this study (i) assesses what are the major factors for this poor logistic performance. (ii) See the relationship between logistic performance and trade. (iii) Help as an input for future researchers on the field of logistics performance and management.

1.6 Scope and Bounds of the study

The research tries to see the challenges and constraints in logistic undertaking and how it affects the countries trade competitiveness in the world market. However, this research will not incorporate the volume of transportation made by each private and governmental transport companies since acquiring a well organized data is very difficult.

1.7 Limitation of the Study

Although this study focuses on logistics service undertaking in Ethiopia and its impact on trade, it is acknowledged that this study have some limitations and there is enough room for further study. The major limitations and of this study are as follows:

Firstly, this study only focus on a land locked eastern Africa country-Ethiopia and hence, Results from this study cannot be generalized to all sub-Saharan developing countries.

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

Finally, acquiring well organized data for a different year about the logistic activities undertaken by all the stakeholders is difficult since there was merging and unmerging of some government enterprises in addition to the lack of time in gathering and processing of this data.

1.8 Organization of the Study

The study is organized into five chapters. Each chapter is devoted to some aspects of logistics practices and trade activities. The rationale behind this kind of organizations is to follow a research methodology approach that allows coherence and enables to see the effects one variable has on the other.

The first chapter contains introduction of the study, which consists of background of the study, problem statement, and purpose of the study, significance of the study, limitations and direction for further research and proposed organization of the study.

The second chapter contains literature review. It shows overall scenario of logistics and trade activities as well as its evidence in the world. It consists of review of empirical studies, research articles, thesis or essay.

The third chapter contains research methodology, which consists of research design, population and sampling techniques, sources of data, procedures of data collection, tools and techniques of data analysis, reliability and validity; and ethical issues.

The fourth chapter contains data analysis which is collected through both primary and secondary data sources and tries to see the relationship between logistic undertaking and trade in Ethiopia.

The fifth chapter of the study contains summary, conclusion, and recommendations

CHAPTER II LITERATURE REVIEW

2.1 Theoretical Literature Review

2.1.1 Logistics and Infrastructure

Logistics infrastructure consists of roads, railways, airports, sea ports, ICT and energy production (Srivastava, 2006). Dry ports and freight stations, and warehouses are important elements of logistics system. Market structure contributes to efficiency of freight transport and logistics system by connecting producers and consumers.

Recent studies on trade costs have concentrated on the contribution of logistics, trade facilitation, infrastructure development and time to the build-up of trade costs and how that impacts on the volume and pattern of trade. Like any other transaction, trade has associated costs mainly from logistics, facilitation and infrastructure (i.e. transactions costs) which influence the pattern and volume of trade.

The importance of logistics, trade facilitation and other non policy barriers has increased in significance mainly because trade policy barriers have increasingly accounted for a smaller proportion of overall trade costs (Anderson and Van Wincoop, 2004). More recently, logistics, trade facilitation and infrastructure have been found to be significant determinants of trade and there are a number of papers that have examined the influence of these factors on trade volume and costs. The main motivation has been to find answers to the obvious question of why countries like China and India (known as “globalizers”) have seen tremendous growth in trade, whereas developing countries (mainly in Africa) have had limited trade growth in this era of globalization (Festus E Turkson, 2006).

Studies such as Dollar and Kraay (2002 & 2004), Rodrik et al (2004) and Chang et al (2005) have provided evidence to the effect that institutions as well as infrastructure and facilitation matters for trade and that if some countries were lagging behind in terms of trade and growth it had something to do with the poor state of institutions and infrastructure among other factors.

As noted by Behar and Manners (2008), trade can be facilitated by substantially reducing trade costs by using a well established logistics, physical infrastructure, and more generally trade facilitation. Bougheas et al (1999), Limao and Venables (2001), Clarke et al (2004), Nordas and Piermartini (2004), Hummels (2001), Wilson et al (2004), Francois and Manchin (2006), Djankov et al (2006), Wilson et al (2008), Hoekman and Nicita (2008) and Behar and Manners (2008) provide empirical evidence to the

effect that an improvement (deterioration) in physical infrastructure, trade facilitation and logistics reduces (increases) trade costs significantly and thereby increases (reduces) trade volumes.

The impact of infrastructure on logistics and trade flows is well documented in the trade literatures. The various studies (such as Bougheas et al, 1999; Limao and Venables, 2001; Francois and Manchin; 2006) that have looked at the impact of infrastructure on trade costs and flows have concluded that the level/state of infrastructure is one of the main determinants of trade costs especially in developing countries. While many countries in the developing world have not been able to take advantage of globalization to increase trade, others have little or no trade with the rest of the world mainly because of the lack of infrastructure to be able to produce and compete effectively in export markets.

Bougheas et al (1999) argued that differences in the quality and volume of infrastructure across countries could be responsible for the differences in trade competitiveness of countries. The authors showed that improvements in infrastructure through its impact on transportation cost impacts positively on trade. Using evidence from European countries, the authors were able to confirm their theoretical findings that by extending the Dornbusch-Fisher-Samuelson (DSF) Ricardian trade model it was possible to show a positive relationship between the level of infrastructure and trade volumes for pairs of countries for which it is optimal to invest in infrastructure.

Limao and Venables (2001) provide evidence to show that improvement in infrastructure is quantitatively significant in determining trade cost and that inadequate and/poor infrastructure accounts for 40 and 60 percent of transport costs for coastal and landlocked countries respectively. Similarly, Clarke et al (2004) found general infrastructure and port facilities contribution to ocean freight as a significant determinant of trade.

2.1.2 Logistics and Institutions

Impact of institutional quality on logistics and trade is also getting higher and higher as the main stakeholders like customs authority, banks, transport service providers and other institutions become unreliable. Unreliability by itself has far reaching negative consequences as reliability of the supply chain is one of the most important aspects of logistics performance. A high degree of uncertainty means that exporting and importing firms and freight forwarders have to adopt costly hedging strategies, such as maintaining relatively high inventory levels. Recent research suggests that these induced costs on the supply chain can be even larger than the direct costs of freight (Arvis/Raballand/Marteau 2007). Traders are faced with a trade-off between direct freight costs and reliability, depending on imports or exports, their specific commodity (time sensitiveness), and the

logistics performance of each country involved in the transport and transit process. Therefore, reliability and logistics costs directly affect firms competitiveness and, for developing countries, the potential to trade and to diversify from non time-sensitive commodities.

Furthermore, developing countries institutions are characterized by poor capacity which can be seen by transit delays, failure to deliver in the needed time window or without the necessary quality and storage cost, false in cargo composition and wrong documentation.

Since many developing countries still rely heavily on tariff duties, they tend to develop redundant procedures to avoid fiscal loss associated with diversion. Transit is therefore often conceived as a chain of control rather than a freedom of transit given to compliant operators in exchange of guarantees (Arvis/Raballand/Marteau 2009:19). On the administration side, procedures (especially added control procedures) are often nonselective and essentially independent of the nature of the shipment (Jean-François Arvis, Gaël Raballand, and Jean-François Marteau 2010). These leads to the prevalence of physical inspection which increases inspection time, red tape, compulsory warehousing, theft, and informal (corrupt) payments in low performance countries.

2.1.3 Logistics and Land Lockedness

As World Bank report (2013), explains it most LLDCs do not have the luxury of multiple routes to sea, a situation that inherently creates transit risks. They have to deal with inadequate transit facilities, cumbersome customs and border procedures, as well as other contingencies related to relaying on another country. Political and social unrest in a transit country can shut down the only available transit route to the sea, thereby cutting off land locked countries from international markets. This problem is further compounded by the inability of many landlocked developing countries to use the more expensive air transport because of the disproportionately high-bulk, low-value commodities content of their exports (World Bank, 2013).

According to World Bank report in 2013 on improving trade and transport for land locked developing countries, In the last two decades new emphasis has been given to the economic impact of geography, especially on the cost of being landlocked. From a development perspective, understanding the cost of being landlocked and its economic impact is critical, since one country of four in the world is landlocked (almost one out of three in Sub-Saharan Africa).

The rapidly expanding interest in trade facilitation has stimulated numerous initiatives and projects aimed at improving the competitiveness of firms located in developing countries. Landlocked economies that depend on foreign transportation corridors for their trade have a very direct and obvious interest in actions to facilitate trade and bring down the costs of moving goods and services. (World Bank, 2013)

Logistics have become increasingly complex and critical for firms' competitiveness, and a weakness in this field can badly hurt firms based in landlocked countries. According to Jean-François Arvis, Gaël Raballand, and Jean-François Marteau (2010), land locked countries have lower volume of trade because, (i) exporters and importers in landlocked developing countries face high logistics costs, which are highly detrimental to their competitiveness in world markets, (ii) high logistics costs depend on low logistics reliability and predictability, (iii) low logistics reliability and predictability result mostly from rent-seeking and governance issues (prone to proliferate in low volume environments).

According to the study made by Jean-François Arvis, Gaël Raballand, and Jean-François Marteau (2010), massive investments in infrastructure seem to have had a rather limited impact on trade than logistics or trade services efficiency even if there may be an infrastructure gap for landlocked countries (which is increasingly questionable) . They also explains that the transport infrastructure of landlocked countries in Sub-Saharan Africa represents a significant penalty—7 percent worse than for coastal countries—but it is not the worst component among the dimensions of the LPI where as logistics or trade services efficiency is more important for limiting the cost of being landlocked than investing massively in infrastructure and neglecting the functioning of logistics services because inefficiency of services or trade processes represents a larger penalty—on average about 10 percent worse than for coastal countries.

The World Bank report (2010) highlights the nexus between geographic location, trade, and economic growth and tries to explain the cost of being landlocked. Some of the conclusions are:

- (1) Landlocked countries trade less (on average 30 percent less) than coastal countries).
- 2) Landlocked countries experience weaker growth than maritime countries (being landlocked reduces average growth by about 1.5 percent); and
- (3) on average landlocked countries have had recourse to IMF assistance longer than coastal countries have.

MacKellar, Wörgötter, and Wörz (2002) highlight, for instance, that crossing a border entails very high transaction costs due to customs and handling charges. Therefore, being landlocked is associated with increased import prices and reduced export revenues. Amjadi and Yeats (1995) pointed out that the incidence of transport costs heavily affects the landlocked African countries because they have to adjust their selling prices to world prices. Gallup, Sachs, and Mellinger (1999) proposed two reasons landlocked countries may be disadvantaged:

- Coastal countries may have political or economic incentives to impose costs on landlocked countries.
- Infrastructure development across national borders is more difficult to arrange than similar investment within a country.

According to the United Nations report (2013), LLDCs' dependence on the political stability, the infrastructure and the institutional quality of coastal transit countries not only affect economic growth of LLDCs' but have also major ramifications for social and environmental aspects of development. LLDCs face transit policy issues that hinder reliability, speediness and security of cross border transport and logistics networks connecting landlocked countries to seaports. Evidence from country experience show that major bottlenecks preventing the smooth flow of trade include burdensome and inefficient transit regulations, cross-border restrictions on vehicle movements, trans-loading, physical inspections and off-loading of freight at borders, unwarranted inspections of goods in route, differing vehicle standards between neighboring countries, inadequate security for drivers and freight and corruption. Furthermore, the report finds that being landlocked adds four days to land distribution of exports and 9 days to imports compared with equivalent distances within the coastal transit country.

According to Agerachineh Inadin (2008), land locked Ethiopia relies on Djibouti port for about 98% of its international trade which makes it vulnerable to factors beyond its control and have a strong impact on economic, political and strategic interest, economic welfare and prosperity, its alliance and support system in the international forum, access to trade, technology and military equipment.

2.2 Empirical Literature Review

According to Brooks (2008) trade networks demand superior logistics services and centers that minimize financial and time costs while ensuring reliable delivery of goods. Transportation takes the largest share from logistic services and infrastructures such as highways and railways can reduce distribution margins of the transportation cost in narrowing the gap between prices faced by producers and consumers, thereby facilitating better improvements for both; in general efficient transportation infrastructures lower transaction costs, raise value added, and increase potential profitability. The cost of transportation globally is 15-16% of the logistics cost, in Asia a 10% reduction in transport costs would boost trade by about 3–4% (Brooks, 2008).

Afro Consult (2010) showed that in Africa, East Africa has the highest transport cost in the world. For instance, the logistics cost proportion in 2003 was about 15% of import value compared to 5.4% for the world average. The situation of landlocked countries, such as Ethiopia was 16% of the foreign trade values in 2008 where in that much cost was consumed by transport and transit costs which were nearly double of the coastal countries on average at the time.

Overview on Freight Transport Infrastructures in Djibouti

The overview of the transportation infrastructures in Djibouti includes specifically the Roads and ports along the international trade route of Ethiopia-Djibouti border to Djibouti port and expansion of other ports. According to World Bank (2013), the routes connecting the Djibouti port to Ethiopia are central to the role Djibouti plays in the region and the lowlands separating Djibouti city from the Ethiopian border are largely arid desert. The older route to Addis Ababa passes through Ali Sabieh and then south into Ethiopia at Dewele, This was the route taken by the railway built at the start of the 20th century and now abandoned but the national highway paralleling the old railway line is used only lightly because some 200 km immediately south of the border with Ethiopia are unpaved (WorldBank, 2013).

World Bank (2013) also stated that the main highway to Addis Ababa branches off near Ali Sabieh and then runs west-northwest to the Galafi border crossing, 217 km from Djibouti city; Since around year 2000 the whole highway from Djibouti city to Galafi—flat much of the way—has been paved with asphalt, which explains why it is now the route used by the vast majority of Ethiopian traffic, even though the road distance is about 65 km longer than the southern route paralleling the railway south from Ali Sabieh: i.e. 910 km via Galafi versus 844 km via Dewele.

Djibouti port contributes substantially to the Djibouti national economy having direct revenues generated by the port estimated from \$65 million to \$90 million per year, representing between 20% and 25% of Djibouti government revenues and also modernization of customs procedures in both countries, together with raised fees for storage in or near the port, is causing ever more Ethiopian importers to transport containers all the way to Addis Ababa or to a dry port at Modjo, 60 km short of Addis Ababa, where imports go through customs clearance (World Bank

As per World Bank (2013), in Djibouti, Ethiopian trucking firms totally dominate the trucking market for transport of goods on the Djibouti-Addis Ababa route. And also Djiboutian truck owners and drivers have a very small share (less than 10%) of this market due to the reason that 200 to 250 Djibouti trucks barely manage to compete with 6,000 to 8,000 Ethiopian trucks and the Ethiopian trucks charge tariffs of about 3 cents per ton-km, which is exceptionally low by international standards, despite the fact that almost all trucks have to return empty because of the severe imbalance between imports and exports (imports have therefore to bear the full cost of the round

trip) thus these low tariffs, combined with several other factors, such as Djibouti truckers cannot find return freight from Ethiopia and the Djiboutian buy their trucks in USD, exclude the Djiboutian firms from the trucking market on the route.

Ethiopia's GDP (Gross Domestic Product) in 2010 was \$24.9 billion, that is, 20 times greater than Djibouti's (in other words, Djibouti's GDP is only 5% of Ethiopia's) (World Bank, 2013). According to The Economist (2014b), Djibouti heavily relies on income generated from its position as a regional shipping hub; the International Trade Centre estimates that Ethiopia's foreign trade through Djibouti amounted to USD 8.4 billion in 2013. The recent improvement of the port and the highway has made the Djibouti route the most attractive to Ethiopia's traders, compared with those serving Berbera and Port Sudan (The Economist, 2014b)

Other Ports in the Region

According to World Bank (2013), competition for Ethiopian imports is essentially limited to Berbera and Port Sudan; Ethiopia does not use Assab at all for political reasons. A recent planning document Growth and transformation plan (GTP) (MoFED, 2010) aims for a 60%-30%-10% split among Djibouti, Berbera and Port Sudan respectively (Table 13). However, today Djibouti's share is more than 90% and likely to benefit in the near future from the more efficient process for customs processing and Berbera is known for the export of livestock but little else; a precondition for greater use will be major rehabilitation works on the road from the port to the Ethiopian border, i.e. within Somalia- which is unlikely as long as Somalia's political situation remains unstable also Port Sudan has a substantial disadvantage because of its long overland distance (1,900 km from Addis Ababa), unless the origin or destination of the goods traded is in northern Ethiopia (World Bank, 2013). With regard to South Sudan, this country is currently served mainly by Mombasa (Kenya) and a transit route via Uganda and the distance from Mombasa to Juba is 2,600 km, whereas the distance from Djibouti is 1,900 km and Mombasa port is often congested and costly, but Kenya is developing a new port at Lamu to relieve it also Ethnic and linguistic ties with South Sudan give Uganda an advantage, including the fact that English is the language of commerce in all three countries (Kenya, Uganda, and South Sudan) plus the trans-Uganda transit route is said to operate satisfactorily without undue impediments, whereas the route from Djibouti via Addis Ababa to Juba is said by an international freight forwarder operating in Djibouti to be "full of obstacles" (World Bank, 2013).

World Bank (2013) affirmed that Djibouti port's competitiveness can be measured not only in terms of cost and time but also reliability and other attributes such as it offers much of what international supply chains seek though handling charges for containers may be on the high side, ocean cargo rates are probably appreciably lower than those to competing ports by virtue of Djibouti's location right on the world's main east-west maritime route, and quick unloading and turnaround of

container ships. For instance as per World Bank (2015), the cost of import and export per container are USD 910 and USD 885 respectively which is lower than that of in the middle east and north Africa. However, areas that particularly need strengthening are the skills of service providers (freight forwarders and shipping agents) to operate in the English language, and in mechanical and engineering functions (World Bank, 2013).

Logistic Performance and Trade Costs

From the comparison of logistic performance of land locked and coastal countries by region, it appears that between 2007 and 2012 LLDCs have experienced the largest increase in LPI (13 percent), which significantly exceeds the increase in LPI for transit coastal countries (7percent). However, in absolute terms, the LPI score for landlocked developing countries has been historically lower than the LPI score of the corresponding transit coastal countries, and the increase in LPI for LLDCs between 2007 and 2012 constitutes only 0.28 (World Bank, 2013).

A number of empirical studies show that countries with high transport costs tend to experience less development as a result of the inverse relationship that exists between a country's growth performance and its transport costs. Reports by the World Bank (2007; 2013) routinely show that LLDCs incur, about twice the cost of imports and exports, as their maritime neighbors. It also explains that steeper cost functions they face in turn render them uncompetitive on the world markets, with their trade volume being up to 60 % less than neighboring coastal economies.

Using neo-classical theory, MacKellar et al. (2002) explain the negative relationship between landlockedness and growth by noting that crossing a border implies higher transaction costs due to customs and handling costs. It also explains that landlockedness is a binding development constraint that raises, permanently, import prices and reduces export revenues.

An economic study commissioned by UN-OHRLLS (2013) concludes that the cumulative cost of landlockedness were substantive. The study found LLDCs, on average, 20% poorer than they would have, had they had territorial access to the sea. A study made by Mackellar et al, (2002) using a regression analysis of compounded average GDP growth rate, and gross domestic investment (expressed as a percentage of GDP) for some 92 developing countries over the period 1960-1992 revealed that LLDCs grew 1.5 % slower per year than countries that were not landlocked. A study by ECLAC found that being landlocked was equivalent to a loss of approximately 0.24 percent of the annual gross production of a typical LLDC. A research conducted by the United Nations Economic Commission for Africa (UN-ECA) shows that on average, transport costs in African landlocked countries represent 77 % of the value of their exports. This makes them less competitive and results in smaller international trade flows (UNCTAD, 2013a).

2.3 Conceptual Framework

A country's trade competitiveness can be affected by how its logistic activities is undertaken. Thus, this is the foundation on which the study will be conducted or established. The conceptual framework of the study can be depicted in the following figure.

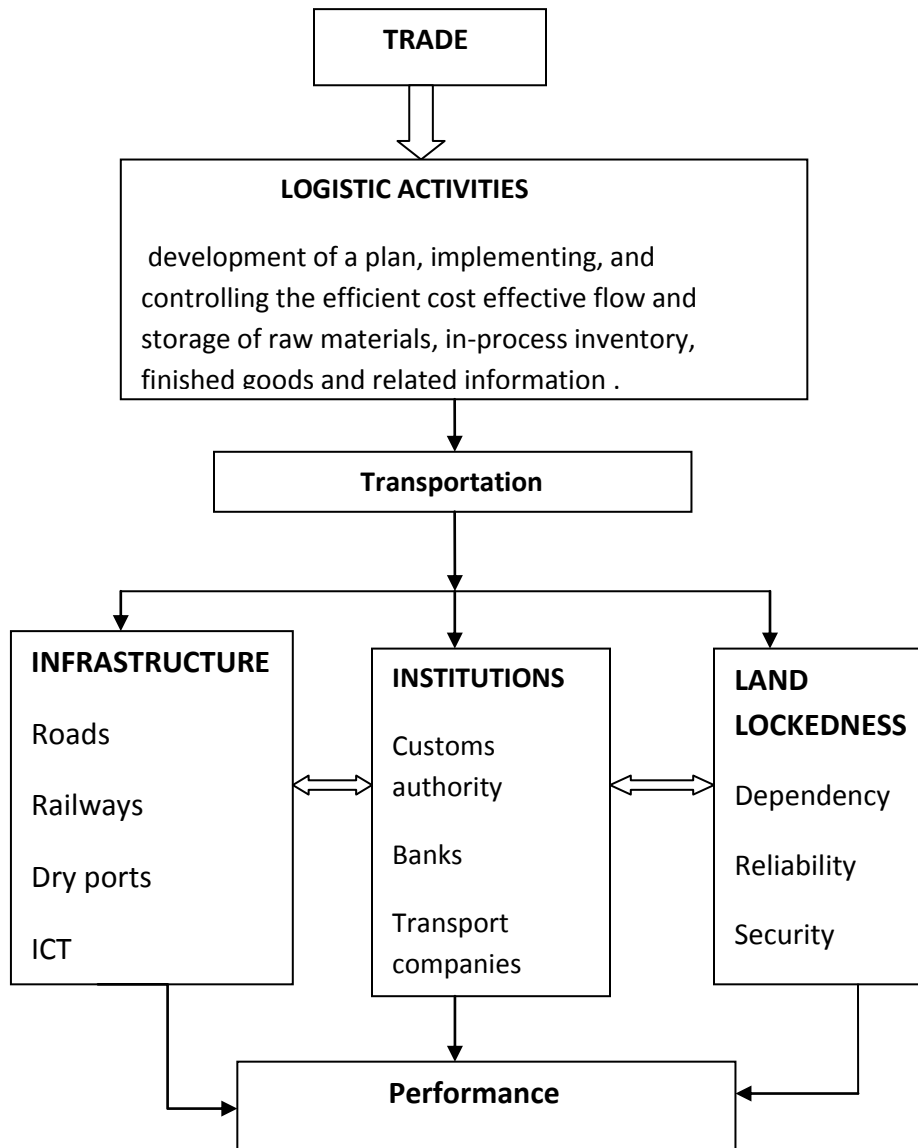


Figure 1 conceptual framework of the research

Logistics is Part of the supply chain processes that plans, implements, and controls the efficient, effective forward and reverse flow and storage of goods, services, and related information between the point of origin and the point of consumption in order to meet customers' requirements.

The operation of logistic determines the efficiency of moving products. The progress in techniques and management principles improves the moving load, delivery speed, service quality, operation costs, the usage of facilities and energy saving. Transportation takes a crucial part in the manipulation of logistic. Reviewing the current condition, a strong system needs a clear frame of logistics and a proper transport implements and techniques to link the producing procedures.

The key element in a logistics chain is transportation system, which joints the separated activities. Transportation occupies one-third of the amount in the logistics costs and transportation systems influence the performance of logistics system hugely. Without well-developed transportation systems, logistics could not bring its advantages into full play. A good transport system in logistics activities could provide better logistics efficiency, reduce operation cost, and promote service quality. The improvement of transportation systems needs the effort from both public and private sectors. A well-operated logistics system could increase both the competitiveness of the government and enterprises.

Transporting is required in the whole production procedures, from manufacturing to delivery to the final consumers and returns. Only a good coordination between each component like infrastructure (also called concrete foundations and basements within logistics systems), institutions, and access to ports would bring the benefits to a maximum. Hence efficient logistic system helps to optimize the existing production and distribution processes based on the same resources through management techniques for promoting the efficiency and competitiveness of trade performance of the country.

CHAPTER THREE

RESEARCH METHODOLOGY

The basic objective of this study is to assess the current status of logistics practices in Ethiopia with the aim of identifying the gaps, potentials and constraints together with their impact on trade. To meet this objective, the following research methodology is followed in the course of conducting the research.

3.1 Research Philosophy

Trade plays an essential role in facilitating country's economic growth and development efforts and for these to be realized having an efficient logistic system is critical so as to minimize trade costs, maintain competitiveness and reliability.

Developing countries which are characterized by poor logistic system, high trade costs and export of mainly primary goods of which prices fluctuate in the world market put these countries competitiveness in the world market in bad situations.

Ethiopia, being one of the landlocked developing countries with more than 80 million populations, its trade share in the world market is so minimal. There can be many reasons for this insignificant trade performance but logistic performance is one of them.

Many researchers (such as Bougheas et al, 1999; Limao and Venables, 2001; Francois and Manchin; 2006 and World Bank report 2013) suggest different reasons for the logistic performance inefficiency in developing countries. Some of these are poor government policies, cumbersome bureaucracy, poor infrastructure, institutional inefficiency and landlockedness. However, there is no argument on which one of these factors is the most influential causes for countries like Ethiopia.

3.2 Research Design

The research is intended to explore the impact of logistic undertaking on trade in case of Ethiopia and establish causal relationships between variables. Accordingly, the research purpose was to investigate and analyze impacts and hence, the researcher uses exploratory research since it emphasize on studying a situation or a problem in order to explain the relationships between variables. In this research, both primary and secondary source of data are collected through interview, observation, questionnaires and literature review. Furthermore, the Research design is both qualitative and quantitative for this study because: firstly, this method uses open-ended questions that provide respondents the opportunity to respond in their own words rather than to choose from fixed responses or pre-fixed alternatives; secondly, the nature of research questions and

unknown variables are the causes for using this research method; third one of the research objective is to develop an understanding of the phenomena in great detail and in much depth, in which qualitative research tools are aimed at and I have an interest in qualitative research. In addition to these, since numbers usually explain things in much detail than words, I have also used quantitative design for this research.

3.3 Population and Sampling Techniques

The target populations of the study are those playing direct role in the due course of processing logistic activities and they are clustered as exporters and importers, government and private banks, Ministry of Transport (MoTr), Ethiopian shipping and logistics services enterprise (ESLSE), Transport Authority (TA), Ethiopian revenues and customs authority (ERCA), Freight forwarders and ship agents association and Transporters. The sample size will be 80 out of different kind of population. Depending on the size and characteristics of the population of the particular cluster, purposive sampling methods will be utilized.

3.4 Procedures of Data Collection

The research uses both primary and secondary sources of data. The study also uses structured, semi-structured, and unstructured observation, interviews and questionnaires to obtain primary information from respondents. In addition, I maintain diary to collect information.

Secondary data also collected by visiting different libraries, procuring relevant documents from the respective institutions, from journals, websites and so on.

3.5 Tools and Techniques of Data Analysis

When primary data is collected, it is systematically sorted. Since the data is mainly qualitative data, it will be converted into quantitative data using Likert's 5 scale model, ranging from best to the worst like 5 (strongly agree), 4 (agree), 3 (undecided), 2 (disagree), and 1 (strongly disagree). Then they will be properly tabulated.

Secondary data are rearranged according to customary accounting principles. They are tabulated in the systematic way. In order to analyze data, appropriate tools and techniques will be used. Statistical tools like average, standard deviation and coefficient of standard deviation, is used. Tables, charts, graphs etc. will also be used whenever required to exhibit and analyze the data.

3.6 Reliability and Validity

Factors like methods of data collection, tools and models of analysis, interaction, response of respondents, bias of researcher etc. directly affect the validity and reliability of the study. Hence, the study takes into account strictly these factors and give keen attention to the reliability and validity of the study by using reliable data sources, tools and methods in the course of action to make sure its trustworthiness.

3.7 Ethical Issues

Some practices that might be extremely unobtrusive, such as observing through a one-way mirror, concealed tape-recording or telephone-tapping are just not permissible - and might lead to criminal proceedings! Hence, this study fully considers the ethical matters of all the individuals and institutions involved in the study.

CHAPTER FOUR

DATA ANALYSIS

4.1 Diagnosis of Ethiopian Logistics System

Much of the global trading business is handled by making use of logistics services that deals with offering optimal solutions based on the arrangement of efficient, effective and highly reliable transport service tailor made to specific needs i.e., for the purpose of achieving a high delivery, a high reliability, a high degree of completeness and a short delivery time (Festus E.Turkson, 2006)

Supply chain management extends the principles of logistics integration to all companies in the supply chain (SC) through strategic partnerships and cooperation arrangements. In essence, SCM integrates supply and demand management within and across companies. Logistics is one component or sub-set of SCM. I.e., it is somewhat larger than logistics, and it links logistics more directly with the user's total communications network and with the firm's functional units. Despite these there is difference between SCM and logistics. SCM is a business philosophy which involves data flow, while logistics refers to the activities that facilitate the flow/movement of goods through the SC (EMMA, 2015).

Logistics and SC operation in maritime context is also complex owing to various activities involved in the entire chain and the different players having their own interest/business objectives with their own logistics and SC. Hence, inefficiency in one of the SC and logistics activities or in one of the players in the chain results in efficiency in the entire service performance which can be exhibited in terms of higher cost, delay and unpredictability in delivering the product and service to the customer in turn impacts economic growth of a country. Import and export items to/from neighboring countries are carried through either on truck waybill or air way bill depending on the mode of transport.

Similarly, the current freight logistics system focused on major segments of the import and export trade end to end SC.

Figure 2 the Sequence of SC Process in the Import Export Shipment





As seen from figure 2, the import trade segment analysis covers the processes from foreign exchange request/banks permit to cargo delivery at destination. Similarly, the export segment analysis begins from submitting export permit request to banks to port of destination through customs/port transit.

4.2 Import Logistic Performance Analysis

4.2.1 Bank Process for Import

According to the Diagnostic Trade Integration Study (DTIS) 2014, Trade finance implies financing import and export trade transactions (international payments, associated risks, and provide needed working capital) for a fee. A wide range of instrumentations are available for transaction such as lending, issuing L/C, factoring, export credit and insurance. The type of document used to get finance depends on the nature of the transaction.

Best practices in the global trade finance show that the services at the financiers' disposal should be comprehensive and integrated to reduce cost of import-export trade. Furthermore, all trade related activities should take place in an efficient, transparent, and predictable manner and the documents needed should be kept a minimum. Developing and implementing a range of trade finance systems, data tools and instruments that are necessary to streamline banking processes are critical to improve trade finance efforts. This in turn enhances the logistics performance and ultimately the logistics service level.

In Ethiopian context, the major financial institutions operating are banks, insurance companies and micro-finance institutions. The banking industry is regulated by National Bank of Ethiopia (NBE). Nineteen banks are operating in the country out of which 3 are public (including two specialized state owned banks; the development bank of Ethiopia (DBE) and the construction and business bank (CBB) and 16 private banks. The trade finance intensity both in private and public banks has increased due to the increased volume of imports in recent years.

All imports, exports and outgoing foreign payments require a foreign exchange permit. The commercial banks are licensed to issue these permits, except for coffee. They can approve imports for any values up to US\$1 million. Values above this amount must be subjected to open international competitive bidding backed by relevant documents.

For imports, the methods of payment are limited to letters of credit (LC), cash against documents (CAD), or advance payment. The period of validity for an LC is 90-120 days versus 30 days for CAD; for advance payment the period is 30 days, compared with 120 days for LC. The period starts from the date of issue but may be extended at the discretion of Commercial banks and with additional fees.

The process to get finance for import in Ethiopia takes in applying a request to a bank for a foreign exchange permit to payment where in a fixed amount of foreign exchange is issued with a validity of 30 days for CAD and 120 days for LC payments. However, this permit may be amended (increased, decreased, validity date extended) or cancelled (non-utilization, partial utilization). The performance results of bank processes for import logistics illustrating the current scenario are summarized in the following table.

Table 1 Bank Process time for Import

Metrics	Type of cargo/ Customer				
	Investor		Commercial (merchandize, vehicle, spare,etc		Government Mfg, pharma, agri, project
Time (average hour/day/month)	Public banks	Private banks	Public banks	Private banks	Public banks
Waiting time to get foreign exchange after submitting request	15-30 days	1-6 months	15-30 days	1-6 month	15-30 days
Time to get import permit after submitting request	½-1 day	1-2 days	½-1 day	1-2 days	½-1 day
Waiting time for LC confirmation after receiving bank permit	½-1 day	1-2 days	½-1 day	1-2 days	½-1 day
Total time	16-32 days	1-6 months & 4 days	16-32 days	1-6 months & 4 days	16-32 days

Source; EMAA survey, 2015

The average waiting time for trade finance depends on a bank's available foreign exchange reserves. As a result, many importers apply to several banks to finance their imports. Banks generally apply a first come first served policy for allocating foreign exchange and also reserve some of their allocation for special customers (e.g. those having large deposits or a large volume of foreign exchange). For this group of customers, the time to secure foreign exchange will be less than a month depending on the earnings from different sources.

As summarized in table 1, investors', commercial (merchandize, vehicles, spares, etc),and government imports take about a month to get foreign exchange and bank permit from public banks while similar process takes an average of 3 months in private banks. Yet imports such as basic consumption public goods including oil/fuel, items for mega projects and imports for Manufacturing,

Pharmaceuticals and Fertilizers, etc are under priority list for the foreign exchange allocation as opposed to the commercial and investors' imports.

The processing time to get foreign exchange (L/C confirmation) for all types of imports after submitting request to public and private banks is characterized by higher delay which is average of 15 days and 90 days for public and private banks respectively. This in turn implies that getting foreign exchange takes about 90% of the total bank processing time while importers in the global scenario mostly don't wait to get foreign exchange.

Based on the data gathered through questionnaires and interviews from importers and exporters which use both Private and Government banks it is found out that the average customer satisfaction on service excellence, FCY loan availability and approval, professionalism and responsiveness of the banks and their staffs to be 62% and 65% respectively.

Hence, there is major gap in bank process impacting the logistics performance because importers need to wait longer to get foreign exchange and they are also uncertain in getting the required foreign exchange. The root causes contributing to such inefficient trade finance situation for import includes; uncertainty in foreign exchange availability and access, limited financial instruments used in practice, lack of standard in the process and issues of code of conduct in the bank service, unregulated payment rate/ higher cost and varies along the banks and inefficient ICT based connectivity among banks.

4.2.2 Shipping for Import

Shipping is one of the critical segment of the logistics chain that has significant effect on the time and cost of cargo delivery. It involves carriage of cargo from the port of loading up to port of discharge. Shipping is a pure global business. Economies of scale and scope are the main basis of competition and the multinational mega carriers who have enormous capacities and provide round the world regular liner services dominate the market. Their worldwide network and connectivity have enabled them attain prominence in the international freight market. Few global operators own substantial share of the world shipping capacity and global shipping service is characterized by monopolistic competition. The following table provides world top ten liner carriers accounts for about 55% of the world container carriage capacity.

Table 2 world's Top Ten Liner Carriers

Rank	Company	Share of global TEU capacity (%) average
1	Maersk line	12.3
2	Mediterranean Shipping Co	12.0
3	CMA-CGM	6.9
4	Evergreen lines	4.2
5	COSCO container lines LTD	4.0
6	Hapang-lloyd	3.7
7	APL	3.5
8	China shipping container lines Co. LTD	3.3
9	Hanjin shipping Co.Ltd	3.1
10	United Arab shipping co	1.9

Source; UNCTAD Review of Maritime Transport, 2011-2014

The other key feature of the global shipping services is that much of the global carriers' operations are concentrated on major world economic regions that have huge trade movements. Africa accounts only for about 6 % of the global sea bound cargo as per the UNDP latest 2014 issue. With such small cargo share African share is marginal and its sphere of influence in the global shipping market is minimal. The volume is so low in size and composition that it does not merit scale and scope economies to avail cost effective and efficient services. The services availed to Africa are less optimal and subservient to the dictates of the global operators (World Bank, 2013).

Ethiopia is a landlocked nation but as per The Economist (2014a), this has not stopped Ethiopia from developing its shipping and due to the reason that the Red Sea ports of Massawa and Assab have been off-limits to Ethiopian freight, the country has to rely on Djibouti port for imports and exports with respect to shipping. Ethiopian Shipping and Logistics Services Enterprise (ESLSE) is the company that provides international shipping services mainly for the country's import trade. It is the sole shipping service provider and determines the sea freight charges of import shipments arranged on FOB basis as per the government directives issued. In order to ensure availability of sufficient capacity for the country's regular cargo shipments ESLSE deploys its own ships (15 vessels) with total tonnage capacity 394 thousands dead weight ton (DWT) and avails extended capacity by engaging outside carriers' service on freight contract agreements. The national freight is composed of largely multi-purpose general cargo ships and two oil tankers. Own ships are well suited for carriage of combination of cargos. Their type, size, number, and capacity have limitations and are not compatible with scope and magnitude of business needs of the company.

ESLSE involvement with respect to bulk cargo shipment like fertilizer, grain, sugar, coal and fuel is limited. As the movement is seasonal and time bound shipping is provided on tramp ships on spot fixture basis and as such has no regular service feature.

4.2.2.1 Shipping Time

Shipping time is defined as the duration of overall time taken to transport cargo from port of origin till it arrives at final place of discharge. Adhering to the officially announced service schedule and discharge in the shortest transit time possible is the key factor of competitive shipping services. Customers esteem and give high regard to standardized services with on-time performances and punctual cargo delivery schedules (ESLSE Annual Report, 2015).

The advertized frequency (regular) of sailings and transit time for both own vessels and slot carriers for some ports are presented in the following table.

Table 3, Advertized Frequency of Sailings and Transit Time

Trade route	port	Frequency of sailings		Transit time	
		Own vessels	Slot vessels	Own vessels	Slot vessels
Far east	Shanghai	monthly	weekly	21 days	24 days
	Pusan	monthly	weekly	21 days	27 days
Gulf	Dubai/sharjah	Every 2 weeks	weekly	6 days	5 days
India	Nava sheva	Every 2 weeks	weekly	12 days	18 days
North continent	Rotterdam		weekly	-	21 days
Black sea	Turkey	monthly	-	7 days	-

Source; ESLSE Annual Report, 2015)

However, the above advertised frequency may/may not be maintained due to shut out and canceling of advertised ports. Based on the feedback and facts gathered from service users in relation to on time performances of the shipping services and ESLSE weekly fleet position the shipping service time and variations in schedule are provided in table 4.

Table 4, logistic performance indicators for shipping service

Metrics	General cargo	Container	Bulk
Waiting time at port of origin/loading	15 days or more	8 days	On time
Sea passage time up to Djibouti	30 - 40 % variation	30 - 40 % variation	On time
Sailing reliability	Delays and deviations	cancellations	-

As can be derived from the facts in table 4, shipments experience various delays at different stages both at port of loading and during sea transit till arrival at port of discharge. Bulk cargo which is related to fertilizer, grain, fuel, coal, sugar and other free flowing homogenous shipments is rarely handled by ESLSE due to the fact that in most cases the shipping is arranged by the sellers. Hence, there is no delay at the origin and on sea passage time for it is governed by the charter party. Some of the drawback issues related to shipping time includes

1. The service level agreements signed with slot carriers is not adequate as it does not provide for clear terms on some key aspects of performance features like delivery time of cargo and it is a non binding and non committing (loose) simple freight contract for spot space booking and when shipments are available which has affected the level of effectiveness of the services. The agreement is also non obligatory where slot carriers take the freedom to make decisions that suit their convenience. Especially in peak seasons carriers have traffic overflows and global freight rates rise highly. The carriers tend to discriminate in favor of high paying cargo and also give 1st priority for their important global customers.
2. ESLSE is working under protection (FOB directive) without competition.
3. There are no appropriate performance measurement mechanisms.
4. Lack of integrated ICT systems for effective handling of the business and interact with customers. Tracking and tracing, notifications, client access and other service features are lacking and show huge gap compared to world benchmark.
5. Lack of institutional and human resource capacity.

4.2.3 Port operation

4.2.3.1 Organization of Port Services

Since Ethiopia is a land locked country, its sea bourn trade is served through neighboring coastal state ports including Port Sudan, Berbera and Djibouti. The ports have differences in many respects in terms of adequacy for serving Ethiopian logistics services needs. Ease of access due to distance and

weak connectivity create variation in the level of utilization of available alternative ports and their significance in handling the Ethiopian trade.

Table 5, ports share of Ethiopian cargo handled

Port of discharge	Share (%)
Port Sudan	1.2
Berbera	0.2
Djibouti	98.6

Source; ESLSE Annual Report, 2015)

As can be seen from table 5, the port of Djibouti is the main gateway for Ethiopian export and import cargoes. It is the base port for ESLSE operations and also serves as a home port for own ships. The port is strategically located at the southern entrance of the red sea with no deviation from the main east-west shipping route through the Suez Canal. Generally, typical characteristic of the port is that it is dominated by few service providers. Of those facilities provided in the port DCT, Horizons and SDTV are sole service providers unrivaled by any competition and exercise monopoly on their respective area of business. The general cargo stevedoring services are the only port services where some degree of competition prevails. Stevedoring is one of the business entities in shipping operation providing services associated with the movement of cargo to and from a vessel. It is a critical operation which determines the vessel awaiting time, demurrage cost and the efficiency of the entire chain. Lower discharging rate, higher vessel awaiting time at anchorage/berth which lead to port congestion, delay ships operation(15 to 20 days to discharge due to limitation in organizing activities efficiently and shortage of facilities for the operation are major issues at Djibouti port related to stevedoring. Hence, the stevedoring efficiency has a direct effect on cost of logistics and trade.

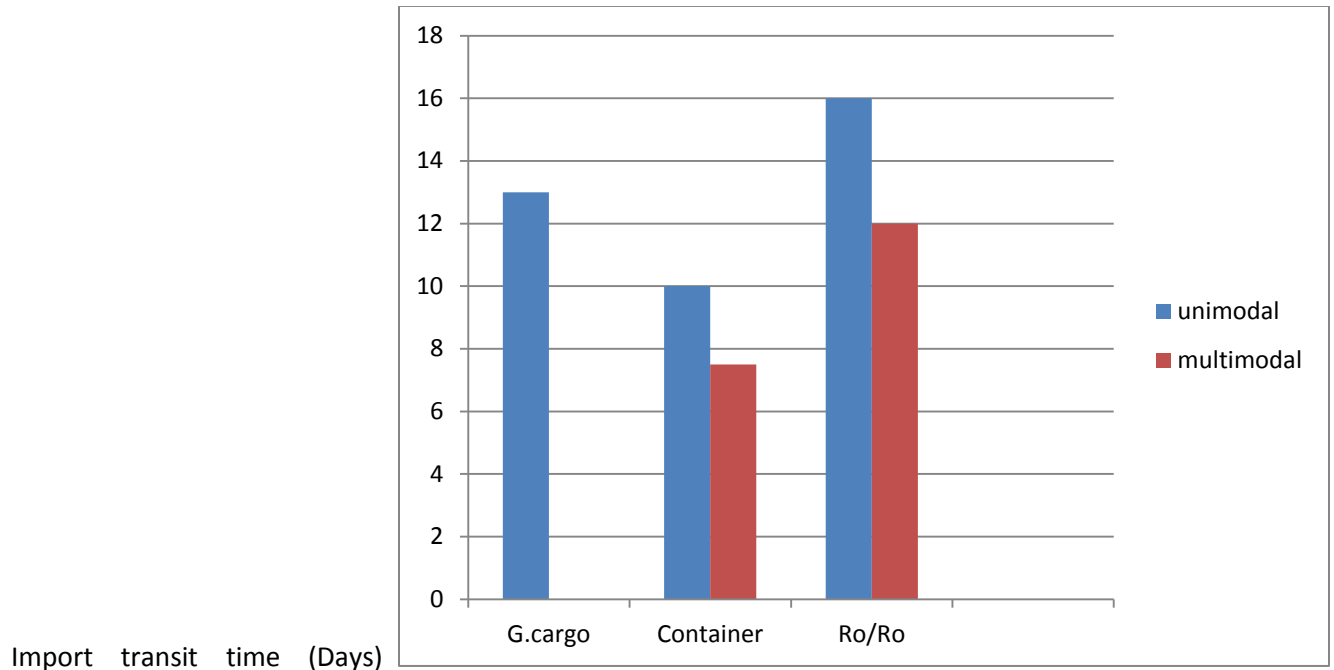
4.2.3.2 Port operation Time

The port transit process is the other decisive element of the logistic chain. The mode of organization and handling process of the transit operations at the port are affecting the level of efficiency of the import trade in terms of cost and time. The extent of impact of the transit process varies depending on the type of terms of cargo carriage, uni-modal, and multi-modal and to some extent the nature of cargo.

One of the bottlenecks affecting the efficiency of the logistics services is the transit process in the port of Djibouti. It takes longer time to clear goods through the port. Various factors contribute to low performance level of transit processes. Review of the level of performance of transit time for uni-modal and multi modal operations are provided below.

Uni-modal transit represents cargo discharged at the port on port to and moved in to Ethiopia with prior completion of customs and import formalities. The performance analysis of the uni-modal and multimodal cargo import transit time is taken considering from initiating operation up to dispatch from port of Djibouti is shown in figure 3.

Figure 3 uni-modal Vs multimodal import cargo port transit time



Import transit time (Days)
Source; ESLSE survey 2015

As can be seen from figure 3, the uni-modal cargo average transit time at Djibouti is about 10 days for container. This is mainly due to lack of synchronized organization of clearance process. Each segment of the clearance activity has to be carried out separately taking its own pace and time. There is no integrated port system to accomplish all on single window basis and cut time and cost. Furthermore, the non-value adding procedures and requirements are contributing to the excessive cargo clearance delay from the sea port. With respect to the global best practice, the average port clearance time of uni-modal containerized cargo is 10 days which is on the high side compared to the global best practice which is less than 3 days.

On the other hand, multi modal transport of cargo represents shipments covered under combined transport and transferred through the port to inland terminals with a single document under the custody of single carrier. It is intended to simplify and facilitate on carriage of cargo with minimal encumbrance of formalities and making it conducive for cargo to move on swiftly to inland terminals immediate upon discharge at the port without delays.

In general, from figure 3, one can realize that container and other transit time under multimodal is relatively short compared to uni-modal import transit time for the same type of cargo and the delay in uni-modal arises on account of process time needed to complete transit procedures. The major causal factor for this is the number of operators involved in multi-modal is one operator under a contract but many in uni-modal with fragmented/uncoordinated in the entire end to end chain.

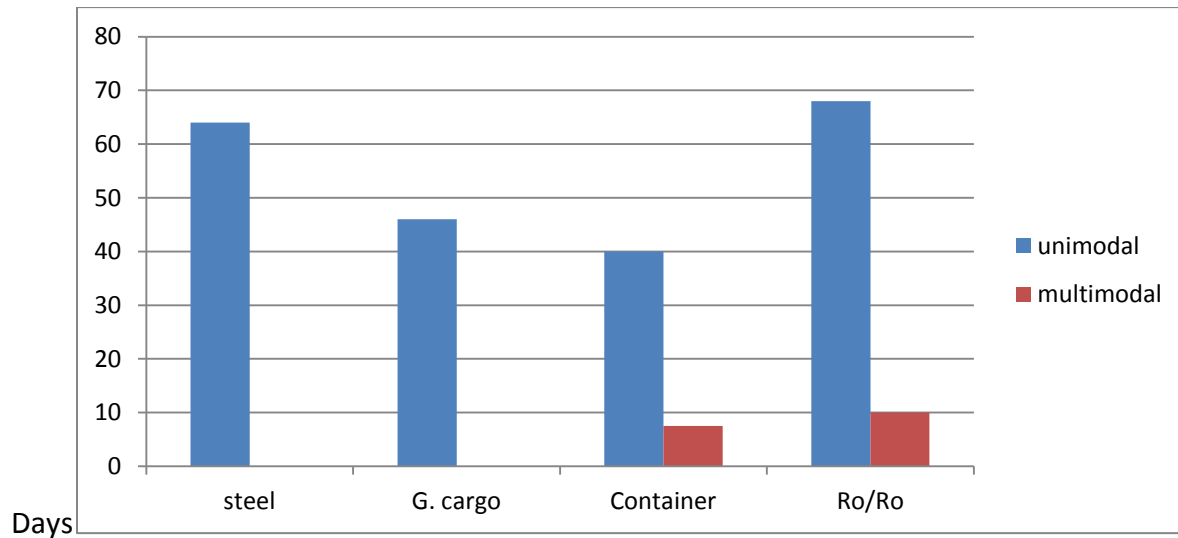
4.2.3.4 Cargo Port Dwelling Time

Cargo port dwelling time represents the amount of days (hr) the cargo stays lying in the port terminal from the time it is offloaded from the vessel until it is moved inland obtaining all permit and clearance requirements.

Figure 4 illustrates the average port dwelling time for different types of cargo at Djibouti. For multi-modal cargo the port stay is relatively short (7.5 for container and 10 days for roll on roll off equipments-RO/RO). The delay arises on account of process time needed to complete transit procedures. Extended port dwelling time is largely associated with cargo carried on uni-modal transport which is 40 days and 68 days for container and RO/RO respectively.

According to the study by EMAA, 2015 from a total of 1200 shipments cleared from port in 2014, it was found that the average import cargo dwelling time at port of Djibouti is about 40 days. Out of this, process takes 13 days (33% of the time) and the remaining 27 days (about 67% of the time) is accounted for time spent due to various reasons such as inefficiency in the trade system, importers' intent for delay to initiate transit and other factors but not linked to transport and logistics function.

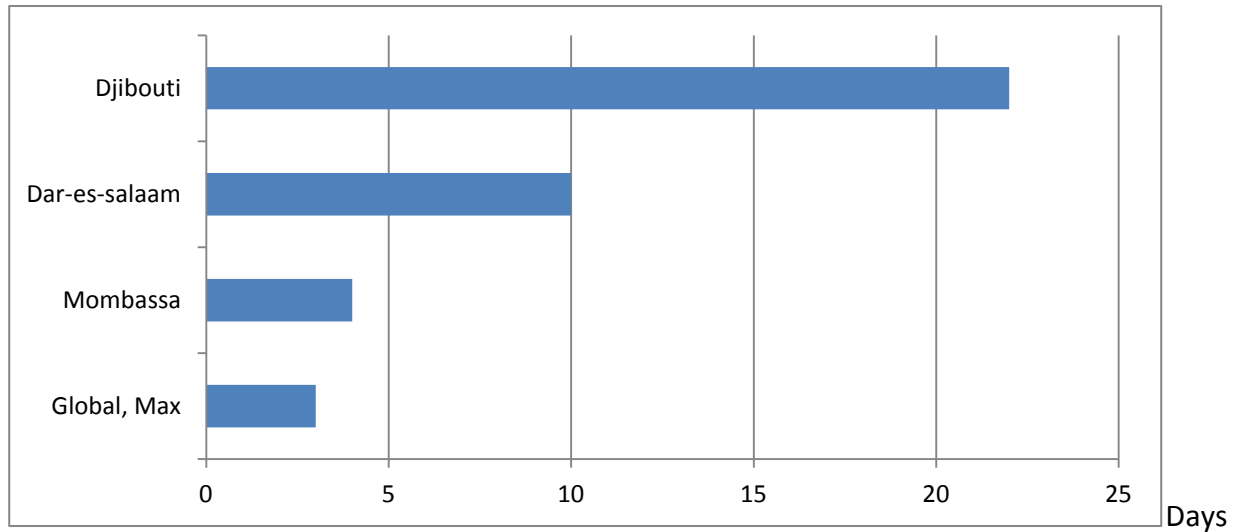
Figure 4 Port Dwelling Time for Uni-modal and Multimodal Cargo at Djibouti



Source; ESLSE survey 2015

This situation is affecting the country not only in terms of extra currency outlays for storage but also it is inflicting incalculable damages as the goods bought by expending huge amount of foreign currency are left to lie astray exposed to ruins in the port.

Figure 5 comparison of average port dwelling time (days) from east Africa ports



Source; ESLSE survey 2015

As can be seen from figure 5, through the multi-modal operation is better in terms of cost and time than the uni-modal, the average dwelling time for container at Djibouti (for both operations) is 22 days which is too high compared with the two east African ports (Mombassa and Dar-es-salaam, average of 7 days) yet, it is worse from international standards which is maximum average of 3 days.

4.2.3.5 Port cargo handling Tariff

This represents the official tariff levied by the port of Djibouti. Various factors contribute to the ports tariff levels. Table 6 summarizes a comparison of port expenses for stevedoring (the cargo discharging activity from the ships hold to the quay side and vice versa) and port dues for import container in the region.

Table 6 Comparison of Port Charges for Import Container in the Region

Cargo	Port charges (USD) full container								
	Aden	Hodeida	Port Sudan	Berbera	Mombassa	Avg.	Min.	Max.	Djibouti
20'	228	235	127	200	157	189	127	228	405
40'	301	159	172	300	195	225	159	301	810

Source; ESLSE Annual Report 2015

Referring to table 6, one can infer that port charges for stevedoring and port dues for import vary greatly (average of 189 and 225 for 20' and 40' respectively) across the ports considered in the table with charges at Djibouti overstated against the other ports and much higher in 40' charges. Yet Port Sudan gives the least charge for 20' (about 1/3rd of Djibouti port charge) and port Hodeida for 40' (about 1/5th of Djibouti port).

In general, the charges by Djibouti port are too expensive compared to the others and the very inherent source of these is the perception of the Djibouti interest to maximize their interest from the port services in viewing the port as mainstay of the economy and there is the tendency to take advantage of the situation. On the other hand, Ethiopia's inability to use alternative corridor/s makes the country exposed to these higher charges levied by Djibouti port.

4.2.4 Freight Transportation

Efficient freight transportation and facilities are necessary to move cargo from origin ports to destination/end user at the right time, at the right quantity and at affordable price. Transportation must be managed carefully to avoid negative impact on logistics performance. Global freight transportation uses different modes of transport including land with a dramatic shift of freight from road to rail, air and pipeline networks.

Trucking is the only and primary mode of land transport in Ethiopia. The country is constructing a new railway for import through Djibouti. Truck transport is involved in virtually all movement of goods including flowers and coffee, some of the major exports.

Based on the Data gathered from MoTr, the road transport is regulated by the transport authority (TA). The authority issues permits to operate on domestic and cross border corridors. A total of 87 transport companies/associations operate in the country in three legal forms namely owners of individual trucks, road transport companies in two common corporate forms namely private limited company (PLC) and share company (SC) and associations of individual truck owners which have legal personality but cannot operate as business companies i.e., PLCs and S.Cs under the Ethiopian Commercial Code but are equated to associations formed for purposes other than securing and sharing profits.

According to the MoTr, the truck companies and associations vary widely in size. 9885 trucks are licensed to operate in Ethio-Djibouti corridor which is about 925km network. The main licensing requirement for companies and associations is the age of the fleet starting at least 33% of the fleet must be five years old or less; 10% must be less than ten years.

Table 7 Freight Fleet Characteristics

	Fleet characteristics				
	Fleet age/year	No. of trucks & %		Capacity,ton & %	No. of round trips/ month
Total fleet in the corridor (9885)	Less/equal to 10	4294	4244	30-40 (98.8%)	4
		(43.5%)	50	20-30	4
	b/n 10.1-20	2424	1677	30 -40 (69.2%)	3
		(24.5%)	747	20-30	3
	Above 20	3167 (32%)	952	30-40 (30%)	2
			1661	20-30	2
554			20-40	2	
Average				35	2.86

Source; MoTr Survey 2015

From table 7, it can be seen that about 44% of the current trucks on the road are more than 10 years age against the licensing requirements stated above and global best practices such as in South Africa, Botswana, and Namibia where replacement of trucks is made between 4-6 years and trailers every 8-10 years. Therefore, trucks utilization rate is very low (2.8 round trips/month) implying that truck maintenance cost is higher.

Based on the Data gathered from MoTr, the trucks have limited carrying capacity as well as inappropriate for container haulage. Due to these facts, loading and unloading operation at ports and destinations as well as travelling takes much time and justifies higher transportation cost as couldn't benefit from the economies of scale. Furthermore, due to individual ownership nature of the trucks, the service is fragmented in many ways and trucking freight tariff is not regulated i.e., it is market driven against the passenger transport service prices which is regulated. In general, the freight transport service is unreliable in the corridor impacting the logistics performance as measured in terms of costs and time.

4.2.4.1 Freight Transport Time

The import freight transportation performance analysis for different types of cargo in the uni-modal and multi-modal operation considers the time from assigning trucks (Djibouti) to the cargo discharge at consignee premises based on critical metrics (time and cost).

Table 8 Freight Transportation Time for Different Types of Import

Metrics	Multimodal		Uni-modal			
	Container	Ro/Ro	G. cargo	Container	Ro/Ro	Bulk
Waiting time at check points; Galafi, Mile, and Awash	½ day	½ day	1 day	½ day	½ day	Nil
Driving time from Djibouti to Modjo/Gelan/Comet	2 days	2 days	2 days	2 days	3 days	2 days
Truck waiting time to discharge at destination or consignee premises	½ day	½ day	2 days	½ day	½ day	1 day
Total time	3 days	3 days	5 days	3 days	4 days	3 days

Source; MoTr Survey 2015

As seen in table 8 different services and transport of import cargo by trucks in the corridor takes about 3-5 days depending upon the type of cargo and this may take a week or so in some cases.

Particular issues contributing to this include inappropriate truck type and capacity, lack of advance notification to truck operators to plan fleet position, road congestion in some parts of the corridor, poor collaborative border management practice among all the agencies to reduce number of physical inspections and lack of long term service agreement between shippers and transport companies. According to the data collected from freight transport users it is found out that its cost is expensive and the service is unreliable which makes the average satisfaction level of users only 57%.

4.2.5 Inland Dry Ports

4.2.5.1 Organization of Terminal Services

For the provision of multi modal transport service ESLSE maintains dry ports at various inland locations including Semera, Mekelle, Diredawa, Kombolcha, Modjo, Gelan and Commet(Addis Ababa).the company also uses other storage facilities on special contracts basis like Bekelcha transport terminal in Adama. Modjo dry port is the main operation center for multi-modal cargo. The terminal is built over a total land area of 62 hectares. It has 17.4 hectares of paved area for open air storage and container stacking with a total capacity of 12,000 TEU containers. It has built 2 mega cargo warehouses with total storage area of 10,800 square meters. Specialized container handling machineries are also bought and deployed in the terminal including 34 forklifts, 18 trailers, 14 reach stackers, etc. the inland cargo facilities appear to be good enough to entertain Ethiopian freight needs. Regardless, they are severely constrained in putting their capacity to full and effective use.

The Modjo terminal facility expansion and development activities have been undertaken on phases and are now at the final stage of completion of the construction works. The terminals in other locations are also in different stages of development and construction phases to make them conducive for smooth cargo handling. Since the launch of multi-modal operations, the volume of cargo handled at Modjo has reached a record level of 9,598 TEUs.

4.2.5.2 Dry Port processing and Dwelling Time

Organization of the terminal activities including cargo receipt, stacking, and stowing operations and delivery procedures are not well set up to ensure prompt clearance of goods through the terminals. The process takes about 7.5 days to clear containers and take delivery of cargo from the terminal.

The dwelling time at inland dry port is very high and is even worse than what it is in Djibouti. With the multimodal transport system the problem of cargo stockpiling is simply shifted from Djibouti to inland dry ports. Because of the various limitations cargo receivers have little motivation to clear the cargo quick. In fact, as the cargo is brought within reach and safe zones than Djibouti, the customers take their time to clear goods thereby exacerbating congestion problem.

Table 9 Processing Time and Dwelling Time (Days) at Modjo Terminal

Processing time	Container	Ro/Ro
Truck waiting time for discharge at dry port	1/2	½
Delivery time at dry ports	7	2
Total time	7.5	2.5
Dwelling time		
Dwelling time at dry port	64days	38days

Source; MoTr Survey 2015

As seen in table 9, the dwelling time is a major issue. Some of the root causes for the long dry port processing and dwelling time relates to the following. It is observed that cargo long lying in the terminal belongs to government organizations. Their cargo is not taken out in time and left for months with no movement. Some importers have also the tendency to use the terminal for storage as a result of lack of fund to pay for tax and dues, market speculation etc. the terminals are also dull to the brim. There are no alternative arrangements put in place to route cargo to their final receivers and ease of the burden of crowding and congestion at the terminals. In addition to these, the terminal suffers from lack of planned terminal operations and management practices and these are creating delays and cost to customers. Cargo handling and operations in the terminal are not organized and managed to ensure swift delivery. It takes days to locate and avail containers for delivery. Furthermore, the space allocation is done only after trucks arrive at the terminal. As such, trucks queue at the gate for a day or more waiting for allocation of slot space at dry ports. These

situations have created cargo pile up and congestions at inland terminals and affected the efficient use of available facilities for smooth transfer of cargo to final receivers.

4.2.6 Customs process for Import

Customs is not directly involved in the logistics services but as a gate keeper has major influences on the efficiency of the flow of cargo. As a trade facilitator the custom can help speed up the transit of goods through customs frontiers by removing cumbersome documentary and checking formalities and simplifying and streamlining its procedures.

4.2.6.1 Customs process Time and Cost for Import

The customs procedural and clearance formalities for import have a direct impact on the cost and time of handling cargo. Customs is the main contributor to process time of logistics services. Due to time taking formalities and clearing procedures cargo transit through customs frontiers is experiencing delays. This situation apart from the time loss will inflict costs by way of storage and other lost opportunities.

Table 10 Customs Processes Time (Days) for Imports

Metrics	Bulk	G. Cargo	Container	Ro/Ro
Uni-modal import				
Time taken for customs inspection at comet and delivery	1	2	2	2
Delivery at customers' custody	1	1	1	1
Total days	2	3	3	3
Multimodal import				
Customs inspection time at dry ports	N/A	N/A	3	3
Delivery time from dry ports	N/A	N/A	4	3
Total days			7	3

Source; ERCA Annual Report 2015

As can be seen from table 10, the completion of customs procedures takes a good deal of time and involves prolonged formalities. Especially when compared with developed countries logistics operations where goods transit is organized seamlessly without any noticeable customs barriers on the flow of goods, the performance of Ethiopia shows huge gap. From the Data gathered through questionnaires and interviews on customs service excellence, professionalism and ethics, and overall responsiveness it is found out that the average satisfaction level of customers to be only 56%.

The major issues affecting the level of customs transit operations during import includes, cumbersome documentary requirements and formalities which are processed manually and cleared through each and every stage at its own pace and time, customs checking process which involves a

thorough and item by item physical inspection of goods, Lack of synchronization and coordination of activities with other government agencies that further aggravates delays in the clearance procedures, the application of ICT and e-service is low and information and data recording and reliability and availability is incomplete and the customs systems are not consistent and uniform and activities are carried out in a fragmented manner and have no predictable standards.

Customs primary orientation is geared at ensuring the collection of tax and duty and does not sufficiently address aspects of trade facilitation to remove barriers for the smooth flow of goods through transit points and these is affecting the level of efficiency of logistics operation through prolonged time taken in waiting for customs transit permit, fulfilling the large number of documents and customs inspection at destination terminals. This again leads to incurring storage and demurrage costs irrespective of mode of transport uni-modal or multimodal.

4.3 Export Logistics Performance Analysis

4.3.1 Bank Process Time and Cost

It is obvious that an hour or a day gap in the markets leads to major saving or loss in terms of foreign exchange earnings. Hence, timely and short possible time service delivery at banks is of paramount importance to achieve the earnings side of the export trade. The commercial banks are authorized by the NBE to issue export permits with the exception of exports to china, which are handled by CBE, and exports of coffee, which are handled by NBE.

Table 11 Bank Process Time (Days) for Export Logistics

Metrics	Days
Time to get export permit after submitting request	2
Time to advice exporter that L/C is opened by the buyer after they receive the correspondent bank for export	½
Total time	2 ½

Source; EMAA survey, 2015

Table 11 shows the performance of the bank process required for export trade takes time. There is room for improvement as per the global practices for the same service offering at banks. Therefore, time to get export permit after submitting request can be reduced to ½ a day and the total time required to complete the process can reduced to ½ day and an hour.

The bank service related to export such as permit and L/C advice is provided free of cost. No export tax is levied on export products while 1.5 % tax levied on semi-processed hides and skins. All export goods are also subjected to zero value added tax.

Ethiopia's system of trade finance constrains the growth of exports and the efficiency of distribution of imported goods. For exports, few financial instruments are available to assist exporters in managing their cash flow from the time an order is received until the time payment is received. They are also placed at competitive disadvantage due to restrictions on terms of trade that requires exporters to be paid at the time of shipping. Furthermore, shipping documents presented under an export L/C will not be accepted for purchase by the bank aggravating exporters' financial restraints. Unable to encourage entry of new exporter/diversification of market by the banks is also hampering the trade as they only focus on treating higher value goods such as coffee and sesame as the only commodities.

4.3.2 Customs for Export

Customs is one of the critical elements that have impact on the logistics process of outgoing cargo and the expansion and promotion of the export trade. The adequacy of the customs export procedures can make or break the ease of doing business in the export market.

Table 12 summarizes the logistics performance of customs procedures for export cargo. It takes comparatively higher process time for clearing export shipments.

Table 12 Customs Process Time for Export Cargo

Customs process	days
Inspection by relevant organizations	1
Waiting time for transit permit from ERCA including inspection	1
Total time	2

Source; ERCA Annual Report 2015

4.3.2.1 Customs Process Time and Cost for Export

As can be seen from table 20, for export cargo to be inspected and get transit permit it has to wait for two days in most cases. This waiting time has its impact on timely forwarding of cargo to the port. Late arrival of cargo to the port is making it difficult to organize and complete port operations like providing empty containers, stuffing cargo and making the shipment load ready in time to catch the scheduled vessel. The delays in many occasions create last minute short shipments and shut outs and cargo have to wait for extra one week to get the next vessel. In the process the cargo incurs storage cost at the sea port. Furthermore, this situation could lead to loss of buyers' confidence and reflect negatively on the export market.

There are various customs related issues affecting the logistics of export shipments which includes the difficulty in getting export permit which is time taking, inspection by relevant bodies is done in different locations, time consuming number of documents, cumbersome process and procedures for

clearance of imported inputs to be used in preparation of exports and ICT based customs systems to synchronize and facilitate clearance and permit procedures are not yet fully applied.

4.3.3 Export freight transport

4.3.3.1 Transport time

Table 13 provides logistics performance of trucking services for export logistics container and bulk cargo.

Table 13 Export Freight Transport Time and Cost (Container and Bulk)

Export freight transport	Days
Time for assigning trucks and preparation of truck way bill	1
Driving time to Djibouti	2.5
Waiting time at check points; Galafi, Mile and Awash	1/2
Total time	4
Cost (USD)	
Inland transport to Djibouti	0.032/Ton KM

Source; MoTr Survey 2015

As shown in table 13, the transport time is higher and the main reasons for these are associated with poor truck deployment and dispatch practice mostly through middle person illegal practices, road safety/road congestion in some part of the corridor, poor collaborative border management practice among all the agencies to reduce number of physical inspections and limited use of e-logistics processes/documents and lack of web-based trace and tracking systems.

4.3.4 Port operation for Export

Majority of the Ethiopian export shipment is handled through the port of Djibouti and involves major difficulties in terms of organization of the cargo operations at Djibouti including empty availing, stuffing and also costs.

4.3.4.1 Port operation Time and Cost

The export freight handling takes total of 9 days from the time of cargo arrival at the port till it is shipped on board.

Table 14 Export Freight Handling Time (Days) at Djibouti

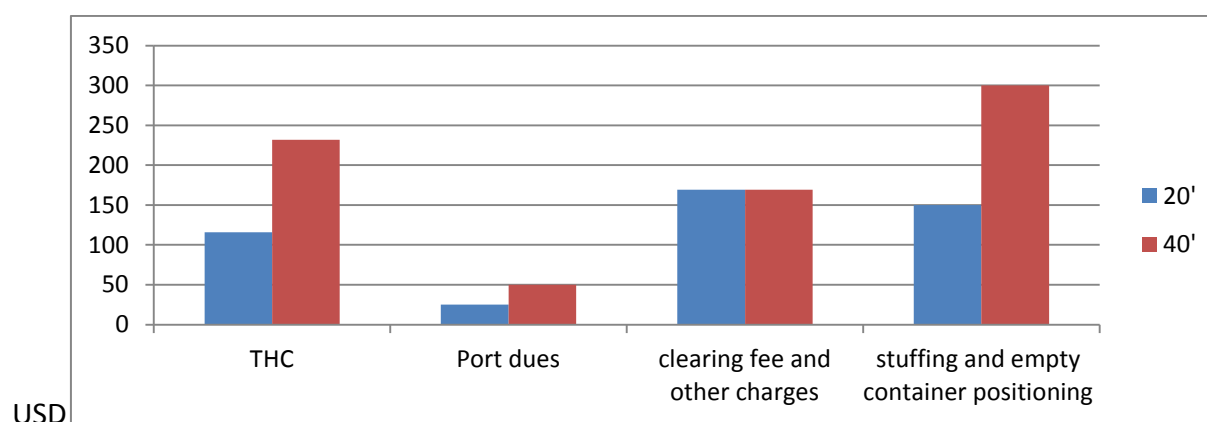
Metrics (time)	Container
Clearance and stuffing including empty container positioning	2
Waiting time for shipping	7
Total time	9

Source; ESLSE Annual Report 2015

As can be seen from table 14, there is undue time delay and loss at Djibouti in the preparation and organization of export shipments and the major reason for these is inability to make empty container readily available before hand for stuffing right on time on arrival of cargo. Some nominated carriers might not have empty containers and cargo have to wait till full containers are unstuffed, possibly returned from inland or even goes to the extent of till it is repositioned from other ports. In addition to these, there is no officially designated export consolidation and processing center where export shipments can be organized and shipped out. Carriers also have no office in Ethiopia, the documentary validation and checking process between Ethiopia and Djibouti prior release takes time. Lack of integrated ICT system applications to organize, plan and timely arrange export shipments is lacking and excessive manual documentations are in use.

The port operation cost relates to stuffing cargo at the port and standard shore handling and transit charges. The relatively expensive port charges are also affecting costs of exports.

Figure 6 Export Handling Cost (USD) at Djibouti



Source; ESLSE Annual Report 2015

The export transit cost at Djibouti for 20' and 40' cargo is about 460 USD and 751 USD respectively. This cost could be reduced if all stuffing is carried out locally. The other cost element relates to the full container storage time. As shown above, when a shipment misses the scheduled ship it will wait for next sailing and incurs port storage charges.

4.3.5 Shipping for Export

Export cargo is mostly carried on global carriers who have weekly sailings from Djibouti and the transit time is competitive. ESLSE plays little role in the export trade due to limitations of global service coverage and frequency of sailings which is not convenient at all for the export shipping needs.

Table 15 Average Export Sea Freight Rate from Djibouti to Various Destination Ports

Destination		Rate(USD)		Cargo
Area	port	20'	40'	
Far East	Tianjin	300	-	Seeds
	Nagoya	675	-	Coffee
India	Nhava Sheva	400	-	Seeds
Middle East	Jebel Ali	750	-	Beans
	Ashdod	1350	-	Seeds
Europe	Istanbul	1000	1700	Textile
	Hamburg	1200	-	Coffee
America	Los Angles	3900	4400	Shoes
	Oak Land	1950	3100	Spices

Source; ESLSE Annual Report 2015

According to the ESLSE Annual report of 2015, The export market is competitive and the freight level is reduced to low in some exports Especially to the Far East ports due to slack back haul sailings the freight is as low as USD 300 for 20ft container. To Europe, however, due to space competition from east west trade the rate quoted is on the high side by comparison.

4.4 Measures taken by the Ethiopian Government

In the context of roles the logistic system plays in the socio-economic development of a country, the logistic system in Ethiopia has to be viewed as core part of the country's trade-led development strategy. Therefore, in order to cope up with the current and future import export trade requirements it is apparent that the Ethiopian freight logistics system needs to be synchronized in line with the global best practices establishments of strong and integrated freight logistic system and trade facilitation. To do so, extensive investment on infrastructure, institutions and development of access to the sea is mandatory.

Various infrastructural investments had been taken by the government of Ethiopia to facilitate the logistics system and trade. The development of road transport, which is the dominant mode of transport in the country, creates a network over a wide array of infrastructural facilities so as to improve the accessibility and mobility of agricultural and industrial products. Accordingly, in 2013/14, the total stock of road network reached 99,522 km of which 6,857 km was federal, 33,609 km rural and 39,056 km woreda road. The asphalt road network in 2013/14 constituted about 12.7% of the total stock of road network in the country. It includes 85 km Addis-Adama express way, the first of its kind in the country which was completed in 2013/14 and contributing much to the export import trade.

Major developments have been also made in the aviation sector to expand and improve the infrastructure required and the quality of air transport services, strengthen its operating capacity, expand its market and comply with safety and security audit procedures. The landing and takeoff time is reduced to 3 minutes against a target of 10 minutes in 2012/13. In line with the aim to expand air transportation, international destinations have increased to 76 and a new hub is also planned to be constructed in the capital.

Acquisition of new aircrafts is in process in order to serve new destinations and increase capacity for local exports. Furthermore, new cargo terminal is in construction to make warehouse capacity 1.35 million tons/annum from only 300 thousand tons currently and to support the fast growing Ethiopian export and high value import for economic development.

Related to railway network development, in 2012/13, priority was given to the Addis Ababa-Djibouti national railway line and the Addis Ababa light rail transit. Accordingly, 22% and 20% of the total construction works of the Addis Ababa/Sebeta-Mieso (317KM) and Mieso-Dewanle (339KM) projects have been accomplished respectively. Feasibility study and other pre-construction preparatory works of the awash-woldiya/Harar gebya (389 KM), woldiya-Harar gebeya-Mekelle(268 KM) woldiya/Harar gebeya-Semera-Asaiyta (229KM and the Asaiyta-Tajura (210KM) railway projects have been undertaken. Likewise, preparatory works are in progress for Addis Ababa/Sebeta-Ijaji-Bedele and Mojo-Hawasa-Boditi-woito railway projects. In order to strengthen the capacity of the sector, capacity building programs are being in conducted locally and abroad.

Due attention has also been given to ensure internationally competent, efficient, effective, reliable maritime transport services, and bottlenecks in the import export business. Accordingly, infrastructure development and regulatory policies such as multimodal transport system supporting the logistics service delivery are put in place. As a result, the share of general cargo imports carried by the multi modal transport system has increased from 21% in 2011/12 to 57.5% in 2012/13. Besides, the share of imported goods transited via dry port/terminal increased to 86% with respect

to developing and expanding dry ports, one dry port was developed in Gelan town, while Mekele, Semera, Kombolcha and Diredawa dry ports were expanded to increase the capacity of container accommodation. Furthermore, cargo handling facilities/machineries have been purchased to facilitate the operation. As a result, dry port terminal operation capacity has increased from 5600 TEU in 2011/12 to 14,582 TEU in 2012/13.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

SUMMARY

This study understands that the logistic service in Ethiopia is still at the early stage of development against the global best practices. Well developed logistic systems and services geared to meeting the impending logistics needs are lacking in the country because it doesn't align with the current and future growth and requirement of the country. Logistic performance is the sum of the performance of the stakeholders within the system. This assessment tries to look at the process that took place at each stage of the SC (Bank Process, Customs, Shipping, Freight Forwarders, Dry Port Process and Port usage). As it can be seen from the assessment made, Bank process time which takes about from 16 days to 6 month for import and 2^{1/2} days for export is relatively higher compared to best practices. These in general creates customers satisfaction level as low as 62% and 65% for private and government banks respectively. With respect to Customs and Dry Ports lack of synchronization and coordination with other government agencies, lack of guidance; regarding Freight Transporters, unfavorable Freight Tariff and shortage of trucks and fragmented service delivery which puts the average satisfaction level of users only at 57% ; the monopoly control of ESLSE of the Shipping service and the high level of dependency of port Djibouti are added together in slowing down the logistic performance and trade activity of the country.

CONCLUSION

This analysis tries to identify the major grounds for low performance of the Ethiopia's trade logistics and what factors in the supply chain matters the most. With these regard the analysis finds out major problems in each of the supply chain. First, with respect to trade finance and trade system, the inadequacy of foreign exchange and insufficient domestic currency in importers coupled with importers and exporters' behavior/unfair practice in the operation including L/C opening at multiple banks, late initiation of operation/late submission of documents to the extent of abandoning their cargo at ports are major issues. Secondly, with respect to transit and trade facilitation, the fragmented/weak interconnectivity among various regulatory agencies and prolonged transit processes, burdensome custom, port and border clearance requirements as well as little focus on trade facilitation to remove barriers for the smooth flow of goods through transit points across the supply chain resulted in longer time, higher cost and impacted reliability of the service. Thirdly, regarding logistic services capability and coordination, organization and stakeholders in Ethiopia's logistics sector including MoT, customs, banks, service providers such as ship agents, carriers and forwarders locally and at Djibouti are uncoordinated or less collaborated either inter-agency with service provider or regulatory agencies and unable to work seamlessly on end to end SC basis rather they are fragmented working only on their respective SC. This has resulted in inefficiencies in the

logistics operation different segments of the sector along the corridor leading to higher logistics cost, longer lead time and unreliable service offering. Fourth, with respect to infrastructure, inadequate and low level of development and unavailability of some of the logistics infrastructure both quantitatively and qualitatively that can meet current and future freight growth and facility requirements including inadequate port/terminal and corresponding facilities, inadequate road, rail, and other mode of transport facilities, old and inadequate type and capacity of trucks, inefficient ICT utilization and unavailability of facilities such as GPS, inefficient management of available facilities at dry ports and terminals are also hampering the development of trade in the country. Fifth, regarding competency, lack of skill, experience and professional manpower in the area of logistics and SCM as well as maritime transport along the logistics chain in the operators and service providers, management, and regulatory: lack of training and exposure visit opportunities, as well as training and development schemes/modules among agencies in the same sector such as customs and logistics are another reasons for the inefficiency in the country's logistics. However, this analysis concludes that the country's being land locked is the major and biggest issue that is hampering the trade logistics since the country is dependent on Djibouti for almost all of the trade conducted. Djibouti port is one of the most expensive ports in the world as a result of their thinking that the port is the only means of their survival. As a result of these, every cost Ethiopia incurs at Djibouti land is increasing in terms of valuable foreign currency overtime. These foreign currency can be spend on many developmental projects in the country and even reverse the foreign currency flow inward if the country have access to the sea and the trade and other activities could be performed in much faster way since there is no crossing of other nations border which in other way reduces the risk and dependency attached with it. However this analysis is not concluding the above problems mentioned are not significant because they are even if the country has access to the port but the extent they hamper the trade and economy do differ. In addition to these the above mentioned issues can be amended if the country develops a strategy towards it but access to the sea is not something that could be developed relatively easily.

Hence, since the logistics service plays a central role in the Ethiopia's economy growth, appropriate actions are needed to be put in place to improve the capability of the logistics service. Otherwise, it could have paralyzing effect on the overall development effort of the country and its trade competitiveness.

RECOMMENDATION

This analysis recommends the following measures to develop the logistic service and trade competitiveness of the country. The country should develop a strategy that create harmonization/synergy among the key stakeholders including those that emerge as new institutions in the sector such as rail transport to avoid fragmented activities and set up logistic governance that develops a clear framework that governs all stakeholders. It is also necessary to invest on infrastructural development including on ICT and human resource so as to create a well equipped professional and skilled workforce. the country should also necessary to share experience and adopt modern logistic systems from other similar countries, develop a reliable system for corridor performance monitoring and analysis, develop/strengthen sea port facilities and port service utilization, dry port/terminal facilities to match the current demand in line with best practices. In addition to these, the country's trade finance system should be improved for increased predictability and availability of foreign exchange reserves. Creating collaboration for joint activities with local/foreign universities, research and training institutions and developing other options in the use of port that could minimize the current dependence on Djibouti (port diversification) should be done.

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Annex 1 list of LLDCs and transit countries

Country name	Transit countries	sub region
Afghanistan	Pakistan, Iran	South Asia
Armenia	Georgia, Iran	Caucasus
Azerbaijan	Georgia, turkey, Russia, Iran	Caucasus
Bhutan	India	South-Asia
Bolivia	Chile, Argentina, brazil, Peru	Latin America
Botswana	South Africa, Namibia	Southern Africa
Burkina Faso	Cote d'voire, Togo, Ghana	Western Africa
Burundi	Kenya, Tanzania, Uganda, Rwanda	East Africa
Central Africa republic	Cameroon	Central Africa
Chad	Cameroon	Central Africa
Ethiopia	Djibouti	East Africa
Kazakhstan	Russia, china	central Asia
Kyrgyz rep.	Russia, Kazakhstan, china	Central Asia
Lao PDR	Thailand, Vietnam	East Asia
Lesotho	South-Africa	Southern Africa
Malawi	South Africa, Mozambique, Tanzania	Southern Africa
Mali	Cote d'ivoire, Togo, Ghana, Senegal	Western Africa
Moldova	Europe, Ukraine	Europe
Mongolia	China, Russia	East Asia
Nepal	India	South Asia
Niger	Togo, Benin	Western Africa
Paraguay	Argentina, brazil	Latin America
Rwanda	Kenya, Tanzania, Uganda	East Africa
Swaziland	South Africa, Mozambique	Southern Africa
Tajikistan	Russia, Europe, Kazakhstan, Uzbekistan ,china, Afghanistan, Iran	Central Asia
Uganda	Kenya	East Africa
Uzbekistan	Russia, Kazakhstan Europe	Central Asia
Zambia	South Africa, Mozambique, Tanzania	Southern Africa
Zimbabwe	South Africa, Mozambique	Southern Africa

Annex 2 logistics performance of LLDCs (1-5 scale)

country	2007		2010		2012	
	score	rank	score	rank	score	rank
Afghanistan	1.21	150	2.24	143	2.25	149
Armenia	2.14	131	2.52	111	2.57	106
Azerbaijan	2.29	111	2.64	89	2.50	119
Bhutan			2.38	128	2.53	114
Bolivia	2.31	107	2.51	112	2.62	96
Botswana			2.32	134	2.85	70
Burkina Faso	2.24	121	2.23	145	2.33	141
Burundi	2.29	113			1.61	165
Central Africa republic					2.58	105
Chad	1.98	142	2.49	115	2.04	160
Ethiopia	2.33	104	2.41	123	2.24	150
Kazakhstan	2.12	133	2.83	62	2.70	92
Kyrgyz rep.	2.35	103	2.62	91	2.35	139
Laos PDR	2.25	117	2.46	118	2.50	116
Lesotho	2.30	108			2.24	151
Malawi	2.42	91			2.81	75
Mali	2.29	109	2.27	139	2.60	100
Moldova	2.31	106	2.57	104	2.33	142
Mongolia	2.08	136	2.25	141	2.26	147
Nepal	2.14	130	2.20	147	2.04	162
Niger	1.97	143	2.54	106	2.70	91
Paraguay	2.57	71	2.75	76	2.49	122
Rwanda	1.77	148	2.04	151	2.37	137
Tajikistan	1.93	146	2.35	131	2.29	144
Uganda	2.49	83	2.82	66	2.38	135
Uzbekistan	2.16	129	2.79	68	2.66	94
Zambia	2.7	100	2.28	138	2.89	65
Zimbabwe	2.29	114			2.56	110
Region						
East Asia & pacific	2.58		2.73		2.78	
Europe & central Asia	2.50		2.74		2.77	
Latin America & Caribbean	2.57		2.74		2.68	
Middle east & North Africa	2.37		2.60		2.59	
South Asia	2.30		2.49		2.53	
Sub-Saharan Africa	2.35		2.42		2.47	

country	2007		2010		2012	
	score	rank	score	rank	score	rank
Income group						
High income; OECD	3.73		3.73		3.68	
High income; non OECD	3.25		3.24		3.24	
Upper middle income	2.66		2.80		2.83	
Lower middle income	2.47		2.59		2.61	
Low income	2.26		2.43		2.43	

Source World Bank

Annex 3 logistic performance index of coastal and land locked countries

Region	Regional average		Land locked countries		Coastal countries		Coastal advantage over landlocked (%)	
	2007	2012	2007	2012	2007	2012	2007	2012
World	n.a.	n.a.	2.44	2.65	2.83	2.92	16	10
Sub-Saharan Africa	2.35	2.47	2.23	2.44	2.40	2.49	8	2
East Asia & Pacific	2.58	2.78	2.17	2.38	2.65	2.85	22	20
Latin America & the Caribbean	2.57	2.68	2.44	2.56	2.58	2.70	6	5
South Asia	2.30	2.53	1.84	2.27	2.64	2.69	43	19

Annex 4 Questionnaires

1. In what business are you engaged in?

- export import

2. What products your company export/import?

- semi finished goods finished goods
 raw materials agricultural products others

3. Which bank does your company prefer for bank process for import/export?

- private banks government banks

4. For how long you have been working with the bank?

- 1-3 years 5-8 years
 3-5 years Above 8 years

5. How long would it take for you to finish the bank process?

- 1-15 days 1-3 month above 6 month
 15-1 month 3-6 month

6. How do you evaluate the foreign exchange availability and access?

- excellent good
 very good poor

7. How do you evaluate the professionalism of the bankers?

- excellent good
 very good poor

8. Your overall impression of the bank service?

- excellent good
 very good poor

9. What are the major problems you face regarding shipping?

10. How do you evaluate the shipping process and time?

O. excellent O. good

O. very good O. poor

11. How do you evaluate the overall shipping service?

O. excellent O. good

O. very good O. poor

12. What are the major problems you face regarding port operation?

13. How do you evaluate the port operation time and process?

O. excellent O. good

O. very good O. poor

14. How do you evaluate the overall port operation service?

O. excellent O. good

O. very good O. poor

15. What are the major problems you face regarding freight transport?

16. How do you evaluate the freight transport time and process?

O. excellent O. good

O. very good O. poor

17. How do you evaluate the overall freight transport service?

O. excellent O. good

O. very good O. poor

18. What are the major problems you face regarding inland dry ports?

19. How do you evaluate the inland dry port process and time?

O. excellent O. good

O. very good O. poor

20. How do you evaluate the overall inland dry port service?

O. excellent O. good

O. very good O. poor

21. How do you evaluate the professionalism of inland dry ports staffs?

O. excellent O. good

O. very good O. poor

22. What are the major problems you face regarding customs operation?

23. How do you evaluate the customs operation process and time?

O. excellent O. good

O. very good O. poor

24. How do you evaluate the overall customs operation service?

O. excellent O. good

O. very good O. poor

25. How do you evaluate the professionalism of the customs bureau staffs?

O. excellent O. good

O. very good O. poor