Sveriges lantbruksuniversitet
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Department of Economics

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Evaluation of Ethiopian Shipping and Logistics Service Enterprise Multimodal Freight Transport Performance by Customers and Employees

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Tadesse Kenea Amentae/Decemebr, 2014

Summary

With today's globally integrated economy the role of transportation has got immense attention in international trade and development. Freight transport is an integral part of transportation system and it moves freight of huge value all over the world. For instance, in 2008, more than $16 trillion of exported freight was transported worldwide (Global highlight, 2010). With such contribution freight transportation service is getting increased attention during this era. Particularly, a system of freight transport that is environmentally safe, minimizes costs, and increases conveniences has become the agenda worldwide. Intermodal transport service is a system with such objectives of efficient, effective and environmental friendly freight mobility (Brewer, et.al, 2001). This study was made with the main objective of assessing the multimodal freight transport performance in Ethiopia through customer satisfaction and employee evaluation. The literature review and case study approaches were used. The review of literature shows that freight transport practices in general and the implementation of multimodal freight transport system in Ethiopia have been hindered by various problems. These problems include poor existing infrastructure and lack of basic infrastructures, inefficient and ineffective freight vehicles, and long and repetitive custom checking points. The case study on multimodal freight transport performance of Ethiopian Shipping and Logistics Service Enterprise showed that majority of customers were either dissatisfied or very dissatisfied with many of the performance indicators. The employees evaluated the organization relatively more positively. Overall, the enterprise was doing well in terms of transport documentation performance indicators but in terms of cost and convenience the performance was unsatisfactory.

Sammanfattning

I dagens globaliserade och integrerade värld har logistikens betydelse för internationell handel och utveckling fått mycket stor uppmärksamhet. Godstransporter utgör en grundläggande del av det internationella transportsystemet och transporterar årligen varor för stora värden över hela världen. Som ett exempel transporterade det under 2008 varor för ett värde av 16 biljoner dollar (Global highlight, 2010). Framförallt har en transportkedja som har liten miljöpåverkan, minimerar kostnader och ökar bekvämligheten kommit i fokus. Intermodal transport är ett transportsystem där dessa mål står i fokus (Brewer et al, 2001).
Denna studie genomfördes med huvudsyftet att utvärdera multimodal godstransport i Etiopien utifrån konsumenttillfredställelse och en utvärdering utför av de anställda. Studien har genomförts genom både en litteraturstudie och en fallstudie. En genomgång av litteraturen visar att godstransport i allmänhet och genomförandet av multimodal godstransport i synnerhet har hindrats av en rad problem i Etiopien. Dessa problem omfattar begränsad grundläggande infrastruktur av dålig kvalitet, ineffektiva fordon samt många kontrollpunkter som tar lång tid. Fallstudien av multimodal tranport hos Ethiopian Shipping and Logistics Service Enterprise visar att en majoritet av kunderna är antingen missnöjda eller mycket missnöjda med transportprestandan. Däremot var de nöjda med själva organisationen. På en övergripande nivå fick företaget gott betyg avseende dokumentering, medan prestandan avseende kostnader och bekvämlighet var otillfredsställande.

Abbreviations

AACCSA – Addis Ababa Chamber of Commerce and Sector Association

AA-LRT – Addis Ababa Light Rail Transit

CIA – Central Intelligence Agency

EAL – Ethiopian Airlines

EC – European Commission

ECMT – European Conference of Ministers of Transport

ERA – Ethiopian Road Authority

ERC– Ethiopian Railways Corporation

ERCA – Ethiopian Revenue and Custom Authority

ESLSE – Ethiopian Shipping and Logistics Service Enterprise

ETVs – Elevating Transfer Vehicles

EU – European Union

MTO – Multimodal Transport Operator

NRNE – National Railway Network of Ethiopia

RSDP – Road Sector Development Program

ULDs – Unit Load Devices

UN – United Nations

UNCMTG –United Nations Convention on International Multimodal Transport of Goods

UNCTD – United Nations Council on Trade and Development

UNECE – United Nations Economic Commission for Europe

UNESC – United Nations Economic and Social Council

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1 Introduction

1.1 Problem background

Ethiopia being one of the developing countries needs to be integrated with global economy and that can only be possible through efficient and effective flows of goods to and from the country in international trade. To this end, the country needs an efficient and effective intermodal freight transport system for international trade. Ethiopia's freight transport practice is characterized by a number of problems including underdeveloped and fragmented management system, inadequate and inappropriate fleets of vehicles and other means of transportation, poor and lack of transport and logistics infrastructure /roads warehouses and cold chains, etc/, very high accidents which is ranked among the worst in the world and congestion in cities at inlets/outlets of cities, lack of coordination of goods transport, damage of goods and quality deterioration due to inappropriate storage, packaging, and transporting, (Debela, 2012; Tadesse, 2006). Moreover, Ethiopia is a landlocked country with 100% dependence on Djibouti port for its whole export and import that resulted in congestion of export and import freight of Ethiopia at Djibouti port. With the aim of alleviating these problems at least in the flow of goods between Djibouti port and dry ports in Ethiopia, Ethiopia recently implemented multimodal transport system. The directive set by the government of Ethiopia (Fortune, 2012) indicated that multimodal transport system in Ethiopia targets for seamless, low cost, and maximum customer convenient transporting of imported goods from Djibouti to dry ports in Ethiopia and the reverse flow in case of exported goods. This study was made to assess the multimodal freight transport performance of Ethiopian Shipping and Logistics Service Enterprise (ESLSE), which is a sole multimodal transport operator (MTO) in Ethiopia by survey of customer satisfaction and employee evaluation. The study started with review of existing literature on the development and prospects of intermodal freight transport systems in general and Ethiopian context. The challenges of intermodal freight transport globally and in Ethiopia context was analyzed from existing literature.

1.2 Problem

Janic (2001), called the challenges to intermodal transportation as "*barriers or critical success factors*". The author identified five types of challenges to intermodalism as: 'hardware', 'software', 'orgware', 'finware', and 'ecoware'. The author explained that 'hardware' challenge includes compatibility of technology, intermodal competition, and complementarities. 'Software' includes compatibility of information system, information related services. 'Orgware' is a challenge of design and management of ports, terminals and transfer points. 'Finware' is a matter of cost effectiveness and user charges. The sustainability, reducing the market share of road transport for appropriate balance with others to bring overall efficiency and safety of transport operations and to reduce pollution and congestion, is the last but not least critical factor or challenge named as 'ecoware' by Janic (2001) for implementation of intermodal transport. These challenges identified by the author were more or less the same with the challenges identified by United Nations. According to standing committee of United Nations Council on Trade and Development on fostering competitive multimodal transport services (UNCTD, 1995), the challenges of multimodal transport were seen from two perspectives. First, the capacity of rendering multimodal transport service, particularly by developing countries, i.e., the development of multimodal transport requires globalization of production and liberalization of services which demands

higher capabilities for countries to offer reliable and cost effective transport and logistics services. Countries need to develop their capacity so as to take advantages of technological developments, but this is not and will never be an easy endeavor for developing countries, hence capacity is one and major challenge of intermodal/ multimodal transport of goods. The second challenge indicated was the need of harmonization of the legal environment for intermodal transport particularly considering the development of international transport demands and harmonization of the legal environment. However, the progress in this respect is still not encouraging that the United Nations convention on international multimodal transports of goods was not yet ratified though introduced in May 1980. In case of Ethiopia, the challenge of intermodal system may be of two-folds. First, the country's capacity to provide multimodal transport service that is reliable and cost effective is dependent on many factors among which are the use of advanced technology and infrastructure. In this regard, Ethiopia is not exceptionally free from the challenges rather it may be more severe. The five challenges mentioned by Janic (2001): the 'hardware', 'software, 'orgware', 'finware', and 'ecoware' are all relevant challenges to Ethiopia in implementation of multimodal freight transport. Second, Ethiopia began the service very recently i.e., by 2011 and the experience of the system to the country is new phenomenon. With less experience operational efficiency and effectiveness may be under problem unless appropriate care is taken. This study was made to evaluate the second challenge or Ethiopian multimodal freight transport service performance.

1.3 Aim

The main objective of this study was to evaluate the multimodal freight transport service performance of Ethiopian Shipping and Logistics Service Enterprise (ESLSE) by its customers and employees. The specific objectives were to evaluate:

1. delivery performance,
2. transportation documentation performance,
3. liability and insurance performance during damage or loss of goods while in transit,
4. transport service price and associated costs & convenience, and
5. administrative/facilitation support service performances of Ethiopian Shipping and Logistics Service Enterprise for multimodal customers.

2 Theoretical perspective and literature review

2.1 General Overview of Freight Transport

These days, households in many parts of the world can buy fresh fruits, vegetables, or other fresh food items regardless of the season, make internet purchases which demands fast and reliable deliveries, and purchase and use products which are manufactured thousands of miles away in other countries and continent. These possibilities which seem miracle long years back are today part of a routine business. Central to these is the freight transport and logistics practice. According to (Global Highlights, 2010), the transportation of freight among countries internationally involves complex structure in a long distance transportation system. It involves many stakeholders such as shippers, carriers, third party logistic providers, consignees, sea ports, airports, and a variety of other modes of transport. The integration of services and interaction among participants at different stages of the transport chain influences the success of trade. The volume of fright transport is growing at high rate and crossing international borders. Studies indicate that this growth in freight transport with resulting congestion of road transport made intermodal freight transport to be among high priority agenda among the public, private players, and academia (Bontekoning & Priemus, 2004).The authors indicated that particularly in Europe, intermodal transport is stimulated by governments to achieve a modal shift and to bring a more balanced use of different infrastructures (rail, sea, road, etc) to accommodate for the growth in transport volume instead of depending on road transport alone.

As a result of its importance in international trade, freight transport industry has shown tremendous developments globally and today in many parts of the world integrated and intermodal freight transport are becoming the old innovations. On the other hand, the volume of international freight transport is also ever increasing demanding more innovative and environment concerned freight transport system to be invented. For instance, according to the Freight transport global highlight (2010), the global freight transport shows a long-term upward trend, i.e., from 1998 to 2008, world merchandise freight exports nearly tripled in value from $5.4 trillion to $16 trillion. During the same period, U.S. freight exports doubled from $682 billion to $1.3 trillion. Janic (2001), indicated that the annual growth rate for goods transport was 2 % between 1970 and 1997, and it increased by more than 75% during these period for Europe. Janic (2001) indicated that goods intermodal transport was also increasing and its volume has almost doubled rising from 113 million tone kilometer per year to 214 million tone kilometer per year only between 1990 and 1997. Fig.1. below shows the value of exports by country in 2008. The Figure shows for Ethiopia and many part of Africa the lowest value export during that period. This may be attributable to the freight transport problems beside other economic factor including the manufacturing capacity of nations to produce export demanded products.

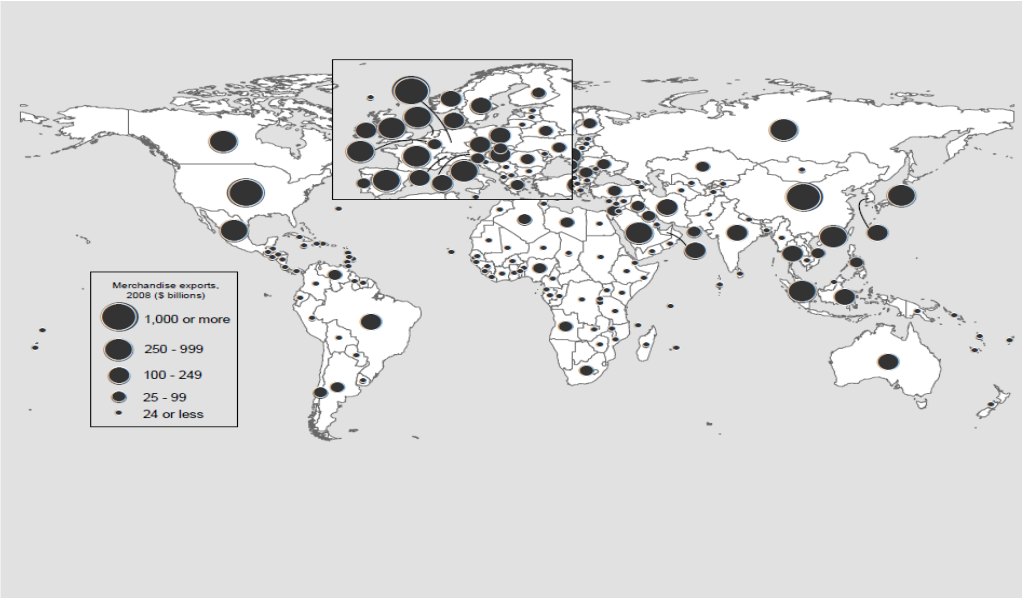

Fig.1. Value of World Goods Export by Country by 2008 (Global highlight, 2010**)**

2.2 Terminologies: Integrated, Intermodal, Multimodal, or Combined Freight transport?

These terms are related and used by different sources usually in an overlapping way. Brewer, et al. (2001), defined intermodal transport as an integration of shipments across modes. An integrated movement of freight that involve at least two modes of transport under a single through rate with a goal of providing seamless transport system from point of origin to final destination under one billing and liability is known as intermodal transport (Hayuth,1987; DeWitt and Clinger, (1999) cited in Brewer, et al. (2001). Breda, et al. (2009) defined multimodal transport in the same way as an integrated transport system involving at least two modes of transport and with a single document and liability. Better insight on the definition of these terms was made by Milan Janic (2001) based on the connotation given by European Union. According to the author, these terms are used under the integrated transport system in general for which there is no generally accepted definitions. Janic (2001) indicated that intermodal, combined, and multimodal transport are terms used generally with freight transport. The author discussed definitions given by European Conference of Ministers of Transport (ECMT), the European Commission (EC), and the United Nations (UN).
According to Janic (2001), a definition given by ECMT has distinguished the terms 'intermodal', 'combined', and 'multimodal' transports. Here are three definitions by ECMT (1998) as cited in Janic, (2001).

> Definition 1: *"Intermodal transport is the movement of goods (in one and the same loading unit or vehicle), which uses successively several modes of transport without handling of the goods themselves in transshipment between the modes"*
> Definition 2*: "Combined transport is a transport in which the major part of the European journey is carried out by rail inland waterways or sea and in which any initial and/or final leg carried out by road are as short as possible"*
> Definition 3*: "Multi-modal transport is a carriage of goods by at least two different transport modes"*

Another author who discussed these terms in similar way with Janic (2001) is Ballis (2005). The author distinguished among these terms as multi-modal transport is a system of transporting freight with a minimum of two different modes of transport in an integrated manner; inter-modal transport on the other hand is defined as a system of transport handing over one commodity with a minimum of two different modes of transport but within the same packaging, without any break. He stated packaging can be a vehicle itself/truck, a trailer or container. The author stated combined transport as inter-modal transport of which the European legs are essentially carried out by rail, eventually inland waterways or sea, and initial or terminal legs, as short as possible, by road. The author stated that combined transport is a term which is commonly used in Europe and is an initiative to cover environment-friendly intermodal transport. It is idea to reduce road transport as much as possible and is supported by financial incentive.

Article one of the United Nations Convention on International Multimodal Transport of Goods (UNCIMTG,1980), defined international multimodal transport of goods as "*the carriage of goods by at least two different modes of transport on the basis of a multimodal transport contract from a place in one country at which the goods are taken in charge by the multimodal transport operator to a place designated for delivery situated in a different country."*

According to Kinlström (2003), intermodal transport is a term within logistics which is the integration of shipments across modes. According to the author, the goal of intermodal transport is to provide seamless transport under one billing and common liability on the whole movement from origin to destination. Kinlström (2003) also noted intermodal transport as an alternative to reduce environmentally hazardous emissions through use of lesser road transport. Kinlström (2003) also raised the fact that intermodal transporting is attracting interests from many actors including transport operators, politicians, engineers, and researchers resulted in many concepts and definitions which needs to be used contextually. In this regard, Janssen et.al (2008) also indicated that the increased attention to intermodal transport, particularly intermodal freight transport is as a result of problems of road congestion, environmental concerns, and traffic safety. The author noted that an increasing attention to speed and agility in supply chain is a driving force for firms to reconsider usual logistics service and intermodal is a result in transport logistics. Kinlström (2003) explained multimodal transport is characterized by essentially separate movements involving different modes while intermodal transport is integration of shipments across modes. Same explanations with Kinlström (2003) was noted by Brewer et.al (2001) and are not the same on the definitions given to multimodal transport by the United Nations Convention for multimodal transport of goods, by EC cited in Janic (2001), and by Ballis (2005). However, Kinlström (2003) explained combined transport in the same way with Ballis (2005), combined transport is intermodal transport of unitized cargo when the major part of the journey is by rail and any initial or final leg is carried out by road. Panayides (2002), also defined intermodal transport in the same way as *"the transport of unitized loads by the coordinated use of more than one transport mode so that the comparative advantages of each modes are maximized and the transport chain is guided as one unity"*.

From these definitions, it is clear that these terms are used by different people at different contexts mostly to say the same thing. The terms involve many concepts in common though lesser differences in conceptualization/definition exist among authors, particularly on 'multimodal' versus 'intermodal'. The involvement of at least two modes of transport, concern for environment, single billing, single liability and integration among the modes are

major issues and features that attracted the attention of most authors. There is difference on these points conceptualization particularly for multimodal transport of goods. For instance, Breda et al. (2009), Ballis (2005), Janic (2001), and United Nations Convention for Multimodal Transport of goods defined multimodal transport as transport system involving multiple modes, integrated movement, single billing and liability. However, Brewer et al. (2001) and Kinlström (2003) defined multimodal transport as a separate movement involving more than two modes but not integrated and not by single billing and liability. The fact that intermodal transport involves same packaging without any breaks and combined transport is the term used by EU member states with aim to use a possible route that minimizes road transport as much as possible can be indicated as distinguishing features of these transport systems. Therefore, in this study 'multimodal' and 'intermodal' transport is used to refer to transport system involving multiple modes, integrated movement, single billing and liability. This is because the concern of this study is on multimodal freight transport practice in Ethiopia where the operational definition of the term multimodal is the same with intermodal transport as it was made by some authors discussed above, i.e., as an integrated transport involving single billing and liability.

2.3 Importance/Advantage of Intermodal Transport

The objective of intermodal arrangements is efficient and effective goods flow from one country to the other for facilitation of both national and international trade. These are key arrangements to development as no country can develop without trade and transportation is central gravity of effective and efficient trade. Intermodal transport service gives combined responsibility for transport activities under one operator with the responsibility of operator to manage and coordinate the total activities from shippers' door to buyers' door.

The United Nations convention on international multimodal transport of goods (1980) stated that its aim was to set international standard and rule of law that member states needs to follow in facilitation of international multimodal transport of goods. The convention report states that all sate parties to the convention recognize points in relation to multimodal transport of goods (UNCIMTG, 1980). Some of these points clearly reflect the importance of multimodal transport. These include:

a. International multimodal transport of goods is recognized as a way of smoothing systematic expansion of world trade,
b. The requirement of trade for smooth, economic and efficient multimodal transport service,
c. The attractiveness of guaranteeing logical development of international multimodal transport in the interest of all countries and the need to consider special problems of transit countries,

Though the points raised by this convention were important and appealing, the convention fails to be ratified and today countries are using multimodal transport under their local laws and contractual laws with other countries. The point here is that the convention clearly stated the importance of multimodal transport.

The rise of international multimodal transport service is the result of its benefit over the segmented mode arrangements. Many studies showed that multimodal transportation of goods saves both money and time. For instance, Palmer and Degulio (1989) as cited in Hoeks (2009) indicated that ten transportation days can be saved on cargo shipment from Far East to New York by using multimodal arrangement over an all-water segmented arrangement routes.

Efficient transitions between modes, flexibility and possibilities for door-to-door service, environmental advantage, and the possibilities of combining the advantages from separate

modes are noted to be advantages of intermodal transport system by Kinlström (2003). Similarly, Panayides (2002) noted that intermodal transport system is a response to customers' demand to get one-window, integrated, just-in-time, efficient and all inclusive door-to-door service at predetermined price.

Hoeks (2009) indicated that the use of multimodal transport has a benefit of enhancing competitiveness of the freight industry as a whole through use of most efficient mode of transport at each stage. The author explained the benefit of multimodal transport from legal point of view and claimed these five major benefits of multimodal transportation arrangements: avoiding of separate arrangements of contracting with many transporters, avoiding the hassle of the shipper for placing goods at the right place at the right time for each of the contracting transporting segments, avoiding the inconvenience of storing goods between different segments of the transport stages when the segments don't fit seamlessly, the negotiability of bill of lading of multimodal transport arrangements to acquire a documentary credit from banks contrary to other consignment notes such as road carriers notes which are not negotiable, and finally it avoids the difficulty of assigning responsibility/liability in case of damage which may be complex under unimodal arrangements with difficulty of identifying at which stage of the segment the damage occurred. Janic (2001) indicated that intermodal transport has an aim of "demand-led" logistics chain with high quality and cost efficient 'door-to-door' services for customers. The author also indicated the utilization of transport infrastructure can be improved by use of integrated transport systems.

Janic (2001) discussed multiple importance of intermodal transport of freight. First, the fact that MTOs use their own communication links and coordinate interchanges smoothly at trans-shipment points minimizes time lost at transit shipment points; it also avoids the risk of loss, pilferages and damages to cargo at transit points. Second, intermodal transport of goods provides faster transits of goods from source to consumer; hence the long distance between origin of material and consumer is now longer and longer with the time of the transport very much lesser as a result of intermodal transport development. Third, modal integration also reduces the burden of documentation and formalities as the issuing of multiple documentations and other formalities at each stage of segmented transport of goods is limited to only one document and formalities only with a single operator. Fourth, intermodal transport also saves cost, i.e., the efficient and systematic linkage based operation of integrated transport operators make them to deliver the service at lower cost than it could have been under segmented operations that involve huge individual overhead which should have been covered by the customer. Fifth, the fact that intermodal transport establishes a single agency relation to deal with transport operator in all issues related to the movement of the goods that include settlement of claims for loss of goods, damage or delay in delivery at destination increases the convenience for customers. Finally, Janic (2001) indicated that multimodal transport also reduces the cost of export, i.e., the nature of integrated transport operation which is efficient reduces the cost of exports and improves businesses' competitive position in international markets.

2.4 Overview of Freight Transport in Ethiopia

Ethiopia is one of non-coastal countries in Africa surrounded by Sudan, Eritrea, Djibouti, Somalia, and Kenya (Fig.2.) and has a land area of about 1.13 million sq. km and a population of about 91.73 million (World Bank, 2012). The country has a wide spread topographic features with an altitude varying from 4620 m above sea level and 155m below sea level. The

country has a very difficult topography where most highland areas are crossed by numerous river valleys and the Great Rift Valley also crosses the country into two from north east to south west direction from edge to edge (Debela, 2012). This made the provision of transport facilities very expensive and the transport activities in Ethiopia may be one among the most expensive tasks. Beside the hassle of topography, though Ethiopia has recorded encouraging developments during the last few years, it is still among the least economically competitive countries (Global Competitiveness report, 2012/13); it is ranked 121st out of 144 countries and its score for some of the assessment criteria are far below average. The problem of the country's capacity in infrastructure development and technological readiness is highly reflected in transport sector. Various studies made in Ethiopia showed that the transportation sector of the country is one that is performing less even to African standards. According to Aschenaki (2004), transport cost of the country was indicated as a problem that imposed obstacles on the overall development of Ethiopian economy.

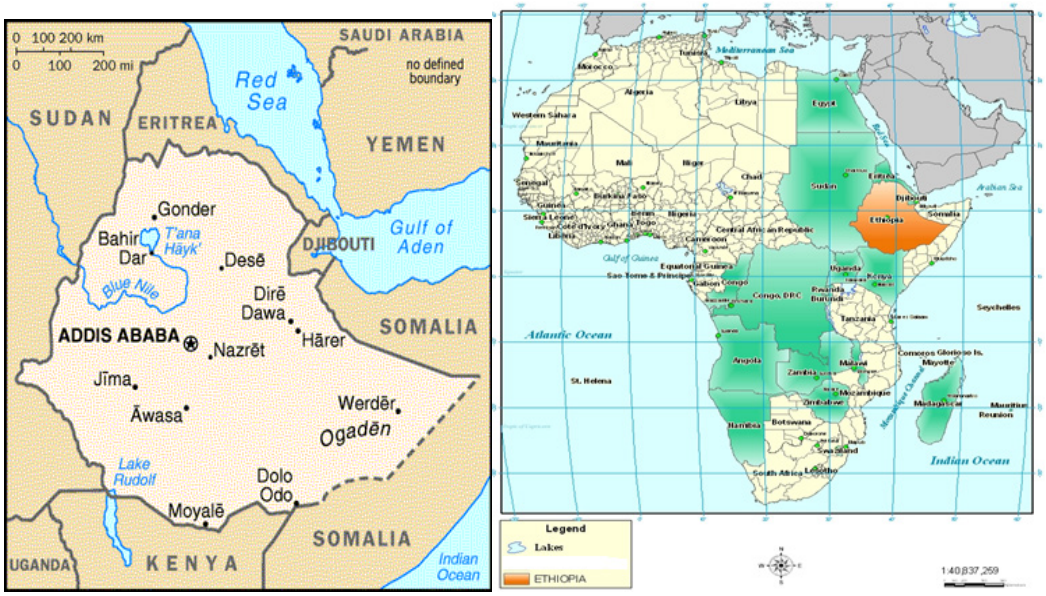

Fig.2. Closer look (right) and location (left) of Ethiopia (Debela, 2013)

Road Transort

The role of road transport for any country is an immense. For instance in USA, the road transport constitute about 70 % of all freight tonnage transported domestically (SELECTUSA Logistics report, 2011); In European countries the road transport mode constitute the biggest share of all modes in freight mobility. In Sweden 60.7 %, Germany 69 % and EU average is 76.4 % of the transportation mode is from road transport (EUROSAT Transport Statistics, 2013).

The importance of road transport in Africa is even more significant. In Africa, 80 % of all freight transport and 90 % of all passenger traffic is carried by road transport (UNESC, 2009). The road transport in Ethiopia is probably more important than elsewhere due to the lack of other alternative transport like railways and the geographical dispersion of the country. According to CIA world fact book (2011), in Ethiopia road transport is the means of mobility for 93 % of freight and 95 % of passengers which is above all Africa average. Thus, the importance of road transport both for freight and passenger transport is vital in Ethiopia. In Ethiopia, as may be with other African countries which were under colony, the construction of asphalted roads were spread by the Italians during five year occupation between 1936 and 1941.The roads constructed during that time had a length of about 7000kms and it connects

many parts of Ethiopia to the center, Addis Ababa. After 1941 independence from Italia, Ethiopia developed road infrastructure under consecutive governments. However, relatively better achievement has been recorded by the current government with better attention to the road sector. During the years 1997 to 2012, the government developed many roads of different nature. The system is managed through the Road Sector Development Program (RSDP) and by 2012 the road length has grown to 63,083 kms out of which 9,875 kms or 15.7 % is surfaced with asphalt (ERA, 2013, see Table 1). Table 1 indicated that the achievement over the fifteen years is encouraging. However, the current situation of 0.75 road density per 1000 population and 5.73 road density per 100 sq. Km (57.3 per 1000 sq.km) is not cheering even against African countries. The road density per 1000 inhabitants and per 100 sq.km for the whole Africa is 2.6 and 6.84, respectively (ECA, 2009), both of which are above current Ethiopian situation.

Table**1:** Growth of road networks & changes in road density 1997- 2012 (ERA, 2013)

Year	Road Networks in Kms					Growth Rate %	Road Density/1000 popn	Road Density/1000 sq.km
	Asphalt	**Gravel**	**Rural**	**Woreda**	**Total**			
1997	3708	12162	10680		26550		.46	24.14
1998	3760	12240	11737		27737	4.5	.46	25.22
1999	3812	12250	12600		28662	3.3	.47	26.06
2000	3824	12250	15480		31554	10.1	.50	28.69
2001	3924	12467	16480		32871	4.2	.50	29.88
2002	4053	12564	16680		33297	1.3	.49	30.27
2003	4362	12340	17154		33856	1.7	.49	30.78
2004	4635	13905	17956		36496	7.8	.51	33.18
2005	4972	13640	18406		37018	1.4	.51	33.60
2006	5002	14311	20164		39477	6.6	.53	35.89
2007	5452	14628	22349		42429	7.5	.55	38.60
2008	6066	14363	23930		44359	4.5	.56	40.30
2009	6938	14234	25640		46812	5.5	.57	42.60
2010	7476	14337	26944		48793	4.2	.58	44.39
2011	8295	14136	30712	854	53997	10.7	.66	49.09
2012	9875	14675	31550	6983	63083	16.8	.75	57.30

Railway Transport

The only functional railway in Ethiopia was the Ethio-Djibouti railway that extended from Djibouti to Addis Ababa. It was Single track, 781 km railway, which served Ethiopia in carrying the of its export and import freight cargo. This historical railway line was out-of-date and already closed. Currently Ethiopia has established Railway Corporation called Ethiopian Railway Corporation (ERC) wich is mandated to support the growing economy of the country through constructing modern railways infrastructure which is cost effective and that transports bulk freight within short period of time and to expand passenger railways transport services and enhance public mobility (ERC, 2010 mission statement). The corporation is currently engaged with two main projects namely the National Railway Network of Ethiopia (NRNE) and Addis Ababa- Light Rail Transit (AA-LRT). The NRNE, with the main objective of supporting both freight and passengers to and from ports and within the country are designed to get maximum possible benefit in terms of creating effectiveness and efficiency in the transport sector.

The National Railways Network of Ethiopia Project

The National Railway Network of Ethiopia project was planned to be completed in two phases and has a total length of about 10,000 kms of railways to spread-out in the country. Fig.3. shows the planned National Railway Network of Ethiopia (ERC, 2010).
The project which is part of the mega projects of the Growth and Transformation Plan of the country is supposed to be partially completed between the plan period of 2010 and 2015. According to ERC(2010), 2000 kms of standard gage railways was planned to be completed by 2015.

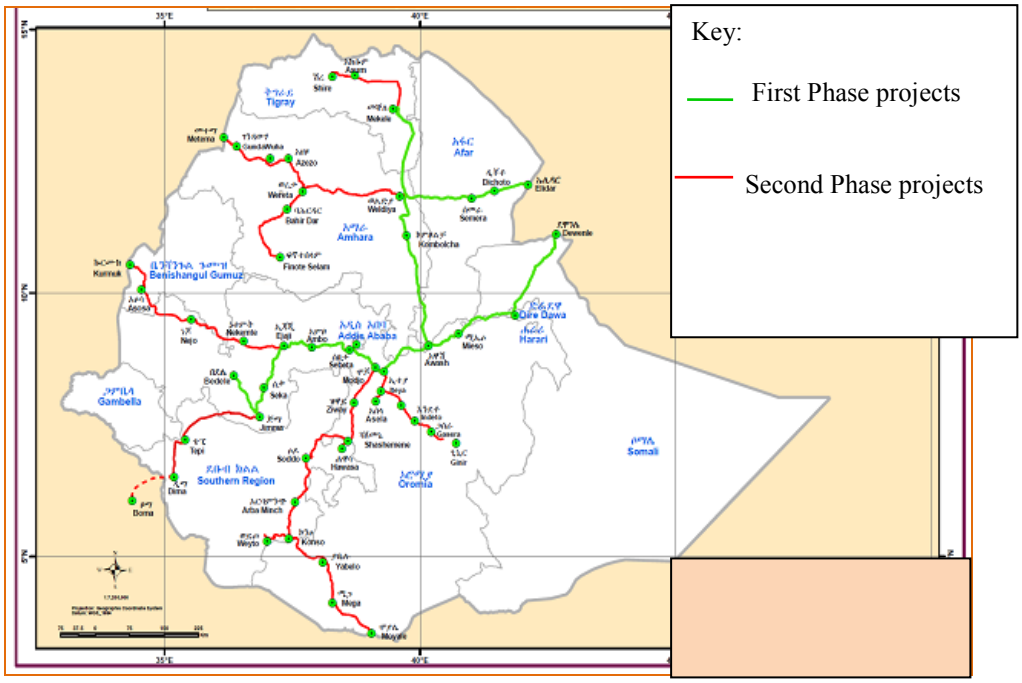

Fig.3: National Rail Network of Ethiopia (ERC, 2010)

Addis Ababa Light Rail Transit (AA-LRT) Project

The second railway project that Ethiopian Railways Corporation is running currently is the Addis Ababa Light Rail Transit project. According to ERC (2011), this project has a total length of 34.25 km. Its main target is to bring mass passenger transportation in Addis Ababa city. It is a double track railway for the whole route and has expected capacity of moving 80,000 passengers per hour. With mass passenger transport and reduction of congestion in Addis Ababa it will have positive impact on freight transport, too.

Sea/Water Transport

Water transport, particularly for domestic freight mobility is insignificant in Ethiopia. In Ethiopia, though there are many rivers they are not navigable and the only river used for minor transportation is river Baro in south western of Ethiopia. In international trade, though Ethiopia is a land locked country it has its own vessels which are managed and operated by Ethiopian Shipping and Logistics Service Enterprise. Currently the company is operating eight vessels and nine vessels are under construction in china (The Economist, 2012). According to The Economist (2012), the Ethiopian shipping lines handles about 45 % of Ethiopian export and import shipping mostly by its own vessels the source also indicated that space is rented from other shipping lines to cover the remaining. According to information from Ethiopian Shipping and Logistics Service Enterprise (2013), the company provides coastal and international marine water transport service from/to Djibouti port through hub ports in India, China, Korea, Japan, Singapore, South Africa, and Indonesia.

Air Transport

Ethiopia has long and better history for its air transport. Ethiopian Airline previously known as Ethiopian Air Lines, simply referred as Ethiopian was founded in 1945 and started operation on 8th April, 1946. According to Ethiopian Airline (EAL) fact sheet (2013), the first international flight took place to Cairo via Asmara in Douglas C-47 Sky train. Ethiopian Airline is a member of International Air Transport Association and African Airlines Association since 1968. It became a member of Star Alliance since 2011(EAL Fact sheet, 2013).According to the factsheet, the air line currently serves a network 72 international destination and 17 domestic destinations. The company currently owns 57 Aircrafts 7 of these are freighter fleets. According to information from the Airline, since early 1970s the agricultural products exports of Ethiopia have been carried by the cargo service of Ethiopian Airline. The Airline cargo service operates dedicated freighter aircraft on a chartered and scheduled basis and is currently operating to 40 cargo destinations spread across Africa, Europe, Asia, and the Middle East. The information from the airline indicated that current focus for the cargo as exports of fruits, semi-processed and finished leather products, vegetables, flowers, carpets, chilled meat, frozen fish, coffee and imports such as chemicals, machinery, spares, electronics, garments, pharmaceuticals and Vehicles.

2.4.2 Intermodal concept and development in Ethiopia

Intermodal transport concept is just at its infant stage in Ethiopia. The system was started on January, 2011 by Ethiopian Shipping and Logistics Service Enterprise (ESLE, 2013). The system is 100 % under the control of the Ethiopian government. Multimodal transport system

in Ethiopia means when freight is transported between foreign ports and Ethiopian dry port under a single transport rate, liability, and document. According to Fortune (2011), the multimodal transport system was introduced with the aim of easily moving freight from port Djibouti on time. The system was started after the issuance of Multimodal Transport Implementation Directive on July 2010. According to the source, the directive defined the multimodal transport system as *"a system where by transportation of goods is under a single contract but performed by more than two means of transportation; the carrier is liable for the entire journey including the shipment's delivery at final destination; the transportation can be made by sea, rail, and trucks (roads)"*. Fortune (2011) stated that the directive made all shipments that belong to government to be transported through Ethiopian Shipping and Logistics Service Enterprise (ESLSE) and to be delivered to dry ports and warehouses authorized by Ethiopian Revenue and Custom Authority (ERCA). On the other hand, ESLSE performance on multimodal system is not encouraging so far. Sources indicated that the system is inefficient and ineffective yet. Report by Addis Ababa Chamber of Commerce and Sector Association (AACCSA, 2012) indicated that many businesspersons spoke their frustration with the multimodal transport of goods service by ESLSE. According to AACCSA (2012), on business luncheon on December 31, 2012, at Hilton Hotel, many businesspersons spoke furiously on the problem of multimodal freight transport system in Ethiopia. According to the report by AACCSA (2012), many businesspersons believe that the major problem of the multimodal transport was the monopolistic operation of the system by the government, lack of infrastructure, daring to engage in operation by ESLSE without proper readiness, lack of experience, insufficient freight vehicles, and procedures at custom terminals were among the problems raised in the luncheon. From the chamber report, businessperson also forwarded their recommendation for the ESLSE authorities who attended the luncheon. Opening the system to private sector/ liberalization, inviting foreign actors, solving infrastructure problems are among the solutions forwarded. On the other hand, it seems the government of Ethiopia also aware of the problem of implementing the multimodal transport system by ESLSE. The government has accepted technical proposals from six international consultants to improve the regulation of multimodal system in Ethiopia (Fortune, 2012).

3 Method

3.1 Approaches

Review of literature and case study approaches were employed.

3.2 Data Collection

Both Primary and secondary data were employed. For primary data collection purpose, structured household drop off survey questionnaires were used. Data was collected from 102 customers and 22 employees. Customer satisfaction and employee evaluation survey was conducted through personally distributed survey during August to September/2013.
Secondary data was gathered by reviewing different financial statements, research outputs, manuals, policy documents, study publications and reports relevant with the study.

3.3 Data analysis

Level of satisfaction was measured through a psychometric 5-point Likert scale. The five categories of response were: 1,very dissatisfied; 2,dissatisfied; 3,neutral; 4,satisfied; and 5,very satisfied. This scale was used to measure strength of opinion of selected service attributes. The use of a 5-pointsLikert scale allows for the balanced collection of respondent opinion through an equal number of positive and negative categories (Bureau of Transport Statistics, 2011). Similarly, employee evaluation was also made in 5-points rating scale where: 1, strongly disagree; 2, disagree; 3, neutral; 4, agree; and 5, strongly agree. The questions addressed to customers and employees were the same but in different ways so as to make comparison possible. Customers were asked how much they were satisfied with the service and employees were asked how they evaluate particular service performance.

3.4 Customer satisfaction methods and benefit

Neely et al., (1995) stated that customer satisfaction is an attribute that evaluates organizational goal achievements. The authors noted that organizations can evaluate their performance by how much they satisfy their customers with greater efficiency and effectiveness than their competitors. According to Neely et al. (1995), efficiency means the measure of how economically the organization resource is used and effectiveness is a measure to evaluate the extent to which the customer requirement is made. Vavra (1997) as cited in Pizam (1999) also noted that customer satisfaction is a key criterion for evaluating the quality that is actually provided to customers by products or services. Pizam (1999) indicated that high level of service through awareness of customer expectations and improvements in services or products is a matter of organizations survival. Different methods can be employed to evaluate the quality of services and customer satisfaction. Pizam (1999) sated subjective or soft measures of quality which focus on perceptions and attitudes of the customer rather than more concrete objective criteria are most common methods used in customer satisfactions surveys. For this study, customer satisfaction survey was made for the purpose of identifying problem areas or effectiveness measure of Neely et al., (1995) for improvement of the multimodal transport service by Ethiopian Shipping and Logistics Service Enterprise. Expectancy disconfirmation approach was the assumption of this study, where customers' and employees' expectations on the service performance indicators are compared or "*psychologically processed*" against the actual performance to bring satisfaction or dissatisfaction (Oliver, 1996) as cited in (Grigoroudis and Siskos, 2004).

3.5 Performance evaluation checklist for this study

Pizama(1999) soft or subjective measure approach was used with survey questionnaires to evaluate customers' and employees' attitude and perceptions of the quality of service they are receiving and rendering based on five performance indicators namely: Delivery performance, Documentation performance, Liability and Insurance performance, Cost and Convenience performance, and Administrative/Facilitation performance. These performance indicators were developed based on United Nations Convention for the international multimodal freight transport (UNCMT, 1980) and other freight transport related literatures.

4 Background for the Study

4.1 Background of Study Organization

Ethiopian Shipping and Logistics Service Enterprise (ESLSE) is a state owned enterprise that was formed by amalgamation of three companies namely: Ethiopian Shipping Lines (ESL), Ethiopian Maritime Transit Services (EMTS) and Dry Port Service Enterprise (DPSE). It is the sole multimodal freight transport operator in international trade in the country.

4.2 Customer Satisfaction

The customer satisfaction survey was made to evaluate how efficiently and effectively was the multimodal freight transport service of Ethiopian Shipping and Logistics Service Enterprise from customers' perspectives. The assessment was made for five major performance indicators which have specific criterion under it. The customers were asked to express their satisfaction on each criterion under the major performance indicators.

4.3 Employee Evaluation

Similar with customers, employees were asked how they evaluate the multimodal freight transport service performance of Ethiopian Shipping and Logistics Service Enterprise from their view. The questions addressed were the same except the employees were asked how they evaluate each performance criterion not how much satisfied.

5 Results

5.1 Customer Satisfaction

This section presents the customer satisfaction survey result on multimodal transport service in Ethiopia.

5.1.1 Respondent Customer Background information

Gender and Educational Background

The respondents were composed of relatively more male customers (69) and lesser female customers (33). This was simply because during data collection the researcher met more male customers than female by chance or may be the company has lesser female customers than male customers for multimodal transport. The educational background of the customer respondents (Table 2) were mainly graduates at diploma level (45.1 %), followed by first degree graduate (34.3 %).

Educational Background of Customer Respondents		
	Frequency	%
High School Graduate	7	6.9
Diploma	46	45.1
First degree	35	34.3
Second degree	14	13.7
Total	102	100.0

Table 2: Educational Background of Respondents Customer

5.1.2 Customers' Evaluation of Delivery Performance

The delivery performance are assessed for customer satisfaction on departure accuracy, promised running time accuracy, instructional clarity on delivery, tracking information, immediate response to compliant related to delivery, and for overall delivery performance.

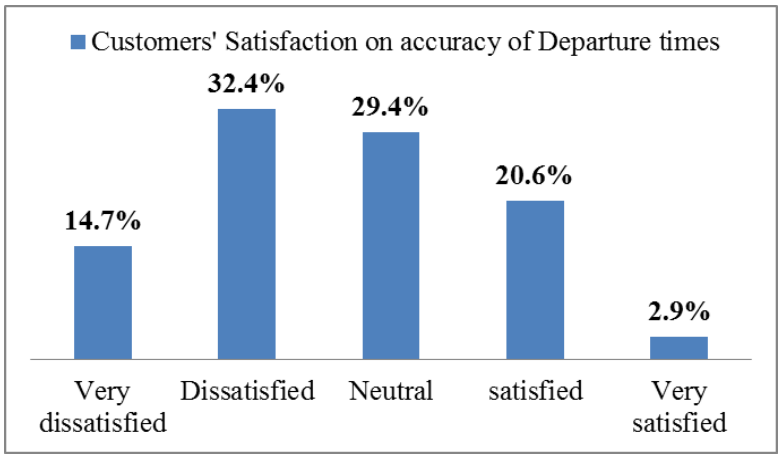

Fig.4: Customers' satisfaction on Accuracy of promised Departure times

From Fig.4, significant numbers of customers were not satisfied with promised departure times. In cumulative very dissatisfied and dissatisfied sum to 47% (14.7 plus 32.4) to the contrary only 23.5% (20.6 plus 2.9) of customers are in satisfied and very satisfied response. Very satisfied response is insignificant only 2.9 %. 29 % of the respondents remain neutral on the evaluation.

Table 3: Customers' satisfactions on promised running times

Customer satisfaction on promised Running times			
Response Category	Frequency	%	Cumulative %
very dissatisfied	13	12.7	12.7
Dissatisfied	47	46.1	58.8
Neutral	28	27.5	86.3
Satisfied	13	12.7	99.0
very satisfied	1	1.0	100.0
Total	102	100.0	

Table 3 shows most customers were not satisfied by the promised running times under the multimodal transport system of Ethiopia, 58.8 % of respondents are in the cumulative of dissatisfied and very dissatisfied customers. On the other hand, only 13.7 (12.7 plus 1) % are in cumulative of satisfied and very satisfied. 27.5 % of respondents opted for neutral on the evaluation.

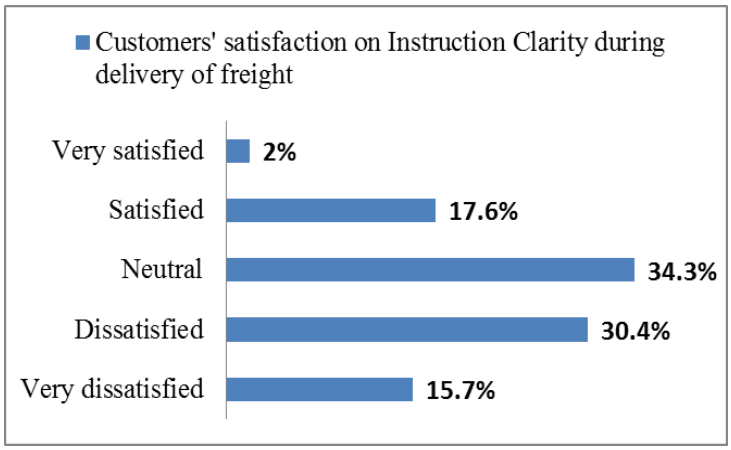

Fig.5. Customers' satisfaction on Instruction Clarity during delivery of freight

Fig.5 shows that in sum 46.1(15.7 plus 30.4) % of the respondent were dissatisfied and very dissatisfied. On the other hand, in sum only 19.6 (17.6 plus 2) % of the respondents were in satisfied response category. The remaining significant proportion (34.3 %) opted to be neutral on the evaluation.

Table 4: Customers' satisfaction on Tracking/whereabouts of their cargo/information

Customer satisfaction on Tracking information			
Response Category	Frequency	%	Cumulative %
Very dissatisfied	20	19.6	19.6
Dissatisfied	27	26.5	46.1
Neutral	32	31.4	77.5
Satisfied	19	18.6	96.1
Very satisfied	4	3.9	100.0
Total	102	100.0	

Table 4 indicate with 19.6 % very dissatisfied and 26.5 % dissatisfied, the company was not making its customers satisfied in terms of providing the whereabouts of their cargo. Only 22.5 % are either very satisfied (3.9 %) or satisfied (18.6 %). 31.4 % of respondents remain neutral with this evaluation.

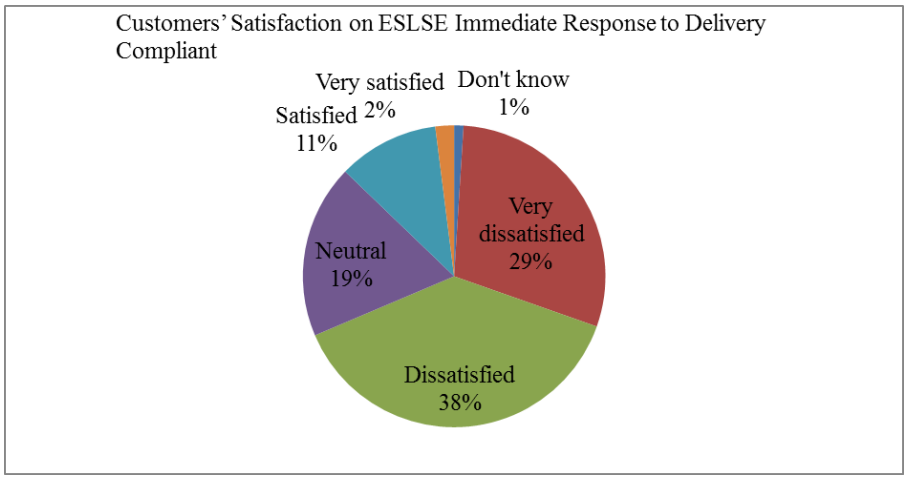

Fig.6: Customers' satisfaction on immediate response for delivery related compliant

Fig.6 shows with 29% very dissatisfied and 38 % dissatisfied, the company's performance in terms of response to customers' compliant can be said not responsive. Only 13% of customers are either in very satisfied (2%) or satisfied (11%) response category.19% of respondents opted for neutral to the evaluation.

Table 5: Customers' satisfaction on overall delivery performance

Customer satisfaction on overall delivery performance			
Response category	**Frequency**	**%**	**Cumulative %**
Very dissatisfied	19	18.6	18.6
Dissatisfied	38	37.3	55.9
Neutral	28	27.5	83.3
Satisfied	17	16.7	100.0
Total	102	100.0	

Table 5 shows customers' satisfaction on overall delivery performance. Majority of the customers (55.9 %) reported that they are either dissatisfied (37.3 %) or very dissatisfied (18.6 %). 16 % of respondents responded that they are satisfied, no one is very satisfied, and 27.5 respond that they are neither satisfied nor dissatisfied.

5.1.3 Customers' Evaluation of Multimodal Transport Documentation Performance

This section presents customers' satisfaction survey on Ethiopian Shipping and Logistics Service Enterprise's documentation performance under multimodal transport system. The assessment is made for proper issuance and delivery of transport document, custom documentation and delivery, transport document confidentiality, and for overall

documentation performance related to multimodal service. The results are presented in the in Fig.7&8 and Tables 6&7.

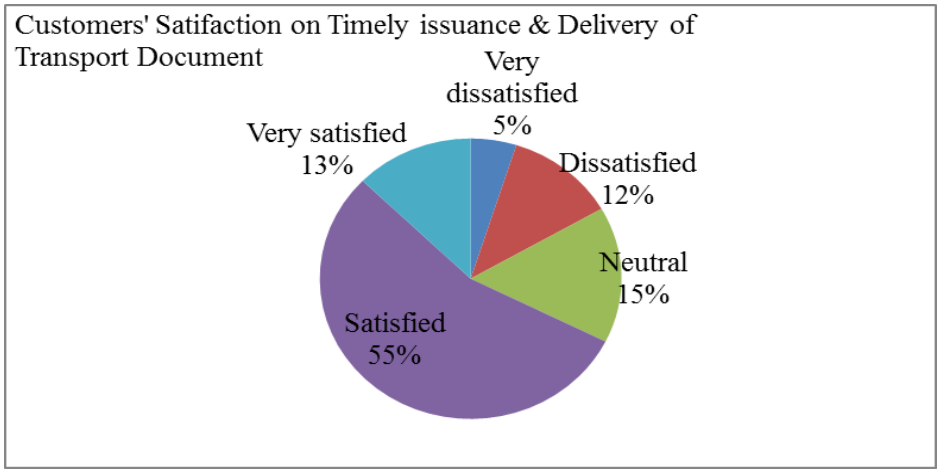

Fig.7: Customers' satisfaction on timely issuance and delivery of transport document

Fig.7 shows that the company is performing well in terms of on time issuance and delivery of transportation documents. With 55 % satisfied and 13% very satisfied in sum 68% of respondent customers fulfilled their expectation in terms of the timely issuance and delivery of transport document. In cumulative, only 17% of respondents are in dissatisfied or very dissatisfied category.

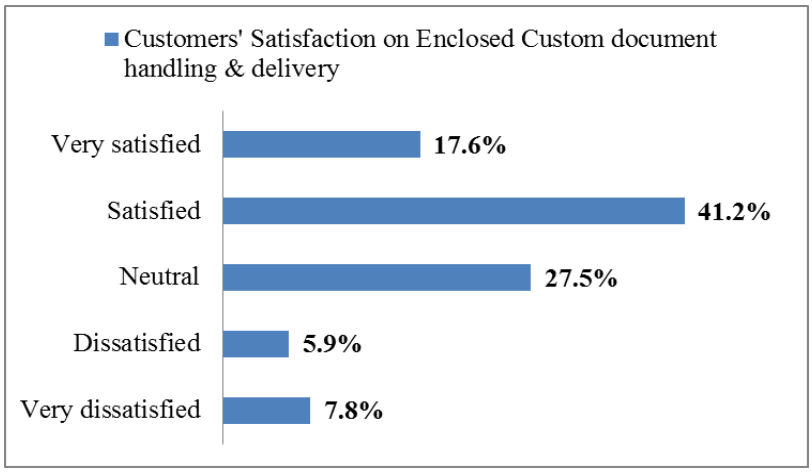

Fig.8: Customers' satisfaction on enclosed custom documents and handling

Fig.8 shows with custom document handling and delivery the company is performing well. 58.8 % of respondents respond that they are satisfied (41.2 %) and very satisfied (17.6 %) but only 13.7 % are either very dissatisfied (7.8 %) or dissatisfied (5.9%). 27.5 % opted to be neutral on this evaluation.

Table 6: Customers' satisfaction on transport document confidentiality

Satisfaction on transport document confidentiality			
Response category	Frequency	%	Cumulative %
very dissatisfied	9	8.8	8.8
Dissatisfied	10	9.8	18.6
Neutral	28	27.5	46.1
Satisfied	42	41.2	87.3
very satisfied	13	12.7	100.0
Total	102	100.0	

Table 6 explains the performance of the company in terms of document confidentiality. 53.9 % of respondents responded that they are satisfied (41.2 %) and very satisfied (12.7 %). On the other hand, only 18.6 % of respondents responded that they are either very dissatisfied (8.8 %) or dissatisfied (9.8 %).

Table 7: Customers' satisfaction with overall documentation performance

Satisfaction on overall performance related to documentation			
Response category	Frequency	%	Cumulative %
Very dissatisfied	9	8.8	8.8
Dissatisfied	12	11.8	20.6
Neutral	21	20.6	41.2
Satisfied	51	50.0	91.2
Very satisfied	9	8.8	100.0
Total	102	100.0	

According to Table 7, the overall performance of the company in terms multimodal documentation is good as per this evaluation. Majority of the customers are satisfied with the overall multimodal documentation performance .8.8 % very satisfied, 50% satisfied in sum 58.8 % of the respondents are satisfied and very satisfied. But only 20 % of the respondents are either very dissatisfied (8.8 %) or 11.8 % dissatisfied. 20.6 % of respondents are neutral on the overall documentation performance.

5.1.4 Customers' satisfaction on liability/insurance in case of loss or damage of freight

This section presents how customers are satisfied with the company's service in relation to the liability and insurance in case of loss or damage of goods under multimodal system. The assessment for this section is made for five points: the company performance in terms of accident reporting, the company insurance system for goods, the company claim presentation to insurer in case of loss, the follow up of the company on claims to the insurer, and finally how customers feel that they are safe for their cargo in terms of loss or damage. The results of this section are presented in Fig.9, 10, &11 and Tables 8&9.

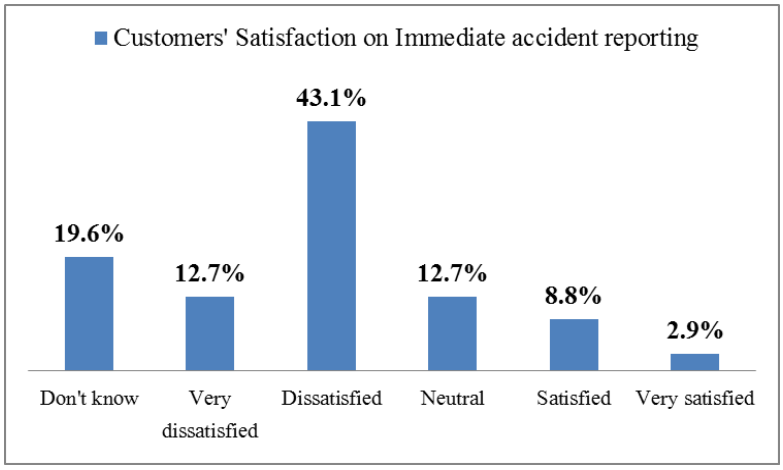

Fig.9: Customers' satisfaction on immediate accident reporting

Fig.9 shows 19.6 % of the respondents responded they don't know implies that these customers may not encounter any accident or loss on their shipment so far. On the other hand, 12.7 of respondents and 43.1 of respondents claim that they are very dissatisfied and dissatisfied respectively. This show that majority of the customers who responded they know about accident reporting by the company are not satisfied with the immediate accident reporting practice. Only 11.7 % of respondents are in satisfied and very satisfied respond category and 12.7 % are neutral on evaluation of this point.

Table 8: Customers' satisfaction on Insurance policy of ESLSE

Satisfaction on ESLSE maintaining Insurance to cover loss of goods/damages			
Response category	**Frequency**	**%**	**Cumulative %**
Very dissatisfied	13	12.74	12.7
Dissatisfied	17	16.67	29.37
Neutral	33	32.35	61.77
Satisfied	32	31.37	93.14
very satisfied	7	6.87	100.0
Total	102	100.0	

Table 8 shows with 31.37 % satisfied and 6.87 % very satisfied (cumulative 38.24 %), the company insurance policy holding made more customers satisfied compared with only 12.7 % very dissatisfied and 16.7 % dissatisfied (cumulative 29.4 %). 32.4 % opted to be neutral on this evaluation.

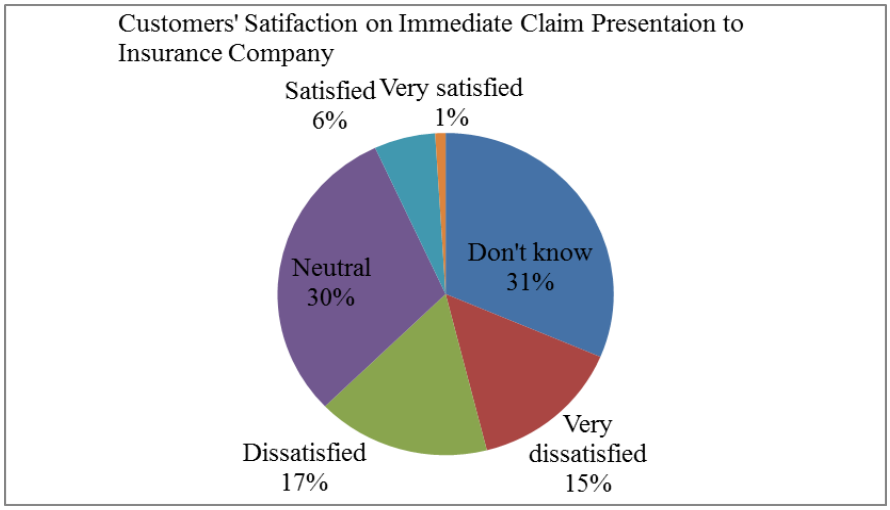

Fig.10: Customers' satisfaction on immediate claim presentation to insurance company

According to Fig.10, the assessment on how responsive is ESLSE in presenting claims to the insurance company in case of loss or damage of goods 17% of respondents are dissatisfied and 15% are very dissatisfied the cumulative of the two constitute 32% compared with only 6 % satisfied and 1% very satisfied cumulative of 7% in a satisfied response category shows that the ESLSE is not fast in presenting claim cases to insurance company. Majority the respondents responded they don't know the case and neutral on the evaluation, 31 % and 30 % respectively.

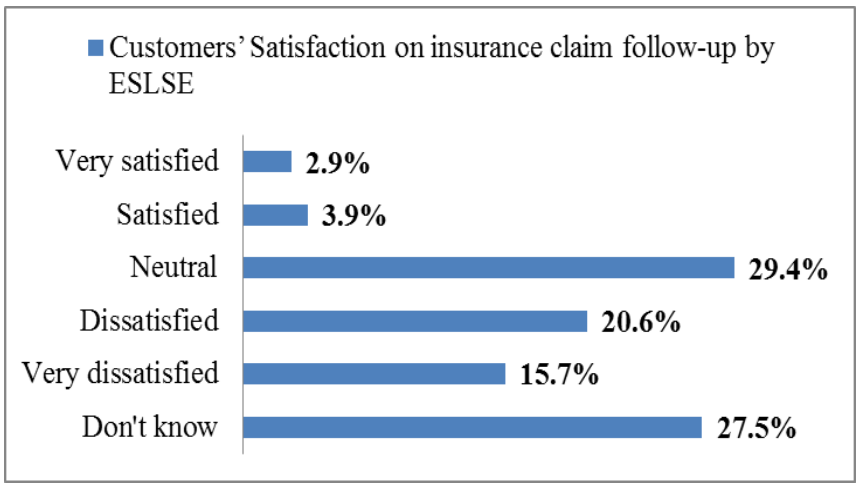

Fig.11: Customers' Satisfaction on insurance claim follow-up by ESLSE

As presented on Fig.11, 15.7 % of respondents claim they are very dissatisfied, 20.6 % dissatisfied, i.e., in sum 36.3 % of respondents are unhappy with the claim follow up by

ESLSE. On the contrary in only 6.7 % are either satisfied (3.9 %) or very satisfied (2.9 %). 29.4 % remain neutral, while 27.5 % reported they don't know the case.

Table 9 Customers' satisfaction on overall safety/security with regards to product loss/damage

Satisfaction on overall safety and security with regard to product damage or loss			
Response category	Frequency	%	Cumulative %
Very dissatisfied	13	12.7	13.7
Dissatisfied	41	40.2	52.9
Neutral	41	40.2	93.1
Satisfied	5	4.9	98.0
Very satisfied	2	2.0	100.0
Total	102	100.0	

As presented in Table 9, the assessment of customers' satisfaction on overall safety/security of their cargo shows that majority (52.9 %) responded that they are either very dissatisfied (13.7 %) or dissatisfied (40.2 %). i.e., majority of respondent customers are not feeling safe for their cargo shipment. On the other hand, only 2 % are very satisfied and 4.9 % are satisfied. Significant proportion (40.2 %) responded neutral to the evaluation.

5.1.5 Customers' satisfaction on multimodal transport cost and conveniences

In the following section the customers satisfaction survey result on ESLSE multimodal transport rate/cost and facilities convenience are presented. The assessment is made in terms of the clarity of cost for which customers to pay, the fairness of the transportation cost, fairness of other associated costs, loading unloading place convenience, and loading unloading machineries conveniences. The results of these assessments were presented in Fig. 12, 13,&14 and Tables 10&11.

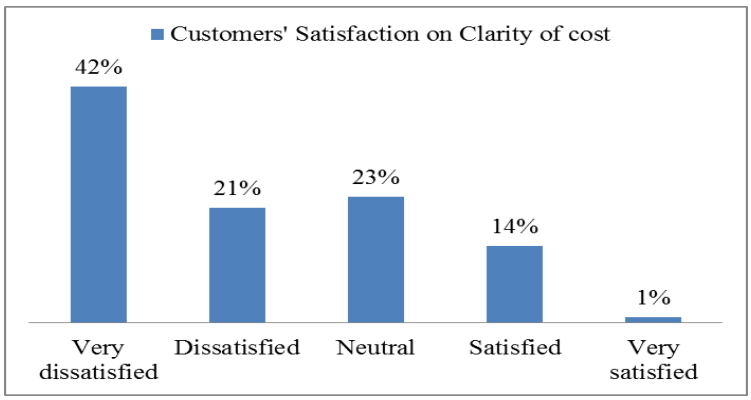

Fig.12: Customers' satisfaction on clarity of cost

According to Fig.12, the survey result indicates that majority of the customers are unhappy with the cost clarity or they don't clearly understand the purpose for which they are requested to pay. In sum, 62.7 % of respondents responded that they are dissatisfied and very dissatisfied. Out of the cumulative of dissatisfaction response category, the majority 42.2 % are very dissatisfied. Only 14.7 % of the respondents responded that they are satisfied with the clarity of cost in multimodal transport service by ESLSE.

Table 10: Customers' satisfaction on Fairness of Transport Cost

Satisfaction on the fairness of transport cost			
	Frequency	%	Cumulative %
Very dissatisfied	46	45.1	45.1
Dissatisfied	32	31.4	76.5
Neutral	13	12.7	89.2
Satisfied	10	9.8	99.0
Very satisfied	1	1.0	100.0
Total	102	100.0	

Table 10 indicates the assessment of customers on fairness of transport cost or price charged for service. The result sows majority of customers are dissatisfied. In sum, 76.5 % of the respondents responded that they are dissatisfied and very dissatisfied. 45.1 % being very dissatisfied and 31.4 % dissatisfied. It is only 10.8 % of the sample respondents who responded that they are satisfied with the fairness of transport cost and 12.7 % of the respondents remained neutral.

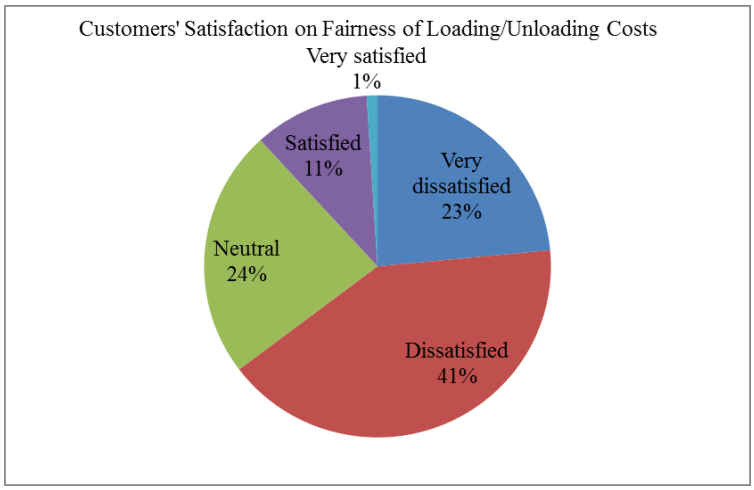

Fig13: Customers' satisfaction on fairness of costs associated with loading& unloading

According to Fig.13, the assessment made on the fairness of other costs such as loading and unloading associated with multimodal transport system shows that majority of the customers are not satisfied with the cost of the service. In sum, 64% of the customers responded that they are dissatisfied (41%) and very dissatisfied (23%). On the other hand in sum only 12% are satisfied and very satisfied with this cost. 24% of the respondents prefer to be neutral on this evaluation.

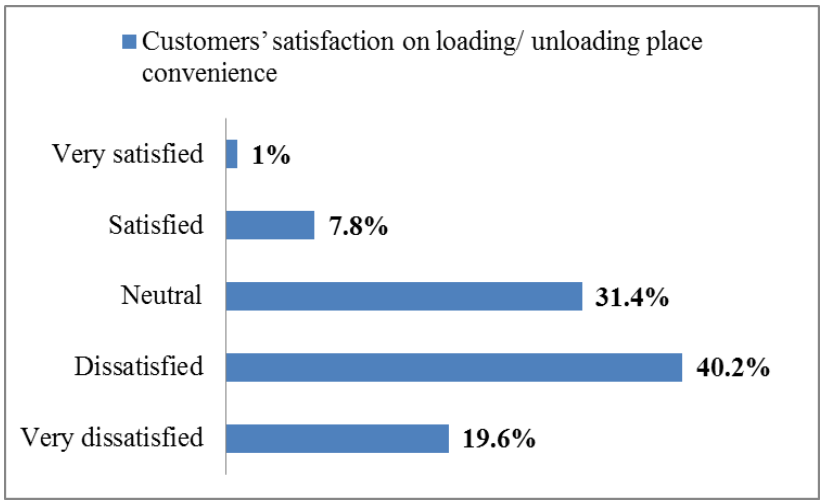

Fig.14: Customers' satisfaction on loading/ unloading place convenience

According to the survey result presented in Fig.14, the majority of customers are dissatisfied. In sum 59.8 % respond that they are dissatisfied (40.2 %) and very dissatisfied (19.6 %). On the other hand in sum only 8.8 % of the customers are satisfied and very satisfied with the place convenience for loading and unloading their cargo under multimodal transport service.

Table 11: Customers' satisfaction on loading /unloading machinery convenience

Satisfaction with loading & unloading machinery convenience			
	Frequency	%	Cumulative %
Very dissatisfied	11	10.8	10.8
Dissatisfied	37	36.2	47
Neutral	32	31.4	78.4
Satisfied	13	12.8	91.2
Very satisfied	9	8.8	100.0
Total	102	100.0	

With machinery infrastructures of the company in loading/unloading most customers from the sample are unhappy with its convenience. Table 11 indicates that in cumulative, 47 % of the respondents responded that they are dissatisfied (36.2) % and very dissatisfied (10.8 %). On the contrary, in sum only 21.6 % of the sample respondents responded that they are either

satisfied (12.8 %) or very satisfied (8.8 %). 31.4 % of respondents opted to be neutral on this evaluation.

5.1.6 Customers' satisfaction on Administrative/facilitation support by ESLSE

This section presents the assessment of customer survey result on how much customers are satisfied with the administration or facilitation service that Ethiopian Shipping and Logistics Service Enterprise is offering to its multimodal transport customers. The assessment is made in terms of satisfaction on support provided through simplification of procedures and formalities with different organizations through information sharing by Electronic Data Interchange (EDI), customs automation and efficient tariff arrangement, and banking facilitation. The result is presented in Tables 12&13 and Fig.15.

Table 12: Customers' satisfaction on procedural and formality simplification

Customers' Satisfaction on reduction of information required by various organizations through sharing information by EDI/Simplification			
	Frequency	%	Cumulative %
Very dissatisfied	8	7.8	7.8
Dissatisfied	49	48.1	55.9
Neutral	30	29.4	85.3
Satisfied	11	10.8	96.1
very satisfied	4	3.9	100.0
Total	102	100.0	

According to Table 12, the survey result shows that ESLSE's performance in terms of simplification of formalities and procedures required by other organizations trough transferring required documents and information related to their multimodal transport service is not satisfactory. In cumulative 55.9 % of respondents responded that they are dissatisfied (48.1 %) and very dissatisfied (7.8%). On the contrary in sum only 14.7 % are satisfied and very satisfied. The remaining 29.4 % of respondents responded for neutral option.

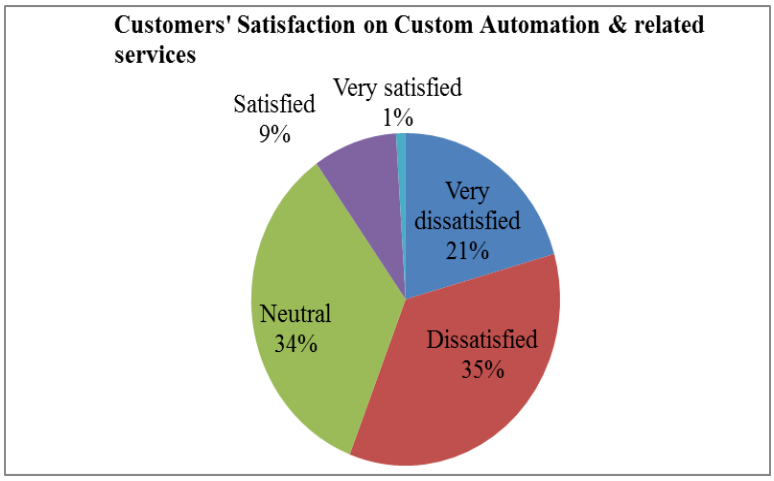

Fig 15: Customers' satisfaction on custom automation based service

Though the customs automation is not the direct responsibility of Ethiopian Shipping and Logistics Service Enterprise, Fig. 15 indicate that majority of the customers are dissatisfied with this facilitation. In cumulative 55.9 % of the respondents are either very dissatisfied (35.3 %) or dissatisfied (20.6 %). On the contrary, in sum only 9.8 % of the customers were responded that they are satisfied or very satisfied on this facilitation task, while 34.3 % of the respondents prefer to be neutral on this evaluation.

Table 13: Customers' satisfaction on banking facilitation

Satisfaction on Banking Facilitation by ESLSE			
	Frequency	%	Cumulative %
Very dissatisfied	9	8.8	8.8
Dissatisfied	12	11.8	20.6
Neutral	39	38.2	58.8
Satisfied	30	29.4	88.2
Very satisfied	12	11.8	100.0
Total	102	100.0	

Table 13 indicates that the Company's performance in banking facilitation is encouraging that 29.4 % of respondents are satisfied and 11.8 % of respondents are very satisfied cumulative amounting to 41.3 %. On the other hand in sum only 20.6 % of the respondents are dissatisfied and very dissatisfied with the banking facilitation of the company. Significant proportion (38.2 %) of respondents responded they are neutral on the banking facilitation.

5.2 Employee Evaluation

In the following section presents the result of employee evaluation of the multimodal service performance of Ethiopian Shipping and Logistic Service Enterprise. The assessment criteria were the same with what the customers evaluated: delivery performance, documentation performance, liability/insurance performance, facilitation performance, cost & conveniences.

5.2.1 Employee background information

Gender

From gender perspective, majority of the respondent employees were male being 14 out of 22 or 63.6 % while only 8 or 36.4 % were female.

Education

Table 14: Respondent Employee Educational Background

Respondent Employees' Educational Background		
	Frequency	%
Diploma	2	9.1
First degree	19	86.4
Second degree	1	4.5
Total	22	100.0

Table 14 indicates the educational background of respondent employees. The majority of respondents are first degree graduates. Only 2 people are diploma and 1 person second degree graduate out of the 22 respondents. Note that this study took the whole multimodal section employees of the company at the head quarter, Addis Ababa. However, there were 2 non-respondent and 1 incomplete responses.

5.2.2 Employees' Evaluation of Delivery performance

Employees were asked to evaluate Ethiopian Shipping and Logistics Service Enterprise's performance in relation to delivery of freight based on five points of evaluation namely: the accuracy of departure times, the accuracy of promised running times, the tracking information of freight whereabouts, the clarity of instructions and procedures during delivery, and overall delivery of goods on agreed times. The results of the assessment are presented in Fig.16, 17, & 18 and Tables 15&16.

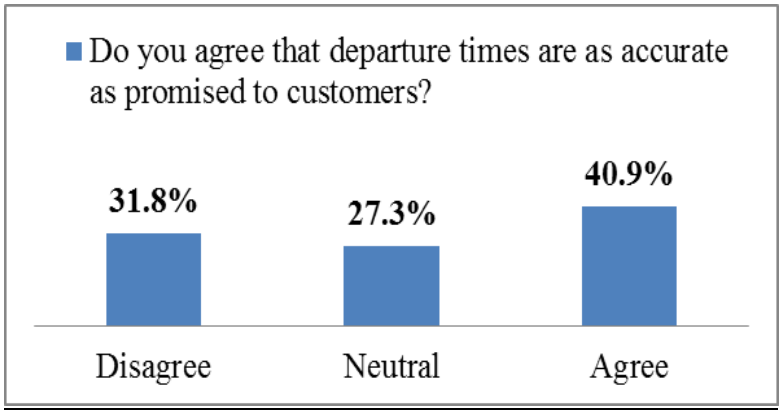

Fig.16: Employees' Evaluation on Accuracy of Promised Departure times

The employees' evaluation on promised departure times presented in Fig.16 shows 40.9 % of the respondents agree that the company's departure times are as accurate as promised to customers. 31.8 % of employees responded that they disagree with this, and 27.3 % remain neutral. Though there were strongly agree and strongly disagree options in the survey, no one opted for both extremes in terms of promised departure times.

Table 15: Employees' Evaluation of promised running times

Do you agree that ESLSE is meeting accurate running times as promised?			
	Frequency	%	Cumulative %
Strongly Disagree	1	4.5	4.5
Disagree	6	27.3	31.8
Neutral	5	22.7	54.5
Agree	10	45.5	100.0
Total	22	100.0	

From Table 15, regarding the promised running times, majority of employees agree that the company is meeting accurate running times as promised to customers. 45.5 % of respondents agree that ESLSE meets accurate running times under multimodal transport system. 31.8 % (same with departure time) remain disagree but this time 4.5 % of them even strongly disagree with the point. 22.7 % remain neutral and no one opted for strongly agree option.

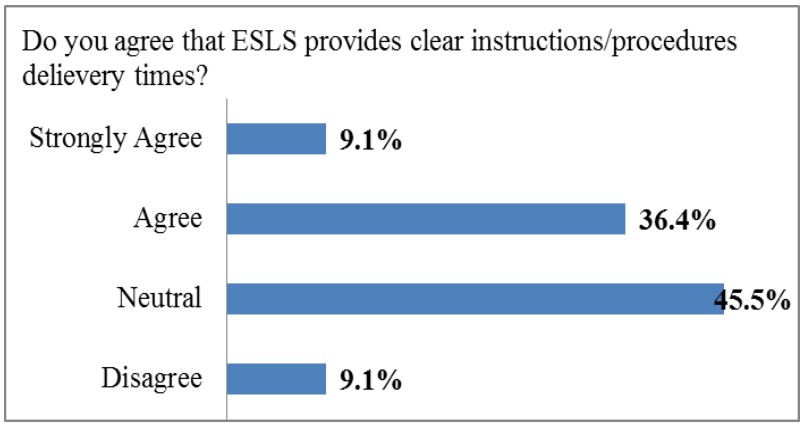

Fig.17: Employees' Evaluation on instruction/procedure clarity

With regards to instruction and procedure clarity from Fig.17, it is indicated that the majorities agree (36.4 %), 9.1 % strongly agree sum 45.5 % and 45.5 % remain neutral for this evaluation. But, only 9.1 % disagree.

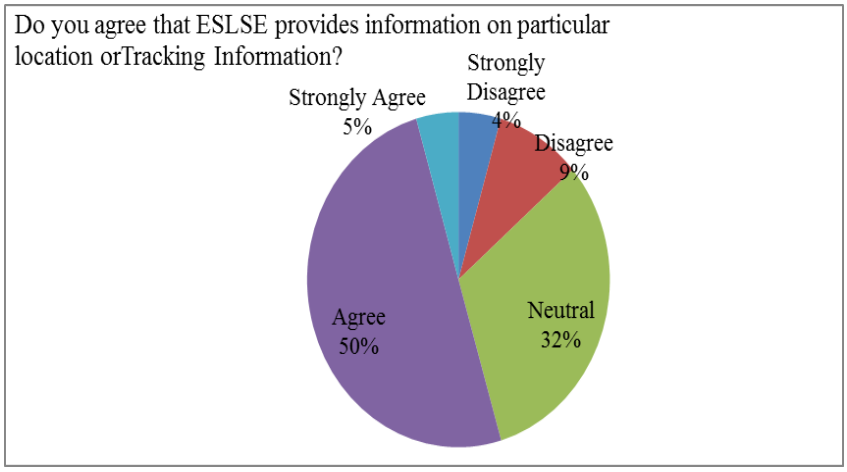

Fig.18: Employees' Evaluation of trucking information of freight whereabouts

As far as the tracking information is concerned, Fig.18 shows that in sum 55% of the employees either strongly agree (5 %), or agree (50 %); only 13% of the employees either disagree (9%) or strongly disagree (4 %); 32% of employees remain neutral on tracking information evaluation.

Table 16: Employees' Evaluation of overall delivery performance

Do you agree that overall delivery performance of ESLSE under Multimodal system makes transfer of goods at agreed times?			
	Frequency	%	Cumulative %
Strongly Disagree	1	4.5	4.5
Disagree	5	22.7	27.3
Neutral	7	31.8	59.1
Agree	9	40.9	100.0
Total	22	100.0	

Looking at Table16, the employees' evaluation for the overall delivery performance of the company for multimodal transport system indicates that the majority (40.9 %) of the employees agree that the company makes delivery of cargos on agreed times under multimodal system. 27.3 % of employees responded either disagree (22.7 %) or strongly disagree (4.5 %). 31.8 % remain neutral and no one strongly agree that the delivery performance of the company under multimodal system transfers goods on agreed times.

5.2.3 Employees' Evaluation on Multimodal Document performance

Employees were asked to evaluate Ethiopian Shipping and Logistics Service Enterprise's performance in relation to multimodal transport documents based on four points of evaluation. These are: timely issuance and delivery of multimodal transport document, accompanying custom document handling and delivery, confidentiality of documents, and overall performance of the company in terms of multimodal transport documentation. The results are presented in Figs.19, 20, &21 and Table17.

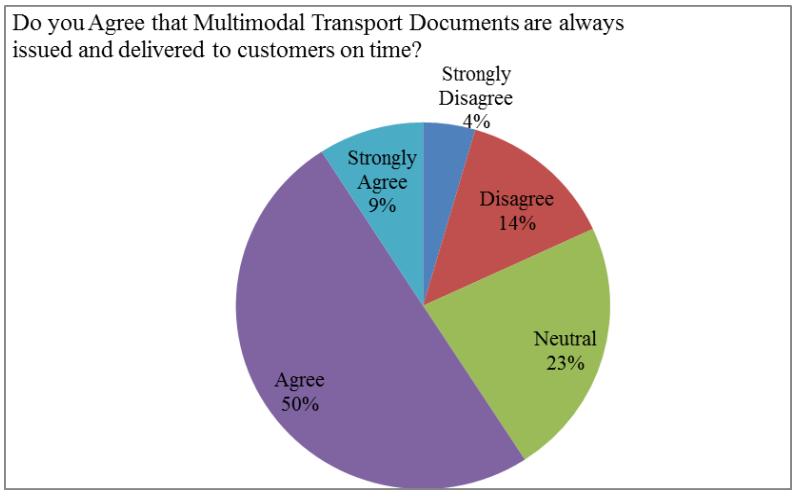

Fig.19: Employees' Evaluation of on time issuance & delivery of documents

On timely issuance and delivery of transport document under the multimodal system, Fig.19 indicates that 59 % of employees (9% strongly agree and 50 % agree) responded that they believe the organization is issuing and delivering documents to customers on time. On the other hand only 18 % (14% plus 4%) employees either disagree or strongly disagree with this. 22.7 % of employees remain neutral with regards to this assessment.

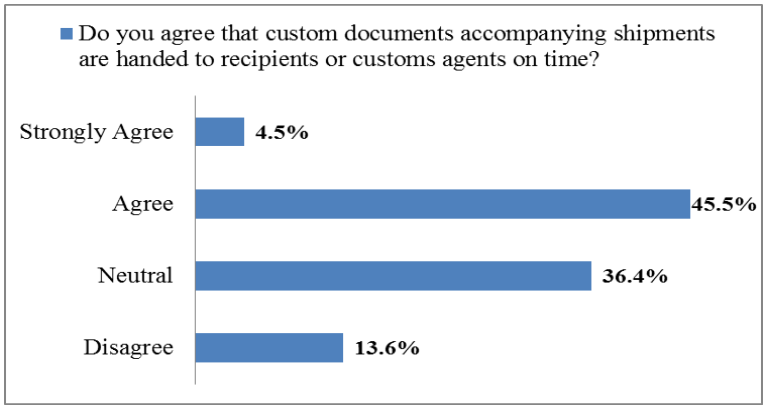

Fig.20: Employees' evaluation on freight accompanying custom document handling/ delivery

As far as the custom documents accompanying the freight are concerned, Fig.20 indicates that 50 % of employees either agree (45.5 %) or strongly agree (4.5%). Only 13.6 % disagree. Significant proportions of respondents also remain neutral (36.4%).

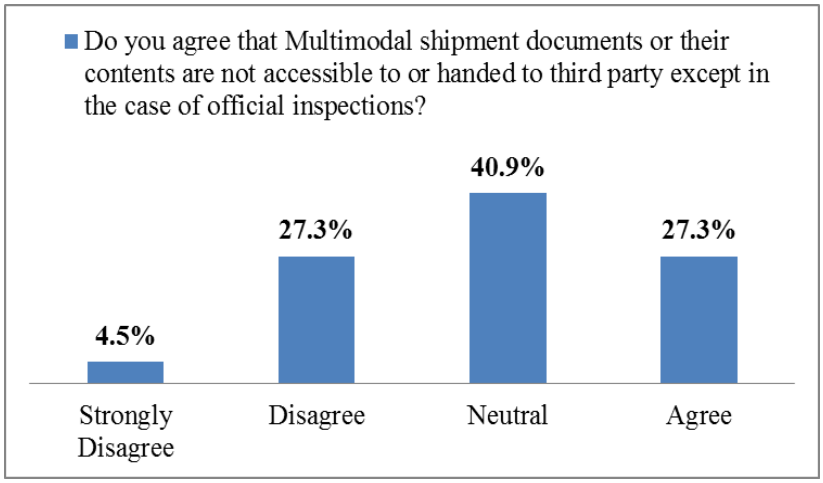

Fig.21: Employees' evaluation on multimodal transport confidentiality

Seeing Fig.21, the employee evaluation for document confidentiality shows that the majority of the employees remain neutral in this evaluation, 40.9 %. Significant number also evaluates this issue negatively, that is, 31.8 % of employees believe that the confidentiality is not protected (27.3 % disagree and 4.5 % strongly disagree). 27.3 % of respondents agree that the documents are kept confidential. No one strongly agrees with regards to document confidentiality.

Table 17: Employees' evaluation of overall documentation performance

Do you agree that ESLSE overall performance is well with regards to multimodal documentations?			
	Frequency	%	Cumulative %
Disagree	5	22.7	22.7
Neutral	13	59.1	81.8
Agree	4	18.2	100.0
Total	22	100.0	

Table 17, indicates the evaluation of employees on the overall performance of ESLSE in terms of documentation. It explains that the majority of employees prefer the neutrality option for the question, i.e., 59.1 %. 22.7 % of the employees disagree on the overall documentation performance while 18.2 % agree it is okay. No one responded strongly disagree and strongly agree with this performance.

5.2.4 Employees' Evaluation on Liability and Insurance in case of Loss or Damage

This section presents the employee evaluation of the company's performance under multimodal system in time of damage or loss of goods while in transit. The assessments were made in respect of five major points of evaluation. These are: immediate reporting of accidents as occurred, insurance policy holding, presenting the claim to insurance companies immediately, follows up of insurance cases by the company, and overall safety and security of customers' cargo shipments. The results of these assessments are presented in Fig. 22, 23, & 24 and Tables 18&19.

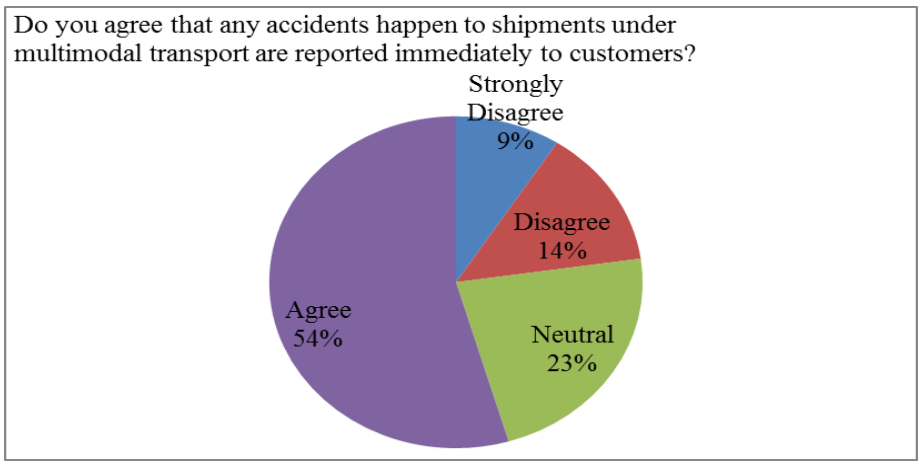

Fig.22: Employees' evaluation on immediate accident reporting

From Fig.22, it is clear that majority (54) % of employees of the company believe that their company is reporting accidents immediately as occurred. Only 23 % are either disagree (14%)

or strongly disagree (9%). The same numbers of employee (23 %) also remain neutral in terms of this evaluation. No one strongly agree with this evaluation.

Table 18: Employees' evaluation on insurance policy holding

Does ESLSE maintain insurance policy for all shipments under multimodal system in case of loss or damage to freight?			
	Frequency	%	Cumulative %
Strongly disagree	2	9.1	9.1
Disagree	4	18.2	27.3
Neutral	7	31.8	59.1
Agree	9	40.9	100.0
Total	22	100.0	

From Table 20, employee evaluation on insurance policy in case of accident/loss, shows that significant portion of the employees (40.9%) agree that the shipments are covered by insurance policy.31.8 % of employees remain neutral while 27.3 % of employees responded they either disagree (18.2 %) or strongly disagree (9.1 %) with the point.

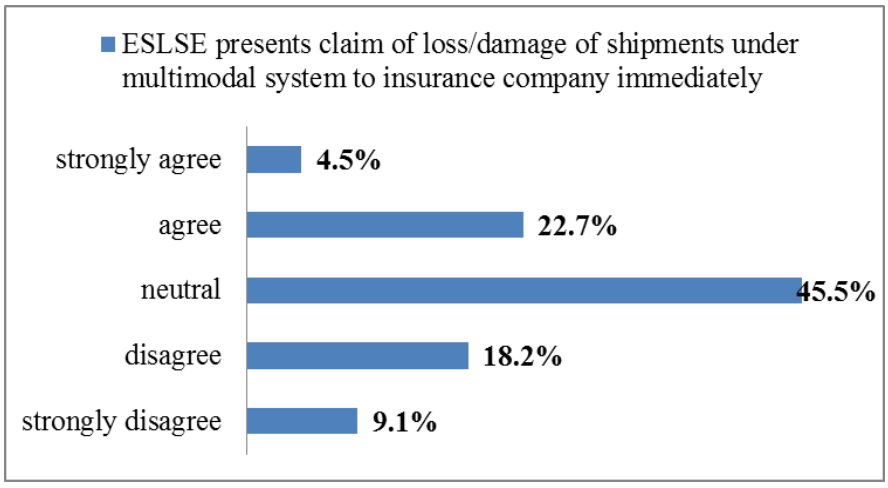

Fig.23: Employees' evaluation on immediate presentation claim to insurer

As presented in Fig.23,the evaluation of employees on the immediate presenting of loss claim to insurance company, reveals that majority of employees (45.5) remain neutral with regards to this evaluation. 27.2 % either agree (22.7 %) or strongly agree (4.5 %). Slightly higher portion than this 27.3 % either disagree (18.2 %) or strongly disagree (9.1 %).

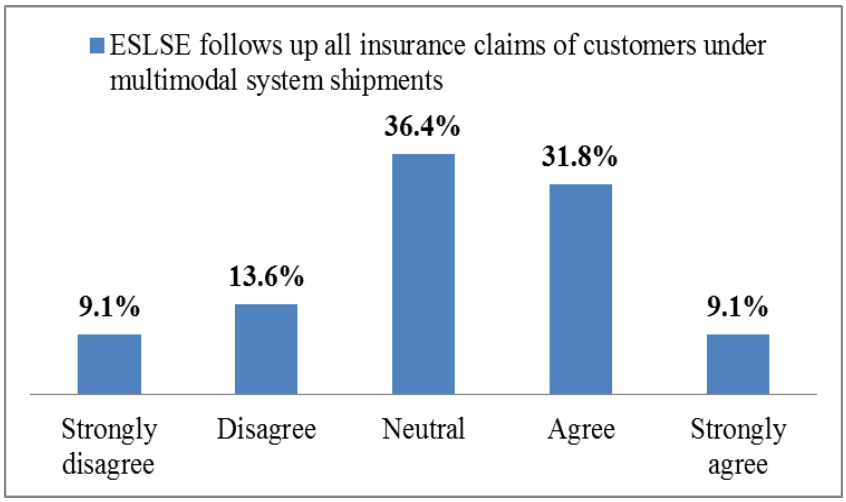

Fig24: Employees' evaluations on insurance claim follow up

Fig.24, evaluation of employees on whether ESLSE follow up insurance cases once presented to insurance companies, discloses that majority (40.9 %) either agree (31.8 %) or strongly agree (9.1 %). 36.4 % of employees remain neutral with regards to this evaluation and 22.7 % of employees responded that they either disagree (13.6 %) or strongly disagree (9.1 %) with this evaluation.

Table 19: Employees' evaluation on overall safety and security of shipments

Do you believe that ESLSE performs well in terms safety and security of freight shipment against loss or damage?			
	Frequency	%	Cumulative %
Strongly disagree	2	9.1	9.1
Disagree	6	27.3	36.4
Neutral	9	40.9	77.3
Agree	4	18.2	95.5
Strongly Agree	1	4.5	100.0
Total	22	100.0	

From Table 19, it is clear that majority of employees (40.9 %) like to be neutral on overall performance of the company in terms of cargo shipments security and safety. Relatively higher portion of employees responded they either disagree (27. 3 %) or strongly disagree (9.1 %) as compared with only 22.7 % of employees who responded that they either agree (18.2 %) or strongly agree (4.5 %).

5.2.5 Employee Evaluation on cost and convenience related to multimodal transport

In the following section employee's evaluation of cost and convenience for multimodal customers is presented. The assessment was made in terms of five criteria namely: Clarity of cost purpose, fairness of transport cost, loading & unloading place convenience, loading & unloading machinery and equipment, and loading and unloading cost fairness. The result is presented in Fig. 25, 26, &27 and Tables 20&21.

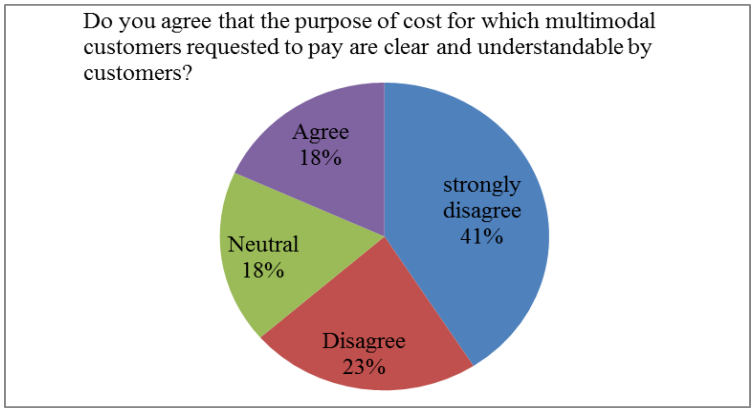

Fig.25: Employees' evaluation on the clarity of purpose of cost

From Fig.25 employees' evaluation on the clarity of cost for multimodal customer service discloses that majority of the employees believe that the purpose of cost for which customers were requested paying is not clear. In sum, 64 % either disagree (23%) or strongly disagree (41%) with the idea that the purpose of cost under multimodal system is clear.

Table 20: Employees' evaluation on the fairness of multimodal transport service cost

Do you agree that the transportation cost is fair for multimodal customers?			
	Frequency	%	Cumulative %
Strongly disagree	9	40.9	40.9
Disagree	6	27.3	68.2
Neutral	5	22.7	90.9
Agree	2	9.1	100.0
Total	22	100.0	

On the other hand, only 18 % of employees agree that it is clear; while same proportion of 18 % remain neutral on the evaluation. No one strongly agree with the idea.
The result of assessment on the fairness of the ESLSE transport cost for multimodal transport service as presented in Table 20 shows that the cost is not fair. In sum 68.2 % of employees either disagree (27.3 %) or strongly disagree (40.9 %) with the idea that the transport cost under multimodal system is fair for customers. Only 9 % of employees agree with the idea,

while 22.7 % opted for neutrality on this evaluation, and no one strongly agrees with this evaluation.

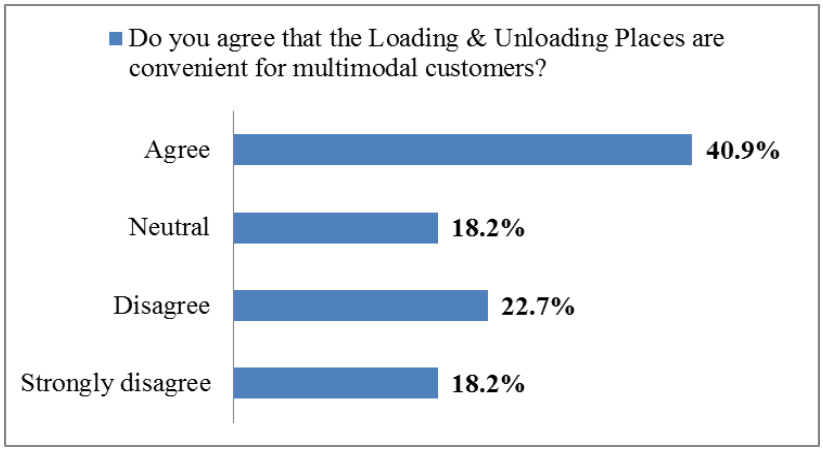

Fig. 26: Employees' evaluation on Loading /Unloading place convenience

The employee assessment made with regards to the place convenience at the time of loading and unloading as presented in Fig.26 reveals 40.9 % of employees agree that the place is convenient. However, 22.7 % disagree and 18.2 %strongly disagree with the idea that the loading/ unloading is convenient for customers. 18.2 % of employees opted for neutrality for the evaluation.

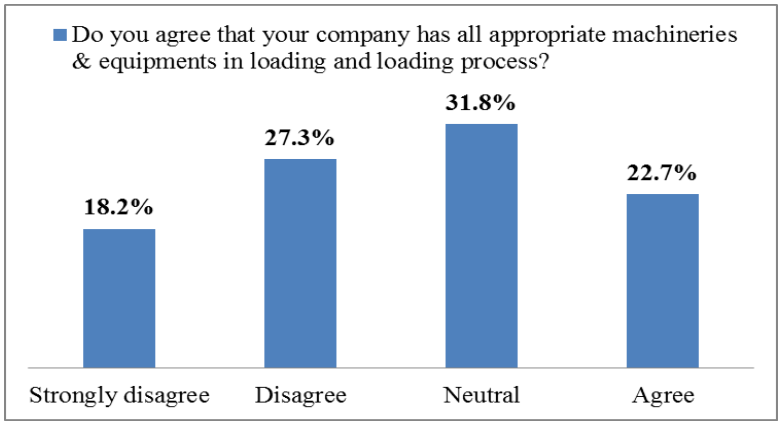

Fig. 27: Employees' Evaluation on convenient machineries used in loading/unloading

Assessment of ESLSE's machineries and equipments used in loading unloading practice by its employees as presented in Fig. 27 discloses that majority (45.5 %) of employees believe that the company has not acquired all required machineries and equipments for loading and unloading. Only 22 % agree that the company presently has all appropriate machineries and equipments while 31.8 % remain neutral on the evaluation.

Table 21: Employees' evaluation on fairness of costs associated with loading & unloading

Do you agree that costs for loading & unloading are fair?			
	Frequency	%	Cumulative %
Strongly disagree	6	27.3	27.3
Disagree	4	18.2	45.5
Neutral	9	40.9	86.4
Agree	3	13.6	100.0
Total	22	100.0	

The employee evaluation with regards to whether the costs for multimodal transport customers for loading and unloading is fair as presented in Table 21 indicated that 45.5 % either disagree (18.2 %) or strongly disagree(27.3 %) with the idea loading/unloading cost is fair. 40. 9 % remain neutral and only 13.6 % agree that the cost is fair. No one strongly agree with the idea.

5.2.6 Employee Evaluation on Administrative/Facilitation Service

The Ethiopian Shipping and Logistics Service Enterprise multimodal section employees were also asked to evaluate their company's performance in terms of facilitation service related to multimodal transport system. The evaluation result which was made on three evaluation points namely: simplification of formalities and procedures required by various authorities and organizations through electronic data transmission, custom automation & clearance, and banking facilitation are presented in Fig. 28 &29 and Table 22 respectively.

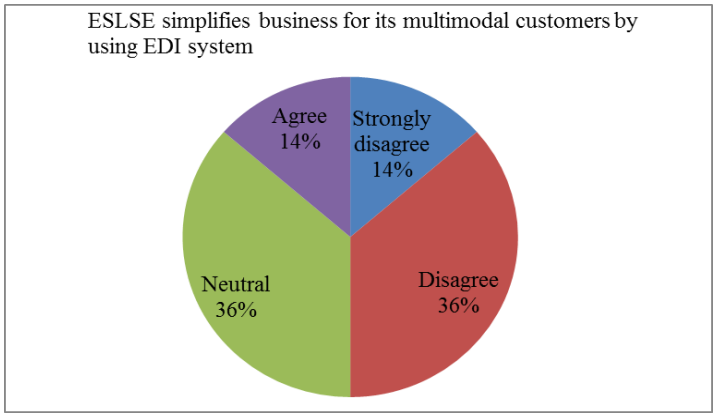

Fig. 28: Employees' evaluation on simplification facilitation

As far as simplification of procedures and formalities through Electronic Data Interchange (EDI) is concerned, Fig. 28 indicates that majority of employees evaluated the company is not doing well in this regard, i.e., 50 % of the respondents either disagree (36 %) or strongly disagree (14%) with the idea that ESLSE is making business easy for its multimodal

customers through EDI with local and international organizations. Only 14% of employees agree with this, and the remaining 36% of respondents remain neutral on this evaluation.

Table 22: Employees' evaluation on custom automation &clearance

ESLSE facilitates Custom automation &clearance process for its multimodal customers			
	Frequency	%	Cumulative %
Strongly disagree	6	27.3	27.3
Disagree	4	18.2	45.5
Neutral	10	45.5	90.9
Agree	1	4.5	95.5
Strongly agree	1	4.5	100.0
Total	22	100.0	

Looking at Table 22, the employee evaluation for ESLSE performance in custom clearance process facilitation discloses that majority of respondents believe the company is not doing well facilitation in this regard. 45.5 % of employees either disagree (18.2 %) or strongly disagree (27.3 %) with the idea that ESLSE is facilitating customs process for multimodal customers. Only 9 % agree (4.5 %) and strongly agree (4.5 %). However significant numbers (45 %) of employees also remain neutral in this evaluation.

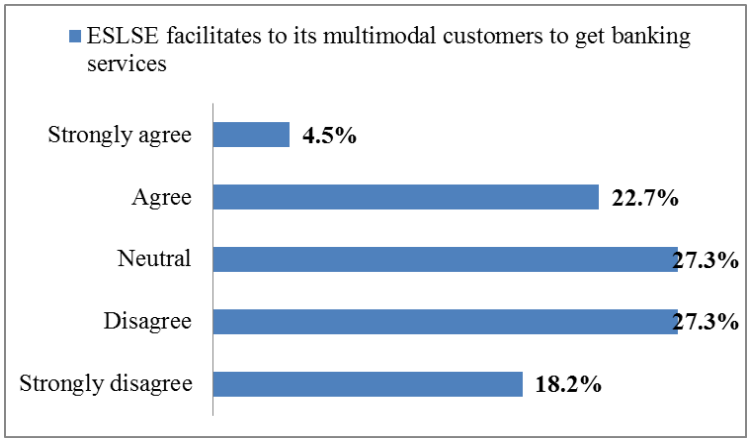

Fig.29: Employees' evaluation of banking facilitation

Employees' evaluation on facilitation by ESLSE for its multimodal customers to get banking services as presented in Fig.29 indicates the majority of the employees believe that ESLSE is not well facilitating banking service for customers. 45.5 % of employees either disagree (27.3 %) or strongly disagree (18.2 %) with the idea that ESLSE facilitates banking service for multimodal customers. On the other hand only 32.2 % of employees either agree (27.7 %) or strongly agree (4.5 %). The remaining 27.3 % of employees opted to be neutral on the assessment.

6 Analysis and discussion

6.1 Geographical position and Topography of the Country

This factor is influencing Ethiopia in two major aspects. One, the country is landlocked country since 1993 and the complete dependence on port Djibouti made port rents and associated costs above normal. Moreover, it also created congestion of Ethiopian freight at Djibouti port because all import and export of the country is through this single route. Second, the country's topography is difficult for the development of transport infrastructure. Very high variation in altitude, many deep gorge rivers, and the Rift Valley that crosses the country into two from North-East to South-West are the major problems.

What can be done in this regard?
This study may not be enough to identify possible solutions for these problems. But as explorative study possibilities that need further assessment may be forwarded as follow. For the landlocked problem, possibilities include negotiation with Eritrea to use port Assab under transport and trade protocol; in this regard Ethiopia's historical investment on the port and it's right under the international laws must be given due attention. Of course port Assab's cost benefit analysis needs further research beyond the negotiation between the two countries. International laws that gives right to Ethiopia use of port Assab include the United Nations Convention on the Law of the Sea (1982), which entered into force in 1994 and which grants right of access of landlocked countries to and from the sea and the freedom of transit. There are other documents under the United Nations convention that can be referred in this case. These include the 1965 United Nations Convention on the Transit Trade of Landlocked Countries; the General Agreement on Tariffs and Trade (in its Article V); the Kyoto International Convention on the Simplification and Harmonization of Customs Procedures (1973). However, the fact that these laws were not ratified by both Ethiopia and Eritrea may make it challenging. But the existence of such international laws can be a ground for starting negotiation. The other solution is looking, evaluating, and using of neighboring countries' ports such as port Lamu and Mombasa of Kenya, port Sudan, port Barbara, and Mogadishu of Somalia. These ports are recommended by previously made assessment such as MoT, 2009 as cited in Debela, 2012. As far as the topographic problem is concerned, expansion of domestic destinations of air transport and increasing the international airports of the country to different parts of the country may solve some problems. That means though this may involve high initial investments, once established it solves many problems. If there are more numbers of international airports in the country freight can be transported abroad from near its origin instead of transporting all the way to Addis Ababa. The other possibilities, which again involve high initial investment, are the expansion of railways for mass freight transportation.

6.2 Transport Infrastructure and Mode of Transport

The review indicated that though there were encouraging undertakings by the government of Ethiopia, further attention of government and all stakeholders in the coming times is very important.
Road: The road transport which contributes to more than 90 % of all mobility in Ethiopia has relatively shown better improvements during the last fifteen years through the consecutive Road Sector Development Programs. But the current achievement of the sector is still far

below African averages. According to sources reviewed, the road density per 100 sq. km and 1000 in habitants for Ethiopia are 0.75 and 5.73 but for whole Africa average are 26 and 6.8 respectively. This shows that the government and concerned stakeholders need to work hand-in hand to let the achievement to get forward.

Air: The review on air transport of the country indicated a better performance in terms of passenger but further attention is needed on freighter cargos. Ethiopian Airline plan to acquire five freighter aircrafts is encouraging and that will solve some problems of the country in freight transportation, particularly in international trade. Ethiopian Airline also may need to consider the expansion of domestic destinations and upgrading of some domestic airports to international level to improve freight transportation of the country.

Railways: In terms of railways, presently Ethiopia is between history and hope. The history part which was the only route from Djibouti to Addis Ababa has already over, and now the country is with full of hopes on the two national mega railway projects: Ethiopia National Railway Network and Addis Ababa Light Rail Transit projects. So far, the performances with regards to Addis Ababa Light Rail Transit project seem encouraging but the national networks (about 10,000 km) performance of which 2000 kms was planned to be completed by 2015 seems the plan is over ambitious at least in terms of time. According to the reports from ERC (2013), it is the Addis Ababa Djibouti railway project in phase one that is so far started and in progress. The report indicated that this project was given to two Chinese construction companies: Addis Ababa –Adama- Mieso (317 km) is under process of construction by China Railway Ltd, and Mieso-Dewele- Djibouti(439km) is under construction by China Civil Engineering Corporation. By March, 2013 the work of Addis Ababa-Adama-Mieso part is about 14 % completed (ERC, 2013). The second part is just at its start; hence the planned works of 2000kms of railways by 2015 is only possible with hard commitment from all involved as only two planned years remaining.

Sea/Water Transport: Ethiopia's water domestic freight transport is identified to be insignificant. With its dispersed lakes and non- navigable rivers the prospect in this regard is also not much expected. On international trade, as a landlocked country having its own commercial vessel is encouraging. The reviewed literature indicated that these vessels are carrying about 45 % of Ethiopia's export and import cargo. This is saving foreign currencies that the country should have been paying for other countries commercial shipping lines. Ethiopian shipping lines need further strengthening to avoid the current renting of other shipping line space for increasing capacity and inline with the alternative ports that Ethiopia will use in the future.

6.3 Case study

As presented in result section, both customers and employees were asked to evaluate Ethiopian Shipping and Logistic Service Enterprise's service performance under multimodal transport system which was implemented since January, 2011. The survey question addressed performance under five major assessment criteria: delivery, documentation, liability and insurance in case of loss or damage of freight, cost and convenience and administrative/facilitation performances.

Delivery Performance: Delivery performance of the company was evaluated based on accuracy of departure times, accuracy of promised running times, instruction clarity on delivery, immediate response to customers' delivery related claim, and overall delivery performance.
The result showed that whereas the majority of customers were dissatisfied and/or very dissatisfied with all delivery performance criteria, for the same questions majority of employees responded that they believe their company was providing appropriate service. Majority of employees agree and/or strongly agree that the service under the delivery performance are accurate, on time and responsive.

Documentation performance: ESLSE's performance of transport documentation for multimodal system was evaluated for proper issuance and delivery of the document, custom document handling and delivery, transport document confidentiality, overall documentation performance. The result shows that both customers and employees evaluated the organization positively. Majority of customers responded that they were satisfied and/or very satisfied with these performances. Similarly, majority of employees also agreed and or strongly agreed with the performance of SLSE in documentation performances. This shows that ESLSE in terms of documentation is doing well under multimodal system; it can be said, the principle of single document under the multimodal system is making customers at their convenience.

Liability and Insurance: the assessment with regards to the liability and insurance in case of loss or damage of goods while in transit was made based on immediate accident reporting, insurance system by ESLSE, immediate claim presentation to insurance company in case of loss or damage, follow up of insurance cases by ESLSE, overall customers' safety and security for their cargo shipments. The result indicates that with the exception of insurance system of the organization, majority of customers responded that they are either dissatisfied or very dissatisfied. On the insurance system of ESLSE majority of customers are satisfied. With employee side, majority of them responded that they agree and/or strongly agree with these performances. However on overall safety and security of customers' cargo shipments, majority of them opted for neutrality on evaluation. From this, it can be said, though ESLSE has insurance policy for freight carried under the multimodal system, there is problem in immediate reporting of accidents, immediate presentation of the claim to the insurer, and follow up once presented to facilitate payments by insurer for damage or loss compensation.

Cost and Convenience: The assessment in this regard was made based on clarity of cost purposes, fairness of transport cost, fairness of other associated costs such as loading and unloading/loading and unloading place convenience, and loading & unloading machinery convenience. According to the result, with the exception of place convenience, ESLSE's performance on these matters is far below the customers and employee's expectation. Majority of the customers were very dissatisfied and/or dissatisfied with the clarity of cost, fairness of both transport and associated costs, and loading and unloading machineries convenience. Similarly, majority of employees strongly disagree and/or disagree with the idea that ESLSE is providing multimodal transport service at fair cost and convenient machineries. Only place convenience made both customers and employees met their expectation.

Administration/ Facilitation: the evaluation of the facilitation service was made based on simplification of procedures and formalities through data sharing by Electronic Data Interchange (EDI) with various organizations, custom automation and associated services, and banking facilitation. The result indicate that majority of customers are either dissatisfied or

very dissatisfied with the first two performances, i.e., simplification and custom automation. However, majority are satisfied with the banking facilitation. On employee side, they responded majority of them either disagree or strongly disagree that ESLSE performs well in these facilitation tasks. Thus, ESLSE has not achieved customers and employees expectation in terms of facilitation services. Particularly, in terms of simplification of procedures and formalities required by different organization which is essential element of multimodal transport system it needs further consideration by ESLSE management.

7 Conclusions

The study identified, on many performance indicators majority of the customers were not satisfied, Majority customers responded that they were very dissatisfied and/or dissatisfied with service provided to them under the multimodal transport system. Though employees relatively better evaluated the company positively, employees' evaluations also indicate that on some performance indicators the company did not meet their expectation.
In general, **documentation performance** of the company seems good as it fulfills the expectations of both customers and employees. On the contrary, **Cost and Convenience** was the very difficulty area of the company that resulted in high portion of customers and employees who did not met their expectations. High proportion of very dissatisfied and/or dissatisfied customers and strongly disagreed and/or disagreed employees was recorded under the evaluation of cost and convenience.

To sum up, it is worth mentioning that the ESLSE though it has faced big challenges in implementation of multimodal freight transport system, with the opportunities at hand and working with all concerned may bring the desired intention of the multimodal transport system for Ethiopia which is not an option rather a must to proceed if Ethiopia has to benefit from international trade and development. To this end, the role of research studies to identify knowledge gap and solutions to the problems are critical & timely issues. The following points were believed for further detailed study.

1. To what extent can the planned railways in Ethiopia contribute to improvement of freight transport in Ethiopia? What can be done to optimize the use of the railways in terms of food logistics and supply chain management?
2. Analysis of possible ports that Ethiopia can use to avoid complete dependence on Djibouti port,
3. Does the trade system in the country contributed to the freight transportation problems?
4. Why costs of multimodal freight transport in Ethiopia is high? What can be done; can privatization of the intermodal service work in this regard?
5. An assessment of custom terminal checking procedure and process at port Djibouti, Ethiopia boarder terminal, and all the ways to dry ports in Ethiopia: what can be done in this regard?

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Appendix 1: Data Collection Check List from Customers

I. Respondent background information:

1. Gender: Male ☐ Female ☐
2. Educational background:
   - High School Graduate ☐ Diploma / 10+3 or 12+2/ ☐
   - Second Degree graduate ☐ First Degree Graduate ☐
   - Above Second Degree ☐

II. Please indicate how much you are satisfied with each of the criteria under performance indicators.

1. Customer satisfaction on Delivery performances: Please tick X mark under your choice

		Level of your satisfaction on the service by ESLSE					
S. No	**Performance indicators:- Your satisfaction on:**	**Very Satisfied**	**Satisfied**	**Neutral**	**Dissatisfied**	**Very Dissatisfied**	***DK**
1	Accuracy on the specified departure times						
2	Accuracy on promised running times						
3	Clarity/ observable of Customer's instructions during delivery						
4	Determining the particular status/location of a shipment in a reasonable time/Tracking information/						
6	Over all delivery performance Transfer of the goods at the agreed times						

***DK= don't know**

2. **Customer satisfaction on Transport documentation performances: Please tick X mark under your choice**

		Level of your satisfaction on the service by ESLSE					
SN	**Performance indicators- Your Satisfaction on:**	**Very Satisfied**	**Satisfied**	**Neutral**	**Dissatisfied**	**Very Dissatisfied**	***DK**
1	Timely issuance and delivery of Transport documents						
2	Enclosed customs documents handed to the recipient or the specified customs agent on time						
3	Transport documents or their content may not be made accessible to or handed over to third parties except in the case of official inspections- Confidentiality						
4	Overall satisfaction on Documentation performance such as bill of lading, airway bill, rail or road consignment note timely issuance, delivery, and the conditions for supplying these documents electronically						

***DK= don't know**

3. **Customer satisfaction on Liability and Insurance during damage by accident or loss on freight shipments under multimodal freight transport system**

		Level of your satisfaction on the service by ESLSE					
S. No	**Performance indicators:** **Your Satisfaction On:**	**Very Satisfied**	**Satisfied**	**Neutral**	**Dissatisfied**	**Very Dissatisfied**	***DK**
1	Accidents to shipments of cargo reported immediately						
2	ESLSE Insurance policy for covering damage or loss of goods on Sipments						
3	ESLSE presents the claim of loss/damage of goods immediately to Insurance companies for compensation payment						
4	ESLSE follows the insurance case till the compensation for loss/damage is covered by the insurance company						
5	Satisfaction on overall safety and security of freight shipments aginest damage or loss						

4. Customer satisfaction on Costs and Convenience

		Level of your satisfaction on the service by ESLSE					
SN	**Performance indicators**	**Very Satisfied**	**Satisfied**	**Neutral**	**Dissatisfied**	**Very Dissatisfied**	***DK**
	1. Costs						
a	Your Satisfaction on Clarity of Purpose of cost						
b	Your Satisfaction on Fairness of the Transportation Cost						
c	Your Satisfaction Fairness of Loading/Unloading Costs						
	2. Delivery Place and infrastructure						
a	Your Satisfaction on Loading/Unloading Place Convenience						
b	Your Satisfaction on Machineries and Equipment used in Loading/Unloading						

5. Customer Satisfaction on Administrative/Facilitation support by ESLSE

		Level of your satisfaction on the service by ESLSE					
SN	**Performance indicators:** **Your Satisfaction On:**	**Very Satisfied**	**Satisfied**	**Neutral**	**Dissatisfied**	**Very Dissatisfied**	***DK**
1	Reduction of formalities and procedures required by various organizations trough sharing of information by Electronic Data Interchange(EDI)-Simplification of Business Process						
2	Facilitation of Custom automation and clearing services/procedures						
3	Facilitation of banking services: arrangements by ESLSE with banks so that customers will get banking services						

Appendix 2: Data Collection Checklist from Employees

I. Respondent background information:

Gender: Male ☐ Female ☐

Educational background:

High School Graduate ☐ Diploma / 10+3 or 12+2/ ☐

Second Degree graduate ☐ First Degree Graduate ☐

Above Second Degree ☐

II. Service performance Evaluation:

Currently ESLSE is providing multimodal transport service. How you evaluate the service performance of the company on the following issues? Please give your evaluation by ticking (X) mark under your choice. Your evaluation is only for Multimodal Transportation services only.

SD= Strongly Disagree, D= Disagree, N =Neutral/ Neither agree nor disagree, DK=don't know, A= Agree, SA= Strongly Agree

1. Delivery performance indicators:	**Your Evaluation**				
	SD	D	N	A	SA
Do you agree that departure times are as accurate as promised to customers?					
Do you agree that ESLSE is meeting promised running times accurately?					
Do you agree that ESLSE provides clear instruction/procedures during delivery times?					
Do you agree that ESLSE provides information on the location/whereabouts of shipments or tracking information?					
In sum(Overall), ESLSE provides delivery service that makes Transfer of the goods at the agreed times and location					
2. Transport documentation performance indicators	**Your Evaluation**				
	SD	D	N	A	SA
Do you agree that Multimodal Freight Transport Documents are always issued and delivered to customers on time?					
Do you agree that Custom documents accompanying shipments are handed to recipients or custom agents on time?					
Do you agree that multimodal shipment documents or their contents are not accessible to third party except in the cases of official inspections?					
Do you agree that overall ESLSE performance is well with regard to documentation performance?					

3. Performance indicators on Liability and Insurance during damages/loss by accident	**Your Evaluation**				
	SD	D	N	A	SA
Do you agree that accidents/losses happen to shipments are reported immediately under the multimodal freight transport system?					
ESLSE maintain an insurance policy covering for damage or loss of goods on transit					
ESLSE presents the claim of loss/damage of goods to insurance companies immediately for compensation of loss/damage					
ESLSE follows the insurance case till the amount lost is covered by the insurance company					
The Insurance company pays immediately the claim amount					
Do you agree that overall ESLSE performs well in terms of to safety and security freight shipments against damage or loss?					
4. Administrative support service performance indicators	**Your Evaluation**				
	SD	D	N	A	SA
ESLSE Simplifies business procedures and formalities for its multimodal customers through Electronic Data Interchange (EDI) with national and international organizations					
ESLSE facilitates Custom automation and clearance process for its multimodal freight transport customers					
ESLSE facilitates procedures of getting banking services for its multimodal freight transport customers					

5. Cost and Convenience Performance indicators	**SD**	**D**	**N**	**A**	**SA**
Do you agree that the purposes of costs for which multimodal customers are requested to pay are clear and understandable by customers?					
Do you agree that the transport service cost for multimodal customers is fair?					
Do you agree that the loading/unloading places for the multimodal freight customers are convenient?					
Do you agree that ESLSE has all required machineries and equipments used for loading/unloading?					
Do you agree that the costs of loading/unloading under the multimodal freight transport system are fair?					