



**Addis Ababa University
College of Business and Economics
Department of Management**

**ASSESSMENT OF CUSTOMER SATISFACTION ON MULTIMODAL
TRANSPORT SYSTEM:
The Case of Selected Private Import Businesses**

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**Assessment of Customer Satisfaction on Multimodal Transport System:
The Case of Selected Private Import Businesses**

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Declaration

I, undersigned declare that this thesis is my original work. Furthermore, all sources of materials used for the thesis had been duly acknowledged.

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Certification

This is to certify that Belay Tadesse Bedanie has done a study on the topic “*Assessment Customer Satisfaction on Multimodal Transport System: The Case of Selected Private Import Businesses*”. This study is of her original work and all the sources of materials used for the thesis had been duly acknowledged.

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Acronyms and Abbreviation

ERCA	Ethiopian Revenue and Customs Authority
CSRQ	Customer Service Relationship Quality
EDPSE	Ethiopian Dry Port Service Enterprise
EFFA	Ethiopian Freight Forwarders Association
EMTS	Ethiopian Maritime and Transit Service
ESL	Ethiopian Shipping Lines
ESLSE	Ethiopian Shipping and Logistics Service Enterprise
FCL	Full Container Load
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
GTP I	Growth and Transformation Plan I
ICC	International Chamber of Commerce
ICT	Information and Communication Technology
IMF	International Monetary Fund
JBL	Journal of Business Logistics
JIT	Just in Time
LCL	Less than Container Load
LLC	Land Locked Country
LSV	Logistics Service Value
MMTS	Multimodal Transport Service
MOT	Ministry of Trade
MTO	Multimodal Transport Operator
OAU	Organization of African Union
ROI	Return on Investment
ROA	Return on Asset
ROS	Return on Sales
SD	Standard deviation
SPSS	Statistical Package for Social Scientists
UNCTAD	United Nation Council of Trade and Development
UNESCAP	United Nation Economic and Social Commission for Asia and Pacific

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Abstract

The primary objective of this study was to assess customer satisfaction on multimodal transport system as evidenced from users (private import business) perspective. Multimodal transport service, logistics service value, and customer service relationship quality, have been utilized as measurement constructs to assess the level of customer satisfaction. In this study, the customer satisfaction has been rigorously studied. The constructs have been properly operationalized to develop, the survey questionnaires used to collect data. A quantitative method has been applied to analyze the data collected from importers operating in Addis Ababa. The findings of the statistical analysis have shown that importers have been relatively dissatisfied on the multimodal transport service. They have not been feeling that the current multimodal operator has been delivering the logistics service value for money and they have been indifferent to the customer service relationship quality. The study has also shown that there are no statistically significant relations between the indicators, which support the null hypotheses as well. In summary, this study has empirically assessed the multimodal transport system has contributed insignificantly to enhance importers business performance in Addis Ababa. And importers businesses have not been improved due to the service values of the current MTO in Ethiopia. This will provoke the need for furthers research at national level in order to assure the theoretically supported effect of the multimodal transport service on private businesses.

Chapter 1- Introduction

In this section, first studies related and pertinent to multimodal transport system, trade and economic development in Ethiopian context has been briefly discussed. Secondly, trends in international trade and transport logistics have been thoroughly examined in relation with transport practices in Ethiopia. Lastly, issues with multimodal transport have been investigated in line with the main research objective.

Ethiopia is one among the founding members of former Organization of African Union (OAU). Ethiopia has been continually recording accelerated growth in its trade development in all sectors namely agriculture, industries and services. Its gross domestic product (GDP) and level of foreign direct investments (FDI) has sharply plunged (www.au.org). However, signs of strong growth in trade and public investment in last decade have a substantial contribution to economic development over the medium term.

In the context of economic development, the level of trade in goods and services were heavily affected by the overall economic growth rate. (As per World Bank Ethiopia, Economic Update, issued, (2015), Addis Ababa; www.worldbank.org).

1.1 Why multimodal transports? The Ethiopian context

Ethiopia has recently introduced a multimodal transport system to stimulate the economic growth and development and to reduce its foreign expenditure. Ethiopia has understood multiple benefits of multimodal transport system from global experience and many countries have implemented this system to speed up their economic growth. In recognition of current global economic development, Rondinelli and Berry (2000) has pointed out that economic globalization, speed-to-market, agile manufacturing and business practices and need of integrated supply chain management were the key driving forces for multimodal transport system.

According to the UNCTAD report (1995) these four driving factors show that the need for continuum of network development is crucial and is achieved through

transport integration with adaptive use of multimodal transport system. Multimodal Transport is defined as:

“Movement of containerized cargo through the usage of combination of mode of transportation from origin of the cargo to consignee under a single rate and a single contract, with through billing and through liability in providing services” UNCTAD, (1981).

The question of why multimodal transport system is so needed is addressed through the above four global economic driving factors.

1.2 Global perspectives of multimodal transport

Since the global container fleet (implying more goods movement) had increased during the last decade, the expectation for a more effective logistics and transport management is demanded, as more goods literally indicate more import or Export, UNCTAD, (2007); (2010). Naturally, containerization plays positive role to improve the performance of modal transfer of goods between ports of origin and final delivery terminals. From importers’ perspective, point-to-point transport is one of the important characteristics of multimodal transport logistics. Nevertheless, globally multimodal transport is highly considered as a facilitator for removing trade barriers, providing a model for achieving supply chain integration (Islam, Dinwoodie, and Roe, 2005).

Multimodal transport has been also a key source of strategic advantage for firms. Firms are encouraged to understand the importance of material flow integration and how it is linked to value creation, as part of firm’s strategic objectives (Whitehurst, 2005). In order to create value, it is important for service providers to match the requirements of customers with their capability to provide service. According to Rondinelli and Berry (2000), values were added through multimodal transport infrastructure as an integrated system managed holistically in logistics services. Value creation can be emphasized through emergence of new capabilities such as production, distribution and consumption mobility, geographical and functional integration, and economic perspectives (Hesse and Rodrigue, 2006).

However, as transport services become more integrated through combinations of

various transport modes, methods and networks, their impact on values has become more complex. The UNCTAD (1995) report has shown that services provided by multimodal transport operators would be very competitive across industries to secure their customer base, establishment and understanding of the relationship among the values created, the logistics service and the customer has been important in strengthening performance. As revealed in the report of UNCTAD (1995), an extensive literature on value has been circulated in the context of logistics and supply chain research.

1.3 Statement of the problem

With the increase of international trade, issues such as reliability, safety, security and frequency of deliveries have affected the pattern of transport practices, which increasingly reflect a demand for more integrated transport services (UNCTAD, 2003). Evidences from Banomyong and Beresford (2001), and Schijndel and Dinwoodie (2000) has shown that in the context of multimodal transport, very little equivalent research on the behavior dimension in commercial decision-making has been done.

Inevitably, collaborative partner-relationship between importers and operators has received considerable attention in determining the effectiveness of multimodal transport system on business performance. The term relationship in the context of transport has always been a critical pillar in strategic business environment (Gibson, *et al.* 2002). Extensive studies have identified the potential impact of efficiency, effectiveness, trust, flexibility, control, performance, fitness and risk on customer relationship (Crosby, *et al.* 1990); (Athanasopoulou, 2009), (Lu, 2003). Similar studies have witnessed that the level of relationships are also different based on the various types of magnitudes. However, according to Athanasopoulou (2009), there are no universally accepted frameworks for measuring relationships.

According to IMF country report 14/304 (2014), it is identified that the logistics system as a key priority and has been tried to improve the system. With the primary aim of saving time and cost for the country resulting in the establishment of the Ethiopian Shipping and Logistics Enterprise (ESLSE), which is the merger of the three major state-owned enterprises, namely the Ethiopian Shipping Lines (ESL),

Ethiopian Maritime and Transit Services (EMTS) and Ethiopian Dry Port Service Enterprise (EDPSE). Despite these improvements the logistics system failed to promote competition whereby the private operators would have played positive role in the system. Besides, practical experiences have also shown that there has been increased time and cost for clearing import cargos.

Even though the Ethiopian economy has been recently categorized among the Africa's fastest growing economy (African economic outlook 2015, pp.2), Ethiopia had trade balance deficit (Import is the dominant business) and depends highly on imported items for domestic consumptions, agricultural and industrial inputs. Arvis, Marteau, and Gaël (2010) have pointed out that land locked countries (LLC) bear higher logistics cost, compared to coastal countries. Since Ethiopia has been also landlocked country after its separation from Eritrea the same fact holds true. Multimodal transport services are crucial in order to reduce cost, and at the same time, to obtain higher service standard according to the international multimodal transport services (MMTS) practice. The aim of multimodal service in the Ethiopian context is to streamline shipments to and from Port of Djibouti to reduce port demurrages and warehouse fees in foreign currency. This is especially true in Ethiopia where business transactions are not much sophisticated and often less transparent than in other parts of the world. Individual interpretation and evaluation of service and value, rather than simple comparative cost, is often found to be decisive. Multimodal transport services such as provisional management, packaging, warehousing, information and transport service within a supply chain are key determinants of the competitiveness of a firm's production process and ability to deliver. The above reviews show that little or no studies have been carried out directly on the effect of multimodal transport system on business performance in Ethiopia. The proper implementation of multimodal transport system for countries like Ethiopian is indispensable provided that the standards and the effectiveness are achieved. According to different literatures many other economies had significantly benefited from the operation of multimodal transport and Ethiopia will also benefit from such transport modernization and prosper its citizen if the multimodal transport system delivers the expected service standard.

Therefore, the purpose of this study is to assess whether the recently operationalized multimodal transport system in Ethiopia has attained the service standard or not. To examine the role it plays in supporting the business venture. The study has been also focused to analysis the effects the multimodal transport had on import business performance.

1.4 Research objectives

The general objective of this study has been two folds. In the first hand it analyzes the effect of multimodal transport system variables on business from viewpoints of import business in Addis Ababa. On the other hand it examines the relationship quality among multimodal transport service, logistics service value, and business performance.

1.5 Specific objectives:

The specific objectives of this study are:

1. To analyze importers satisfaction level on multimodal transport service.
2. To analyze the importers contentment on multimodal transport system logistic service value.
3. To examine the importers fulfillment on multimodal transport system's customers service relationship quality.

1.6 Scope of the study/limitation

The scope of this research has primarily been delimited to analyzing the importers satisfaction on multimodal transport service, logistic service value, and customer service relationship quality. The data has been gathered from firms engaged in importing goods and services within Addis Ababa city and classified as large taxpayers in the Ethiopian Customs and Revenue Authority.

1.7 Research questions

The following research questions have been formulated based on the objectives of the current study. Three of these questions have been statistically tested in order to support the existence of relationship between the dependent variable (Customers satisfaction) and the independent variables (Multimodal transport service, Logistics service value, and customer relationship quality). Furthermore the remaining three research questions have been statistically analyzed and described to observe whether importers are satisfied with the current multimodal transport system; hence, the research questions have been formulated as shown below:

Q₀₁: Multimodal Transport Service Value has no effect on customer satisfaction.

Q₀₂: Customer relationship quality has no effect on customer satisfaction.

Q₀₃: Logistic service value has no effect on customer satisfaction.

1.8 Research contribution

This research aspires to provide a better understanding of the effect of multimodal transport system on private import business performance, with a primary focus on Ethiopia. The core of the research is based on perspectives of Private import businesses in Addis Ababa City and the Ethiopian Shipping and Logistics Service Enterprise as multimodal operator. Moreover, the research has considered a combination of theoretical and practical perspectives, which ultimately helps understand the breadth and depth of multimodal transport systems, relationships and importers' business performance from Ethiopian perspectives.

1.9 Research organization

The project work has been organized into six broad chapters as shown below:

The first chapter of this study (**Chapter 1**) introduces about the study background, statement of the problem, objectives of the study, hypothesis, scope and limitations of the study, research, significance of the study and the structure of the thesis.

While the second chapter (**Chapter 2**)critically reviews existing literatures relating to the economic development, trade patterns, and transport development and the multimodal transport service, relationships and business performance with respect to the research objective have been thoroughly and briefly discussed. Base on which the conceptual framework has been developed to operationalize both the variables and the measurement items. The third chapter (**Chapter 3**) discusses the methodology aspect. It discusses issues related to the choices of methodological approaches with specific emphasis on philosophy, data collection, questionnaire design, sampling techniques. The fourth chapter (**Chapter 4**)presents data preparation, data cleaning, and prepared for interpretations, test the reliability and validity of the measurement scale.

The fifth chapter (**Chapter 5**)presents the data analysis part of the study. The analyses focus on descriptive and inferential statistics. The descriptive part presents the response rate of the survey, demographic characteristics and descriptive statistics analysis result. The inferential statistics part describes the effect and the relationship analysis of the data using different models. Further the statistical tests and the results of the analysis have been presented in this chapter. The final chapter (**Chapter-6**) discusses the conclusion of the study with an overall summary of the results and discusses the key outcomes, contributions and managerial implications along with the limitations and recommendations for future research.

Chapter 2- Literature review

This chapter covers the literature review of works done earlier and will also define terms used in the covered by the study. Defines variables and operationalize them to define model for the study.

2.1 International trade and logistics

With regards to the geographical position of the country, Ethiopia has been a land locked country since its separation from Eretria in 1990 G.C. Ethiopia is a country where its exports are primarily dominated by agriculture-based products. According to GTP I, strategic development initiatives are currently positioned in the logistics development strategy plans, which aimed to transform Ethiopia as East Africa's trade and investment center via the establishment of world-class logistics systems. Which will be further elaborated in the succeeding sections. In terms of Ethiopia's main trading partners, China, Saudi Arabia and Japan are the top three.

2.2 Roles of multimodal transport in Ethiopia

Ethiopia has already operationalized the multimodal transport system since 2012 by law and generally the significance of multimodal transport in Ethiopia was inevitable. Ethiopia in its growth and transformation plan I endorsed heavy infrastructure building with the aim to increase facilitation of trade and tourism (UNESCAP, 1996). According to multimodal transport handbook (UNCTAD, 1995), the term 'multimodal transport' system has been defined as:

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

The role of the MTO is signified in Ethiopia with responsibility of transport activities and coordination between the port of loading and the port of destination to ensure the continuous movement of the goods in a most effective manner.

In Ethiopia, the term ‘multimodal transport’ is used to describe the movement of containerized goods from port of origin to port of destination (Dry ports in Ethiopia) by sea (international water) and road transport (and rail in the future) by one operator namely the Ethiopian Shipping Lines and Logistics Service Enterprise, known as the “Multimodal Transport Operator” (MTO), assumes liability for the carriage of goods under one contract (Ethiopian Multimodal Transport Directive, 2012). According to the Ethiopian Ministry of Transport (MOT), the concept of multimodal transport is seeing greater use in supporting national development for integration, convenience and efficiency of transport services. Realizing the need to meet the challenge of reducing logistics cost, and foreign currency, the government seeks to promote the usage of water, road and rail transport in cost and currency saving. The main principles and developments that have been appointed by the MOT to safeguard the benefits of domestic importers are:

- a) To emphasize the improvement of existing infrastructure network,*
- b) To support efficiency by the development of the production and service base, and*
- c) To promote multimodal transport activities.*

In the case of the institutional framework for multimodal transport, an official draft of the main objectives to the multimodal transport directives was:

- a) To provide the minimum requirements for registration of multimodal transport operators,*
- b) Define the liability and limit of liability of multimodal transport operators and consignors and*
- c) To unify the legal principles to institutionalize multimodal transport operations in Ethiopia.*

The formality of the Ethiopia multimodal transport directive has been to impose significant effect on how multimodal transport business is done, aiming to reduce the huge warehousing fee in foreign currency, increase efficiency and reduce overall logistics cost for the country. At present, according to Ethiopian Freight Forwarders Association (EFFA), currently there is only one MTO is providing multimodal transport logistics service in Ethiopia. Domestically, Ethiopia is very much dependent on road transport in term of physical movement of goods with future potential use of railway.

2.3 The notion of multimodal transport

The idea of Multimodal transport evolved long ago over period of time following the economic development for better and efficient means of delivering goods. The traditional transport and logistics services were continually changing with the changing global economy and the level of transport logistics service complexity increases the need for integration of modals of transport emerged to meet the expected efficiency and effectiveness. The ‘multimodal transport’ concept can be defined as the combination of various types of transport modes used in a national or international transport operation, in which provides door-to-door services, under the responsibility of one single transport operator (UNCTAD, 1995). Practically, this particular concept is not new and may even have been practiced long before the introduction. According to Woxenius (1998), the early form of combining transport modes dates back to Roman times where horses and carriages were the primary form of interchangeable transport modes. An effort of introducing adequate legal framework for multimodal transport operation was found in the work of ‘International Code of Affreightment’ in the early 1910s. However, during that time, transportation was considered as a segmented industry based on unimodal operation and contracts. It was after the introduction of large-scale containerization in the 1970s, did Multimodal Transport gain considerable momentum (Faust, 1985).

Until the introduction of containerization in the 1960s’, physical movement of goods had been through evolutionary changes of innovation in an attempt to achieve efficiency and effectiveness (Hayuth, 1987). However, based on the emergence of the driving forces such as technology, economy, regulation, social environment and business competitiveness, the complexity of transport operations has propelled the need to introduce a more structured concept. As a component of international trade, Multimodal Transport has generated considerable commercial values for firms in comparison to other alternative transport systems. Campisi and Gastaldi (1996), Banomyong (2000), SLA (2008), summaries some of many advantages of Multimodal Transport are:

- a) *Reduction of time, risk of lost or damaged goods through a planned and coordinated single transport operation,*

- b) *The establishment of a seamless communication link maintained by single Multimodal Transport Operator,*
- c) *Increase market access opportunity through speedy transfer and transit time,*
- d) *Reduction of multiple documentation,*
- e) *Cost saving through possible reduction of freight rate,*
- f) *Minimizing confusion through a single point of contact (the MTO),*
- g) *Ultimately, an improvement in the competitive position of companies in the international market place,*
- h) *Different solutions can be easily benchmarked for performance.*
- i) *Offering these likely benefits, it is clear that multimodal transport has the potential in providing numerous commercial advantages for shippers, consignees and freight forwarders. It is an integrating tool in providing firms a choice of cost control, flexibility, competition, reliability and a one-stop service (Islam, et al. 2005). The notable features of the multimodal transport concept are:*
 - j) *Combination of various types of transport modes,*
 - k) *International transport operation and,*
 - l) *Responsibility of one single operator.*
- m) *In order to capture the breadth and depth of the concept, a critical review regarding to key characteristics of Multimodal Transport, will be fundamentally presented below.*

2.4 Definitions

Transport terminologies such as ‘Through Transport’, ‘Combined Transport’, ‘Intermodal Transport’ and ‘Multimodal Transport’, has been widely used in context of cargo movement through flow of traffic, which in some cases share similar meanings such as the movement of goods by more than one mode of transport and a through freight rate (Banomyong, 2001). For the sake of clarity, terms of some key components and systems that are encountered in this thesis are described as below.

2.4.1. Through transport

According to HMSO (1966), ‘Through Transport’ has been defined as “the methods of distribution and transport, which give through flow of traffic, from the point of

origin to the final point of destination, with minimum trans-shipment and delay” There is no specific identification of transport modes involved through the process but it identifies the emergence of the concept of unit-load movement and ICDs. Another distinguishing characteristic is the use of standardized documents, such as the Through Bill of Lading, along the transport journey.

2.4.2. Combined transport

The term ‘Combined Transport’, is defined by the International Chamber of Commerce (ICC) Rules (Banomyong, 2000) as

“The carriage of goods by at least two different modes of transport, from a place at which the goods are taken in charge situated in one country to place designated for delivery situated in a different country”.

The various transport modes combine to enable goods to be transported by sea, inland waterway, air, rail or road. In a combined transport system, there are no indications of the characteristics of the cargo goods but a single document method of ‘*Combined Transport Bill of Lading*’ has been utilized to facilitate the movement of goods. Traditionally, the term ‘*Combined Transport*’ involves road-rail transport rather than other combinations of transport modes. Regarding the 1975 ICC Rules for Combined Transport, the 1992 UNCTAD/ICC Rules have now replaced these terms as Multimodal Transport (Banomyong, 2000).

2.4.3. Intermodal transport

Hayuth (1987) has defined ‘Intermodal Transport’ as:

“The movement of cargo from shipper to consignee by at least two different modes of transport under a single rate, through billing, and through liability.”

The purpose of the concept was to further imply the cooperation and coordination throughout the entire transport chain in the most cost- and time-effective manner. In comparison with ‘Combined Transport’, intermodal transport draws a wider application in other possible combinations of transport modes rather than just road-rail (Lowe, 2006).

2.4.4. Multimodal transport

Unlike intermodal transport, the definition of Multimodal Transport is more settled

but less explored. With regards to the usage of the terminology, coined by the United Nations Convention on International Multimodal Transport of Goods in 1980 (UNCTAD, 1981), defines the terminology as:

“Involvement of cargo movement through the usage of combination of modes from shipper to consignee under a single rate, with through billing and through liability in providing door-to-door services”.

In recent literature, therefore, various definitions of multimodal transport have been found. The first part of the above definition shares the same understanding among different authors in the involvement of the movement of cargo from origin to destination using two or more different modes. Therefore, when dealing with multimodal transport, the ability to design and provide combination of mode choice has been agreed upon all authors. It is interesting to note that transport terminology between multimodal and intermodal transport shows great similarities in terms of its definition and functions.

The second part of the definition draws the difference by the use of one single MTO under a single contract. Therefore, according to the above definitions, one of the key characteristics in distinguishing multimodal and intermodal transport in the context of transport is the arrangement of MTO under one single contract.

2.5 Service context of multimodal transport

Traditionally, services provided by the MTOs are usually involved with container activities such as: full container load (FCL), less than container load (LCL) and consolidation services (SLA, 2008). However, due to market competition in the transport industry, these services are often insufficient. The increase of service coverage such as: the use of information and communication technology (ICT) and infrastructural capability, security and safety, facilitation, legal aspects and market access has become a rising phenomenon in the competitiveness of multimodal transport (UNCTAD, 2003). According to Banomyong (2000), MTO's competitiveness is highly dependent on the managerial and operational techniques in each specific transport links. Thus, with overlapping characteristics of logistics services, a review of multimodal transport service is provided hereunder with its attributes and its relation with logistics services.

2.6 Logistics service

Long ago, in most business-related literature, logistics operations were formally known as physical distribution, which focuses on the outbound side of the logistics system (Coyle, et al. 2003). However, as more functions have been integrated in to the transport process, for example: complex forms of collecting, storage, trans-shipment and value-added logistics activities, the concept itself has gradually evolved to include inbound flows and internal systems e.g. in a manufacturing plant or retail distribution center. This increasing complexity has encouraged much greater use of information technology to implement sufficient control of transport operations and inventory management in acquiring effective and efficient results. According to Kent and Flint (1997), the evolution of the logistics terminology falls into six eras, namely:

- a) *Farm to market,*
- b) *Segmented functions,*
- c) *Integrated functions,*
- d) *Customer focus,*
- e) *Logistics as a differentiator, and*
- f) *Behavior and boundary spanning.*

2.7 Customer service relationship quality

According to (Lambert, et al. 2004) any efforts to manage the flow of materials and information across any type of channels are likely to be ineffective for any type of business without effective relationship. Establishment of a smooth working relationship with transport stakeholders reflects an MTO's service quality. Therefore, development of a positive relationship would allow both importers and MTOs to obtain competitive advantage through secured customer base, and favorable rates respectively (SLA, 2008).

A successful customer relationship guarantees proper input from the beginning to the end; the development of successful and mutually beneficial relationships has drawn the attention of researchers for decades (Athanasopoulou, 2009). Thus, in today's highly competitive environment, multimodal transport companies have been trying to secure customer loyalty through development of long-term relationships with their customers.

2.8 Conceptual framework

The conceptual framework is the blue print of the research work that guides the researcher to conceptually understand the research and outline and operationalized the dependent and the independent variables so that the measurement, processing, analysis of the data and interpretation of the result been easy and meaningful.

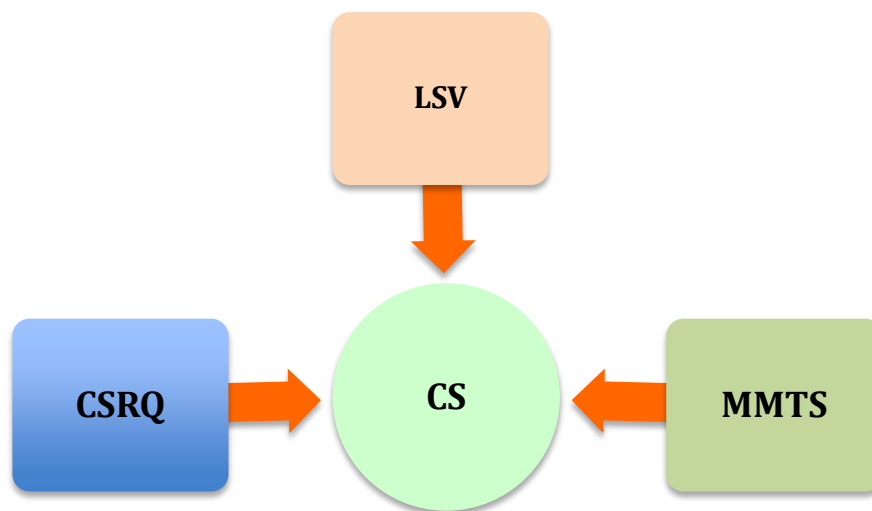


Figure 1: Multimodal transport Conceptual framework

2.9 Construct and variables operationalization

The focus of this part is to operationalize the constructs and to build the questionnaires to collect data for statistical analysis of the research hypothesis. The literature review has addressed the foundation of multimodal transport service and its relationship with logistics service value. In this chapter, constructs are drawn and operationalized based on the study question and objective.

The variables such as the multimodal transport service (MMTS), the Logistics Service Value (LSV), and the customer service relationship quality (CSRQ) are classified as independent variable whereas the variable business performance (BP) is the dependent variable/construct.

2.9.1 Unit of measurement for variable MMTS

As it is clear that multimodal transport system is providing logistics services, Coyle, et al.(2003)have used the so-called seven R's to indicate these attributes through the company's ability to deliver the 'right' amount of the 'right' product at the 'right' place at the 'right' time in the 'right' condition at the 'right' price with the 'right' information. Mentzer, et al. (2001), the definition of logistics service varies from industry to industry and has changed as business environments have broadened to include several other operational aspects of logistics.

In both small and large businesses Coyle, et al. (2003) indicated that good financial conditions, high frequency of sailing, on-time pick-up, courtesy of inquiry, prompt response to claim, good condition of containers, ability to provide computer system for cargo tracing, ability to provide door-to-door service, and ability to provide customs clearance service were found as significant logistics service attributes for businesses.

As Multimodal Transport aims to provide services such as computer system for tracing, frequency of departure and on-time pickup are often used to ensure the reliability of MMTS (Islam, et al 2005).UNCTAD's report of development of multimodal transport and logistics services (2003) also highlighted that there responsiveness to importers' service demand reflects the capability of MTO's customer service capability in terms of courtesy of inquiry, prompt response to claims, condition of containers, just-in-time (JIT) and customs clearance services.

In Hayuth (1987) research on multimodal transport service Items that were used in measuring time-related service attributes were: availability of cargo space, accurate documentation, prompt response to claim, short transit time, high frequency of sailing, on-time pick-up, reliability of advertised sailing, and service coverage. These service attributes has been frequently referred to as responsibilities of a MTO in the commercial arrangements.

Williamson, et al. (1990)divided multimodal transport service dimensions into three main groups: **transportation**, **facilities**, and **communication and information**. Referring to the MMTS attributes, some items are revealed to have similar

characteristics. For example, on time pick up (item 2), transit time (item 3) and schedule reliability (item 4) are all related to ‘time’. Furthermore, availability of booking space (item 7) and frequency of schedule (item 8) might portray similar meanings. It is challenging to decide which aspects to keep or eliminate.

Table-1: Dimensions and measurement items of multimodal transport service

Dimensions	Measurement Items
	Transportation-Variables
1	Accurate documentation
2	Transit time
3	Schedule reliability
4	Special cargo handling
5	Availability of booking space
6	Frequency of schedule
7	Arrangement of door-to-door service Facilities
Dimensions	Facilities-Variables
8	Inland transport arrangement
9	Warehousing service
10	Customs clearance
11	Service coverage
12	Tariff flexibility
13	Payment flexibility
14	Cargo safety
15	Advance notice of delays
16	Quality of data transmission& Communication
17	Cargo tracking Information
Dimensions	Communication and Information-Variables
18	Response to customer complaint
19	Response to cargo claim
20	Cargo or damage record

Source: Adapted from Williamson et al. (1990)

These 20 multimodal transport services measurement items are identified through the service attributes based on customers’ viewpoint and has been used to develop the questionnaires to collect data on multimodal transport service variable.

The survey questions for the „multimodal transport service variable“ has been developed using the above measurement items and were measured using seven-point Likert scale with the endpoints „strongly disagree“ (=1) and „strongly agree“ (=7).

2.9.2 Unit of measurement for variable LSV

Mentzer, et al. (1997), stated LSV as an important component of customer service, which provides competitive advantage in the marketplace. In order to create value, it is crucial for service providers to match the requirements of customers with his or her capability to provide service. Pioneered by Porter (1985), value can be perceived as the amount of cost that buyers are willing to pay for a firm's 'output' in yielding its competitive advantage. Service, on the other hand, was regarded as an important component of the value chain, which marks the immediate output of primary activities (Porter, 1985;Coyle, et al. 2003).

In an attempt to define the concept of value, Liu (2006) categorized value into three are namely: (i) consumer consumption value, (ii) customer value and (iii) perceived value. Sheth, et al.'s (1991) proposed theory of consumption value, five dimensions are presented in explaining consumer choice behavior, namely: functional, conditional, social, emotional, and epistemic. They have claimed that not all dimensions are always significant with all situations, but the theory could be applied in a wide application of consumption value related research.

Based on the work of Sweeney and Soutar (2001), four dimensions of value were adapted namely: functional (quality and price) value, social value and emotional value. Thus, these measurement items of were adapted according to the central question of this research, the measurement items have been amended to fit the context of multimodal transport as shown in table below.

Table-2: Dimensions and measurement items of logistics service value (LSV)

Dimensions	Measurement Items
	Functional-Variables
1	Services provided by the MTO are reasonably priced.
2	Services provided by the MTO offer value for money.
3	The MTO provides good service for the price.
4	Services provided by the MTO are appropriate, when price and other costs are considered.
5	The MTO delivers superior service compared to other transport companies.
Dimensions	Social-Variables
6	Services provided by the MTO are of a high standard.
7	Services provided by the MTO are consistent.
8	Services provided by the MTO make us feel confident.
9	The MTO has a good working relationship with us.
Dimensions	Emotional-Variables
10	The MTO responds to our service needs promptly.
11	The MTO visits us when needed.
12	The MTO keeps us better informed of new services.

Source: Adapted from Sweeney and Soutar (2001).

Thus these measurement items for the „Logistics service value“ were measured based on Likert seven point scale with the endpoints „strongly disagree“ (=1) and „strongly agree“ (=7) Sweeney and Soutar (2001).

2.9.3 Unit of measurement for Customer Service Relationship Quality

A successful customer service relationship ensures proper input from the beginning to the end and allows stakeholders to use their expertise in any transport journey. Similar to any other type service providers, the cost of losing relationships with the customers will inevitably affect the profitability of the services provided by MTOs(Athanasopoulou, 2009).

The importance of personal interactions or relationships is recognized as an important means of getting satisfied customers (Athanasopoulou, 2009; Crosby, 1990). In today's highly competitive environment, multimodal transport companies have been trying to secure customer loyalty through development of long-term relationships with their customers rather than the traditional 'transactional' relationships. Hence, the development of successful and mutually benefited relationships will allow MTOs to gain loyal customers and to increase profitability.

According to Crosby, et al. (1990), Relationship Quality from the customer's perspectives achieved through the ability of a service provider to reduce perceived uncertainty. Therefore, a high Relationship Quality relies on the service provider's integrity and consistency in providing satisfactory services for customers (Crosby, et al. 1990). In the work of Crosby, et al. (1990), Relationship Quality is viewed as a higher-order construct composed of at least two general dimensions, trust and satisfaction. Trust, commitment / loyalty and satisfaction are the three dimensions, which appear to be commonly used to measure the relationship quality. According to the main objectives of this study, the measurement items have been amended to fit the context of multimodal transport in Ethiopia as shown in table-3 below.

Table-3: Dimensions and measurement items of customer service relationship quality (CSRQ)

Dimensions	Measurement Items
	Trust-variables
1	The MTO can be relied upon their promises.
2	We find it unnecessary to be cautious in dealing with the MTO.
3	The MTO is trustworthy.
4	We do not suspect that the MTO will withhold certain piece of
Loyalty- Variables	
5	We feel we are loyal to the MTO's offerings.
6	The service offered by the MTO is our first choice.
7	Even with more choice, we will not choose other
Service Satisfaction- Variables	
8	The service offered by the MTO always meets our expectation.
9	We are satisfied with our current MTO.
10	The services offered by the MTO always meet the desired level.

Source: Adapted from Crosby, et al. (1990).

The survey questions for the „Customer service relationship quality variable“ have been developed using these measurement items and have been measured using seven-point Likert scale with the endpoints „strongly disagree“ (=1) and „strongly agree“ (=7). The items were adapted from Crosby, et al (1990).

Chapter 3: Methodology

This chapter has been organized to present the methodological aspect of the study in three major parts, the first part discusses the methodology, the second part discusses the sampling methods and the last part discuss about the data collection method.

3.1 Background of the study

The present study has been carried out in the capital city of Ethiopia, Addis Ababa. Geographically, Ethiopia is located at the eastern part of the African continent having an approximate landmass of 1.1 million square kilometers (www.ethiopia.gov.et) and sharing border with six (6) countries namely: North Sudan, South Sudan, Kenya, Somalia, Djibouti and Eritrea. The bordering countries engulf the country in all directions: Sudan and Eritrea on North, Djibouti and Somalia on the East, South Sudan and Sudan on the West and South Sudan, Kenya and Somalia in the South. Ethiopia is home to approximately 96.96 million people, which is one aspect of the future potential market for the growing economy, World Bank (2014); www.worldbank.org.

3.2 Research methodology

In any kind of research the methodological consideration is one of the important aspect of a research that can also help in better understanding of the effects of the multimodal transport system variables (multimodal transport service, logistics service value and customer relationship quality) on the business performance variables (percent profit, percent sales, percent market share, percent return on investment, percent return on asset and percent reduction of cost). This research adopts a positivist paradigm as a research paradigm. Self-administered questionnaires have been developed modifying in line with the research questions and the respective hypotheses have also been established. This self-administered questionnaire has been used to collect the primary data required. A quantitative approach has been employed to analyze quantitative data generated from the self-administered questionnaires with the help of SPSS version 23. Results of the data analyzed has been interpreted in a meaningful manner and reported.

3.3 Research design

As logistics and transport are predominantly a practice-oriented and solution based discipline, research outcomes are methodologically shaped by operations research, focusing on, for example: truck-loads, on-time-in-full deliveries, inventory turnover, and out of stock situations (Aastrup and Halldorsson, 2008). Logistics research is an interdisciplinary subject, which stems from various scientific traditions. With the introduction of terminologies such as ‘value-chain’, logistics has grown out of the physical distribution, transportation and inventory research boundaries and it has welcomed other concepts such as causality of behavior activities and social science researches (Porter, 1985). Therefore, with the emergence of these concepts, the identification of appropriate research design is needed to conceptualize and structuralize the newly evolved disciplines of logistics and transport research (Yin, 2003).

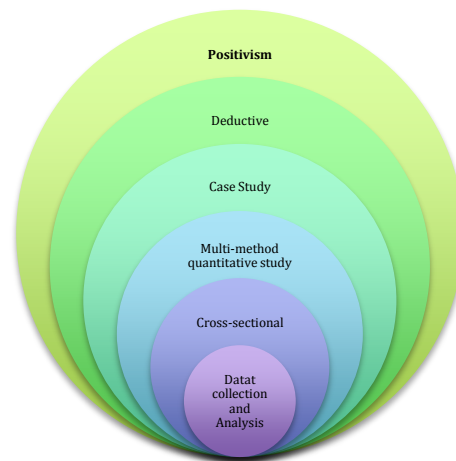
Churchill (1976) compared research design as the architect’s blueprint of the house, which is nothing more than the framework in a research. A choice of research design reflects the decisions regarding the priority being given to a range of dimensions of the research process (Bryman and Bell, 2007). In essence, a research design provides guidance for the collection and analysis of the data in a study, which ensures the relevance of the work to the proposed problem and the employment of economical procedures (Churchill and Iacobucci, 2002). This, of course, influences the choice of methodology, data collection and justifications of research outcomes.

In research, methodology is a body of knowledge that allows a researcher to underpin the research questions through use of various types or evidence that can be gathered (Clark, et al. 1984). According to Avison and Fitzgerald (1995:63), “a methodology is a collection of procedures, techniques, tools and documentation aids... but a methodology is more than merely a collection of these things. It is usually based on some philosophical paradigm; otherwise it is merely a method.

Therefore, in order to identify presuppositions and consequences of the applied procedures, research methodology is important to any study (Miller, 1983). Referring to Naslund (2002), selection of research method should be based on the research

paradigm, or question, due to the fundamental nature of the research processes, which are generally involved with a particular research strategy and method. The following section presents the philosophical position and approach of the research, which highlights the influence of research method selection in this research. Saunders, et al. (2007) portrays the research process as an ‘onion’ where assumptions must be made at each individual stage of research approach.

Figure 2: Research Onion



Source: Adapted from Mark Saunders, Philip Lewis and Adrian Thornhill 2008 page 108

3.4 Research philosophy

A research philosophy is an assumption of how knowledge is developed and analyzed (Saunders, et al. 2007). In this research, the positivism philosophy is adopted.

3.5 Research approach

Taking into account the research philosophy stated above, it is necessary to examine the decisions involved in selecting a proper research approach based on the positivist research paradigm. As stated earlier, positivist researchers focus on explicit testing of theories or hypotheses with actual objects, processing or structures in the real world (Guba and Lincoln, 2005). Therefore, the first decision that is to be made is whether the research should use the deductive approach or the inductive approach (Saunders, et al. 2007).

This study adopts a deductive approach, which seeks to test the causal relationships between multimodal transport services; logistics service value, customer relationship quality and their effects on business performance. Deductive positivism is often

regarded as the predominant research approach in general, which is also true in logistics and transport research (Mentzer and Kahn, 1995; Naslund, 2002; Aastrup and Halldorsson, 2008). Therefore, with the type of the research question, deductive reasoning is used to allow combination of abstractive theories (behavioral and service values in Marketing disciplines) to be operationalizing in the field of Multimodal Transport logistics research. As the researcher adopts a positivistic view, this research focuses on hypothesis testing through adapted conceptual framework.

Given the nature of the research objectives and time constraints, this study employs a cross-sectional design. According to Bryman and Bell (2007), a cross-sectional design is built on the idea of a social survey, which connects in people's mind with questionnaires in regard with two or more variables at a particular time.

3.6 Research method

It is important to stress the purpose of the research, which in some ways governs the use of research methods. Noted by Naslund (2002), in a complex and applied research field such as logistics and transport, a predominant research paradigm resulting in dominant method should not exist. However, according to a review of logistics journal articles conducted by Mentzer and Kahn (1995), in the Journal of Business Logistics (JBL), the dominance of survey methods has indicated that quantitative methods are preferred in logistics research in general. Nevertheless, criticisms can still be found with quantitative methods, especially with surveys. As previously stated, logistics is very much a real-world orientated discipline which are often unstructured and complicated. Therefore, a systematic approach is ideal in presenting the outcome of the research through a structuralized methodology.

3.7 Sampling procedures and techniques

3.7.1 Sampling procedure

In this research work both probability and non-probability sampling method have been employed in order to select the samples. Addis Ababa has been purposively chosen due to the reason that large proportion of importers has been concentrated in the capital city. Import business has been purposively selected as a sample frame in this study due to the fact that import is the dominant business in the trade balance of

Ethiopia and more cargos have been imported than exported so the effect has been more from the import business perspective. The samples frame has been further narrowed purposively to importers who have been large taxpayers base on the Ethiopian customs and revenue authority (ERCA) tax category since this category operate large volume of import cargos. However, the samples have been selected randomly within the sample frame. So non-probability and probability sampling method has been employed to select the final sample.

3.7.2 Sampling techniques

The sample size has been determined quantitatively using Kothari (2004) formula. Accordingly, the sample size in this study has been 60. Out of the total importers, large taxpayers have been chosen using simple random sampling techniques as a respondent to be incorporated into sample.

The 95% confidence level with margin of error of +/-5% is assumed to estimate the sample size. The following formula is employed to determine sample size:

$$n = \frac{Z^2 \cdot p \cdot q \cdot N}{e^2(N - 1) + Z^2 * p * q}$$

Where:

N =Population size=1,005* **source ERCA Large taxpayers annual report*

n = sample size

Z =1.96 for 95% level of confidence

e = 0.05 margin of error

p =population proportion, $q = 1-p$ *Assuming the probability of the sample explaining the true population is 96%. i.e $p=0.96$ and $q=0.04$ will result in a sample size of 60.*

And simple random sampling technique is applied to define the samples. The sample size has been decided to be 85 so that it has duly embraced allowances to account for missing data, on-respondents and unqualified data to reduce the level of error.

3.8 Data collection instrument

Data collection instruments are important in terms of the result of the research; more accurate and relevant data will result in best outcome while otherwise the result will entail significant error. Self-administered questionnaire method has been used in this research work as data collection instrument for the following advantages in terms of

convenience (time, cost and location for both interviewer and interviewee) and as it is less obstructive (absence of interviewer effects) to interviewees (Bryman and Bell, 2007).

Even though self-administered questionnaire is used as an instrument, it is not limitations free and the following are the major limitations: lack of clarification when needed and less opportunity to collect additional data (Maylor and Blackmon, 2005). However, to overcome these barriers it becomes necessary to simplify the questionnaires and consider contingency in combating the non-collectable data and consideration of missing data in advance that has helped in reaching the objective of collecting the required amount of data and to the expected accuracy level. Hence meaningful attention has been given to data collection method as it influences the significance of the type of the questionnaires, the response rate and the data accuracy.

Therefore, a self-administered questionnaire has been the method applied for the primary data collection in this study. And accordingly, a set of questionnaires has been developed, modified and adopted from various literatures in line with the research questions and objectives.

Chapter -4: Data presentation

The main reason for focusing on the data preparation is that data preparation is a crucial consideration to avoid misleading analysis findings. This chapter has been presented in two parts the preliminarily finding of the questionnaire in a descriptive manner. The first part deals with the data preparation that includes the evaluation of the measurement validity and reliability of each variables and construct, and the equality variance assumptions by transforming the raw data into more interpretable information through SPSS 23.0. The second part of this chapter addresses the preliminary result of the survey response rate, respondents' characteristics in terms of company profile and percentages, frequencies of the respondents' profile.

4.1 Data preparation

Screening and preparation of the data is considered as one of the most crucial steps before applying various techniques for the analysis. As the analytical process is time consuming and tedious, careful examination of data prior to performing the analysis would help to derive clear and unambiguous findings. Thus, three specific data preparation issues, namely outliers, missing data and normality have been thoroughly done.

In the data collection due care has been taken to eradicate possible impacts of missing data, based on the returned survey. A total of 85 questionnaires have been distributed to different importers in Addis Ababa with the target of 25 questionnaires as contingency. Of the 85 questionnaires, 75 questionnaires have been returned while 10 of them were not returned. Out of the 75 questionnaires returned 5 questionnaires has been discarded due to irrational inputs, 7 questionnaires have not been completed properly and 3 questionnaires being discarded due to unfamiliarity of the respondent with multimodal transport services. As a result, a total of 25 questionnaires have been discarded and a net of 60 questionnaires have found to be fit for analysis and no missing data is reported.

4.2 Normality

Under the process of data preparation for analysis, the final assumption lies in the assessment of normality of distribution. In this analysis, the distribution of the data has been viewed as the most fundamental assumption in multivariate analysis and thus data have required to be normally distributed. Furthermore, examination of each observed variable for skewness and kurtosis has also been done to test the normality of data. The generally accepted values of skewness and kurtosis in indicating the multivariate normality of the data are between +2.0 to -2.0 and +7.0 to -7.0. However, all items in the present dataset do not have extreme skewness of more than absolute value of 2.0 or kurtosis of more than absolute value of 7.0 respectively (see the annex for the kurtosis and skewness test). Therefore, the overall multivariate normality can be assumed and no further treatments of datasets are needed.

4.3 Scale Reliability

In this section, the result of the reliability measurement has been reported through reliability statistics with Cronbach's alpha. The rule of thumb for Cronbach's alpha is that Cronbach's alpha value of .70 or higher. The higher alpha value indicates more reliability and higher consistency of the measurable items under the same latent construct. Result of the Cronbach's alpha reveals that the constructs MMTS, LSV and CSRQ show alpha values of 0.941 and the overall Cronbach's alpha value of 0.731 which is well above .70 (see table-5). Thus, the observed variable truly reflects the latent construct and amendments are not necessary (See more details in annex-1).

Table-5: Over all Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	No.of Items
.731	.942	64

4.4 Survey Response Rate and Non-response Bias

In the current study, a total of 85 questionnaires have been dispatched including 10% contingency for non-response. The data collection process has been conducted since

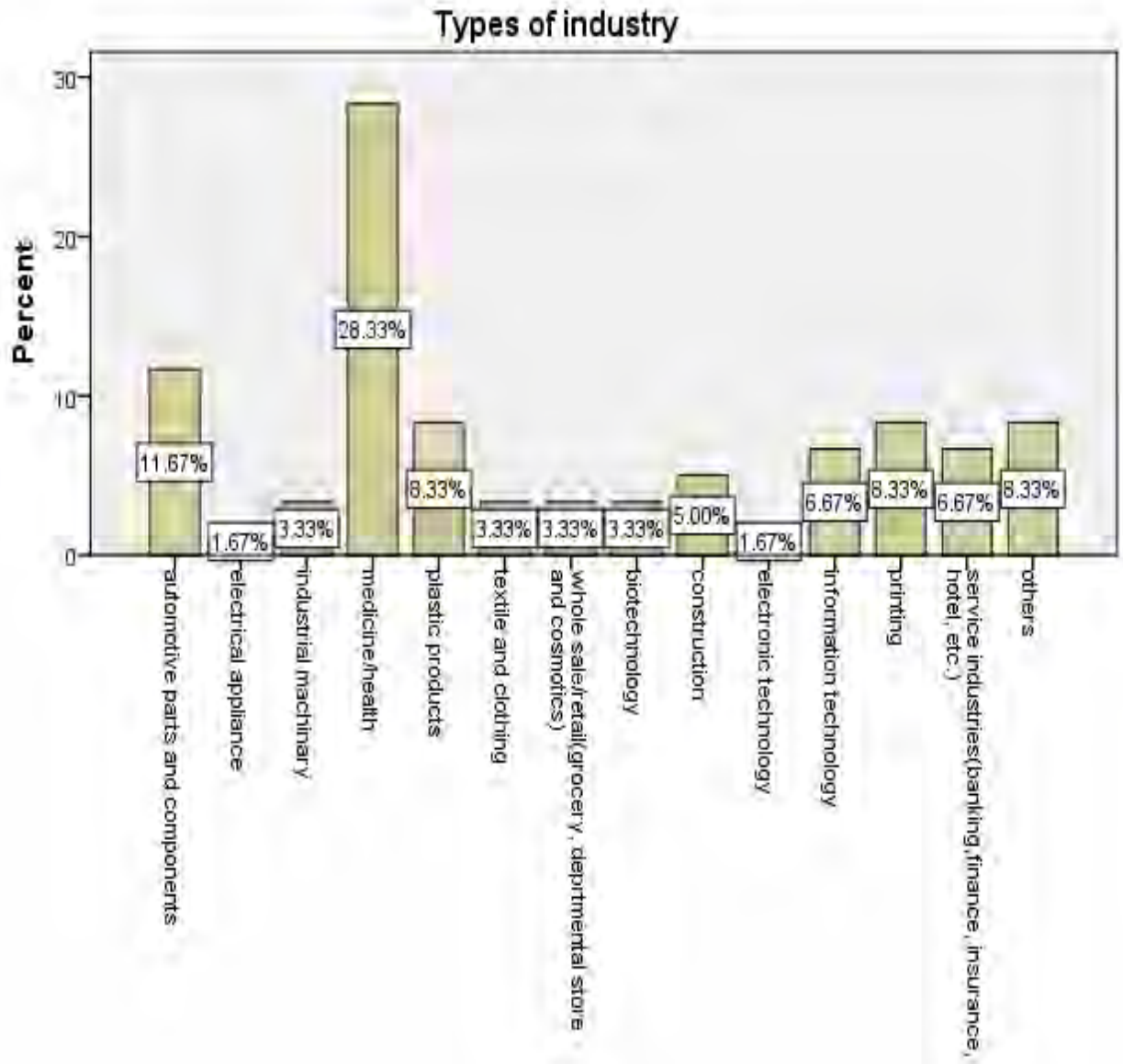
the past 8 weeks from the first week of March 2016 until the first week of May 2016. A total of 75 questionnaires have been received from participant importers (multimodal transport service users), giving a response rate of 88.23 percent of the total distributed samples. However, 15 questionnaires have been discarded leaving 60 questionnaires for analysis (see annex-1). Hence, non-response bias is not a major concern in this study.

In terms of respondent business type, the largest response has been from Medicine/health sector (28.3%) followed by Automotive, parts and components (11.7%), Plastic products (8.3%), Printing (8.3%), Information Technology (6.7%), Service Industries (6.7%), Construction (5%) and others (30%) of the sample size for its dedicated sector. As shown in table-6 below, a total of 18 sectors have responded to the questionnaire.

Table 6: Types of respondent business by industry

	Types of industry	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Automotive parts and components	7	11.7	11.7	11.7
	Electrical appliance	1	1.7	1.7	13.3
	Industrial machinery	2	3.3	3.3	16.7
	Medicine/health	17	28.3	28.3	45
	Plastic products	5	8.3	8.3	53.3
	Textile and clothing	2	3.3	3.3	56.7
	Whole sale/retail (grocery, departmental store and cosmetics)	2	3.3	3.3	60
	Biotechnology	2	3.3	3.3	63.3
	Construction	3	5	5	68.3
	Electronic technology	1	1.7	1.7	70
	Information technology	4	6.7	6.7	76.7
	Printing	5	8.3	8.3	85
	Service industries (banking, finance, insurance, hotel, etc.)	4	6.7	6.7	91.7
	Others	5	8.3	8.3	100
	Total	60	100	100	

Figure 2:Types of respondent business by industry



4.5 Characteristics of Respondents

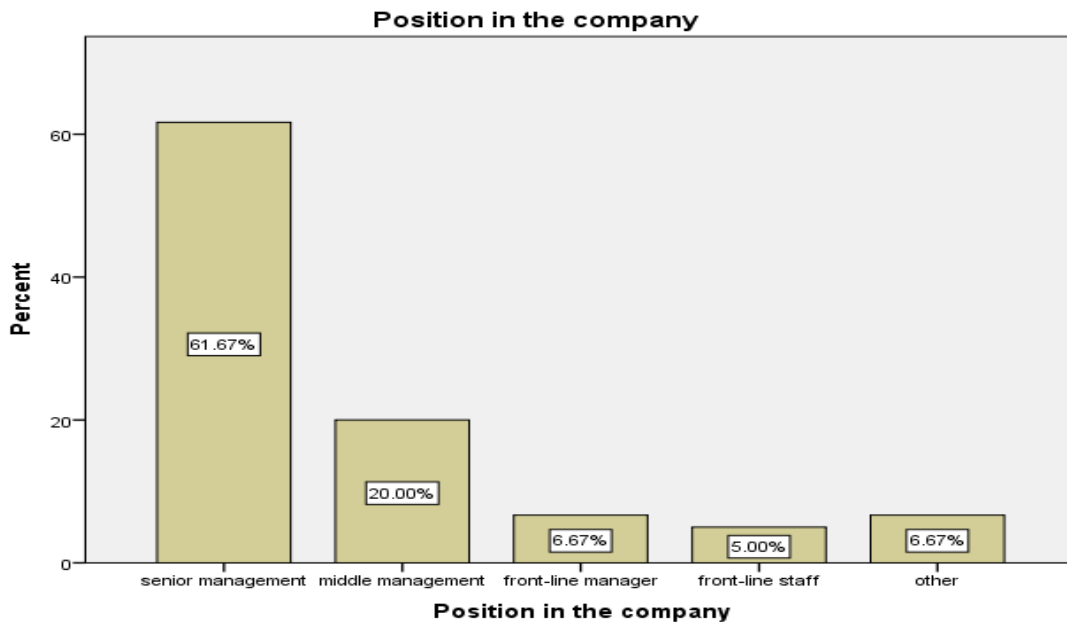
The profile of respondents' firms and their characteristics are displayed in table-9. A total of 75 respondents had responded to the question regarding his or her position in the company, whereas 15 respondents refused to answer this question. According to the questionnaire survey, 61.7 percent of the respondents were senior managers or above, 20 percent were middle managers, 6.7 percent were front line managers, 5 percent were Front line staffs, and 6.7 percent were others finance and logistics

division representatives. More than 81.7 percent of the response comes from managers or above which indicates the reliability and the quality of the response.

Table 9: Types of respondent business by industry

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Senior management	37	61.7	61.7	61.7
Middle management	12	20.0	20.0	81.7
Front-line manager	4	6.7	6.7	88.3
Front-line staff	3	5.0	5.0	93.3
Other	4	6.7	6.7	100.0
Total	60	100.0	100.0	

Figure 7: Bar Chart depicting respondent position in the company



4.6 Respondent in terms of business experience

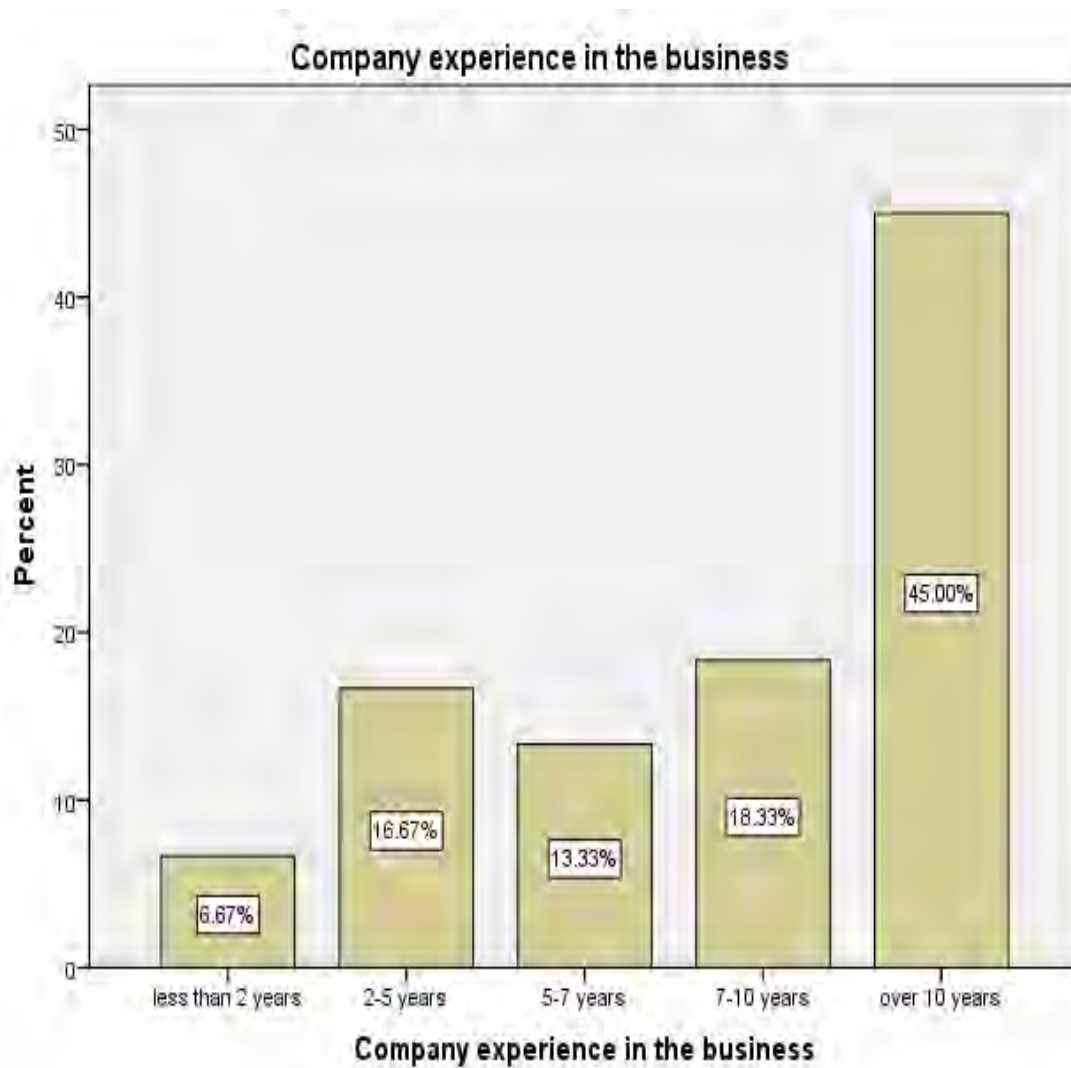
In, the majority of the respondents were from experienced firms 45% were experienced over 10 years (45%), 18.33% were experienced from 7-10 years, 13.33% were having experience of 5-7 years, 16.67% were having experience of 2-5 years and 6.67% were experienced below 2 years. In general 76.66% of the respondent firms were experienced more than 5 years. This shows the level of experience and reputation that the firm has in the market place, as well as the quality of the

responses. Table-10 shows the respondents statistical profile in terms of business experience.

Table 10: Respondents business experience

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Less than 2 years	4	6.7	6.7	6.7
2-5 years	10	16.7	16.7	23.3
5-7 years	8	13.3	13.3	36.7
7-10 years	11	18.3	18.3	55.0
Over 10 years	27	45.0	45.0	100.0
Total	60	100.0	100.0	

Figure 8: Respondents profile in terms of business experience



Chapter-5: Analysis, Result and Discussion

5.1 Data Analysis

The main concern of this chapter is to analyze the data to understand relationships between Multimodal Transport Service (MMTS), Logistics Service Value (LSV), Customer Service Relationship Quality (CSRQ), and Customer Satisfaction (CS) in line with the research objective using the SPSS version 23 software packages.

The analyses part has been divided into two parts. The first part of the analysis presents the descriptive statistics and inferential statistics to describe the data and testing of each proposed hypotheses respectively. Once all the hypotheses have been examined, the last part proceeds to detailed discussions on the findings on each hypothesis with possible explanations and recommendations.

5.2 Descriptive Analysis of Constructs

The previous part of this chapter has presented the characteristics of the responding firms and the respondents. It has been found that most of the respondents are highly positioned in well-established firms. The following part focuses on the pattern of the responses given to the items measurement developed in conceptual model. All the measurement items were measured in a seven-point Likert-type scale format ranging from “1 = Strongly Disagree to 7 = Strongly Agree”. The measurement items are presented under four distinct groups of constructs, namely: Multimodal Transport Service (MMTS), Logistics Service Value (SLV), Customer Service Relationship Quality (CSRQ), and Customer Satisfaction (CS).

5.3 Descriptive Analysis of Multimodal Transport Service (MMTS)

The measurement of multimodal transport service (MMTS) comprises 20 items. The findings are presented in annex-2. The respondents have been asked to indicate the level of their satisfaction of services (1 = Strongly Disagree to 7 = Strongly Agree)

provided by their current MTO. The results show that 91% of the respondents have believed that their current MTO provides accurate documentation with a standard deviation of $SD = 1.166$, 66.7 % of the respondents have been satisfied with the transit time provided by their current MTO with standard deviation of $SD = 1.457$, 60.1 % of the respondents believe that their current MTO offers reliable schedules with standard deviation of 1.46, 50% of the respondents have been satisfied with their current MTO's special cargo handling capability with standard deviation of $SD = 1.54$, 60% of the respondents have been dissatisfied with the availability of booking space capability of their current MTO with standard deviation of $SD = 1.398$, 60 % of the respondents have been dissatisfied with the frequency of schedule offered by their current MTO with a standard deviation of $SD = 1.522$.

While 73% of the respondents are satisfied with the arrangement of inland transport service offered by their current MTO with standard deviation of $SD = 1.483$, 68.3% of the respondents believe that their current MTO offers satisfactory warehousing services with standard deviation of $SD = 1.830$, 53.4% of the respondents have been satisfied with their current MTO's customs clearance capability with standard deviation of $SD = 1.441$, 53.3% of the respondents have been dissatisfied with the current MTO service coverage for their logistics and transport needs with standard deviation of $SD = 1.743$, 70% of the respondents are dissatisfied with their current MTO's level of tariff flexibility with standard deviation of $SD = 1.754$, 71.7 % of the respondents have been dissatisfied with their current MTO's flexibility of payment capability with standard deviation of $SD = 1.463$.

With respect to facilities 65% of the respondents have been satisfied with their current MTO's safe handling of their cargoes with standard deviation of $SD = 1.750$, 56.6 % of the respondents have been dissatisfied with the advance notice of delay service capability of their current MTO with standard deviation of $SD = 1.745$, 61.7% of the respondents have been dissatisfied with their current MTO's quality of data transmission with standard deviation of $SD = 1.672$, 60% of the respondents are dissatisfied with their current MTO's cargo tracking capability with standard deviation of $SD = 1.568$, 63.3% of the respondents feel dissatisfied with their MTO's response to customer compliant with standard deviation of $SD = 1.467$, 68.3% of the respondents have felt dissatisfied with their current MTO's response to cargo claims

with standard deviation of $SD = 1.467$, 75% of the respondent feel dissatisfied with their current MTO's capacity of cargo loss or damage records with standard deviation of $SD = 1.369$, 68.3% of the respondent are dissatisfied with their current MTO's capacity in understanding customers need with standard deviation of $SD = 1.513$.

Over all out of the 20 the multimodal transport services the importers respond on 12 items that they are dissatisfied on the level of their current MTO's service. While they remain neutral on 1 item and they are satisfied on the reaming 7 measurement items. However, the standard deviation (SD) of their satisfaction with the service is reasonably high, indicating varying levels of satisfaction from person-to-person.

5.4 Descriptive Analysis of Logistics Service Value

The measurement of Logistics Service Value (LSV) comprises 12 measurement items and the findings have been presented in Annex-3. Respondents have been asked to indicate the extent to which he or she agrees or disagrees with logistics service value provided by their current MTO (1 = Strongly Disagree to 7 = Strongly Agree). The results show that 56.3% of the respondents have felt that the services provided by their current MTO are not reasonably priced (LSV1: $SD = 1.558$), 51.7% of the respondents feel that the services provided by their current MTO offer value for money (LSV2: $SD = 1.586$), 51.7% of the respondents think that their current MTO provides good service for the price (LSV3: $SD = 1.548$), 50 % of the respondents think that the services provided by their current MTO are appropriate, when price and other costs are considered (LSV4: mean = 4.63, $SD = 1.665$), 53.3% of the respondents do not feel that their current MTO delivers superior service compared with other transport companies (LSV5: $SD = 1.774$), 58.4% of the respondents do not think that the services provided by their current MTO are of a high standard (LSV6: $SD = 1.585$), 51.7% of the respondents do not think that the services provided by their current MTO are consistent (LSV7: $SD = 1.574$), 63.4% of the respondents think that the service provided by their current MTO makes them feel confident (LSV8: $SD = 1.495$), 61.7% of the respondents feel that their current MTO has a good working relationship with them (LSV9: $SD = 1.407$), 55% of the respondents feel that that their current MTO responds to their service needs promptly (LSV 10: $SD = 1.547$), 75.1% of the respondents disagree that their current MTO will visit them when

needed (LSV 11: SD = 1.605), 76.6% of the respondents do not think that their current MTO keeps them better informed of new services (LSV12: SD = 1.547).

The overall results of the logistics service value indicate that the importers have been relatively dissatisfied with the values of service provided by the MTO. In general they have disagreed on 7 measurement items out of the 12 logistics service value measurement items. They have remained indifferent to 1 item and they have agreed only on 4 items.

5.5 Descriptive Analysis of Customer Service Relationship Quality (CSRQ)

In the current research, the measurement of Customer Service Relationship Quality (CSRQ) comprises 10 items. The findings are presented in annex-4. The respondents were asked to indicate their company's performance in relative to their major industry competitor (1 = strongly disagree to 7 = strongly agree). The results show that 65 percent of the respondents agrees that their current MTO keeps its promises (CSRQ1: SD = 1.266), 63.4% of the respondents find it necessary to be cautious in dealing with their current MTO (CSRQ2: SD = 1.467), 63.3% of the respondents think that their current MTO is trustworthy (CSRQ3: SD = 1.403), 66.7% of the respondents do not suspect that their current MTO will withhold certain pieces of critical information from them (CSRQ5: SD = 1.558), 81% of the respondents feel that they are loyal to their current MTO's offerings (CSRQ4: SD = 1.224).

Whereas 51.6% of the respondents do believe that the service offered by their current MTO is their first choice (CSRQ6: SD = 1.676), 58.3% of the respondents do not think that even with more choice, they will not choose other service providers (CSRQ7: SD = 1.774), 68.3% of the respondents do not believe that the service offered by their current MTO always meets their expectation (CSRQ8: SD = 1.346), 51.7% of the respondents are dissatisfied with their current MTO (CSRQ9: SD = 1.388), 58.3% of the respondents do not believe that the service offered by the MTO always meet their desired level (CSRQ10: SD = 1.478).

The descriptive findings of CSRQ showed that the importers have been indifferent to the customer service relationship quality. They have responded their agreement on 5 measurement items and disagreed on 5 remaining measurement items. However, there was significant variation in responses, as indicated by the magnitude of each

individual response.

Chapter-6: Conclusions and Recommendations

6.1 Conclusion

From this empirical analysis, it can be concluded that the aggregate effect of multimodal transport service on various business performance indicators has been found statistically insignificant. Hence, the effect on net profit, return on investment (ROI), Market share and sales growth is exclusively negative though it is statistically insignificant.

The effect is similar when it comes to the construct logistics service value. That is, the effect of logistics service value on net profit, return on investment (ROI), market share and sales growth is also found to be negative and it is statistically insignificant. Similarly the effect of Customer Service Relationship quality (CSRQ) on net profit, and market share is negative and at the same time it is not statistically significant.

Generally, the effect of MMTS, LSV, and CSRQ in terms of contributing and improving business performance have been found to be ineffective and inefficient from the Ethiopian importers perspective, which contradicts the theories in the literature review.

Besides, the null –hypotheses for all the covariates are found to be statistically insignificant and hence the Ho are failed to reject except for the variable percent cost reduction and MMTS for which there is correlation between them as its p-value is less than 5%.

6.2 Recommendations:

As part of recommendation all stakeholders has to be committed in improving multimodal transport services, logistics service values and customer service relations quality in order to have positive effect on customer satisfaction in terms of the following key aspects. One of the major area of intervention as per this study is that the need to have better cargo handling equipment, sufficient booking space, frequent cargo scheduling, efficient service coverage, flexible payment mode and quality

information system. Moreover, the MTO should notify delays in advance, understand customers need proper cargo loss and damage records and claim procedures.

Furthermore, the MTO should provide consistent, standardized and dependable services that would help meet customers need and expectations. In order to increase customer's satisfaction, the efficiency and effectiveness of multimodal transport services, logistics service value and customer service relationship quality has to be further improved and standardized in order to meet the demand of business so that their contribution to GDP and the overall economy would be highly significant.

Besides, there should be harmonized relationship among importers, multimodal transport operators, customs authority and banks to smooth the flow of improved goods for domestic use until the capacity of domestic industry and firms to substitute imported cargos and services are enhanced.

Since the present study is at micro level, it can be suggested that further study has to be carried out at macro /national level to comprehend the effect of multimodal transport system on customers satisfaction in Ethiopia to come up with a consolidated and representative policy measures that can comprehensively improve the effect positively.

References

1. *African Union website <http://www.au.org>, July 8, 2015, Addis Ababa, Ethiopia*
2. *Ethiopian government website <http://www.ethiopia.gov.et>, July 8, 2015, Addis Ababa, Ethiopia.*
3. *World Bank website on countries, Ethiopia Data, 2014: <http://www.worldbank.org>, July 8, 2015, Addis Ababa, Ethiopia.*
4. *World bank Ethiopia Economic Update issued July 8, 2015, Addis Ababa:<http://www.woldbank.org>*
5. *Rondinelli, D. and Berry, M. (2000), Multimodal transportation, logistics, and the environment: Managing interactions in a global economy, *European Management Journal*, Vol. 18, No. 4, pp.398-410.*
6. *UNCTAD, (1981), United Nations Conference on a Convention on International Multimodal Transport, UNCTAD, TD/MT/CONF/17, New York.*
7. *UNCTAD, (2007), Handbook of Statistics 2006-07, TD/STAT.31, United Nations.*
8. *UNCTAD, (2010), Handbook of Statistics 2009, TD/STAT.34, United Nations.*
9. *Islam, D.M.Z., Dinwoodie, J. and Roe, M. (2005), Towards supply chain integration through multimodal transport in developing economies: *The case of Bangladesh, Maritime Economics and Logistics*, No. 7, pp. 382-399*
10. *Whitehurst, C.H.Jr, (2005), Multimodal transportation companies in the 21st century, *The Strom Thurmond Institute. Clemson University, Clemson, South Carolina.**
11. *Hesse, M. and Rodrigue, J.P. (2006), Global production networks and the role of logistics and transportation, *Growth and Change*, Vol. 37, No.4, pp. 499-509.*
12. *Banomyong, R. (2000), Multimodal transport in South East Asia: a case study approach. PhD Thesis, Department of Maritime Studies and International Transport, Cardiff University.*
13. *Schijndel, W.J. and Dinwoodie, J. (2000), Congestion and multimodal transport: a survey of cargo transport operators in the Netherlands, *Transport Policy*, No. 7, pp.231-241.*

14. Gibson, B.J., Rutner, S.M. and Keller, S.B. (2002), Shipper-carrier partnership issues, ranking and satisfaction, *International Journal of Physical Distribution & Logistic Management*, Vol.32, No.8, pp.669-681.
15. Crosby, L.A., Evans, K.R. and Cowles, D. (1990), Relationship quality in service selling: *An interpersonal influence perspective*, *Journal of Marketing*, Vol. 54, pp. 68-81.
16. Athanasopoulou, P. (2009), *Commentary: Relationship quality: a critical literature review and research agenda*, *European Journal of Marketing*, Vol. 43, No. 5/6, pp. 583-610.
17. Liu, A. H. (2006), Customer value and switching cost in business services: Developing exit barriers through strategic value management, *Journal of Business and Industrial Management*, Vol. 21, No. 1, pp. 30-37.
18. Charuka, Blessing, "Unlocking the landlocked: appraising the economic viability of dry ports for Zimbabwe" (2014). *World Maritime University Dissertations. Paper 458*.
19. Jean-François Arvis, Jean-François Marteau, and Gaël Raballand(2010), *The cost of being landlocked: Logistics, Costs, and Supply Chain Reliability;*
20. *IFM country report 14/304, October 2014*
21. UNCTAD, (1981), *United Nations Conference on a Convention on International Multimodal Transport*, UNCTAD, TD/MT/CONF/17, New York.
22. UNCTAD, (1993), *Containerization and Standards*, UNCTAD, Geneva, UNCTAD/SDD/MT/4.
23. UNCTAD, (1995), *Multimodal Transport Handbook*, UNCTAD, Geneva.
24. UNCTAD, (1999), *Institutional and Technological Changes in Transport/ Logistics Field*, Report by the UNCTAD Secretariat, UNCTAD/SDTE/TIB/3.
25. *Ethiopian Multimodal Transport Directive, 2012*
26. Woxenius, J. (1998), *Development of Small-Scale Intermodal Freight Transportation in a System Context*, *Unpublished PhD Dissertation*, *Chalmer University of Technology*, Goteborg, Sweden.
27. Faust, P. (1985), "Multimodal transport" in Beth, H.L. (Ed.), *Port Management Textbook - Containerization*, Bremen: *Institute of Shipping Economics and Logistics*, Borsenh of A, Am Dom, pp.219-232.

28. Muller, G. (1995), *Intermodal Freight Transportation, (3rd Ed.)*, Lansdowne, VA: *Eno Transportation Foundation and Intermodal Association of North America*.
29. Hayuth, Y. (1987), *Intermodally: Concept and Practice*, *Lloyd's of London Press, London*.
30. Campisi, D. and Gastaldi, M. (1996), Environmental protection, economic efficiency and intermodal competition in freight transport, *Transportation Research Part C, Vol. 4*, pp. 391-406.
31. Banomyong, R. (2000), *Multimodal transport in South East Asia: a case study approach. PhD Thesis, Department of Maritime Studies and International Transport, Cardiff University*.
32. SLA. (2008), *Multimodal Transport: the practitioner's definitive guide /Singapore Logistics association with Cheong Yun Wan in Consultation with Stanley Lim and Thomas Sim, SNP International Publishing. Singapore*.
33. Bontekoning, Y.M., Macharis, C. and Trip, J.J. (2004), Is a new applied transportation research field emerging? - *A review of intermodal rail-truck freight transport literature. Transportation Research Part A, No. 38*, pp. 1-34.
34. Lowe, D. (2006), *Intermodal Freight Transport. Elsevier Limited, USA*.
35. UNCTAD, (2003), *Development of Multimodal Transport and Logistics Services, UNCTAD, Geneva, TD/B/COM.3/EM.20/2*.
36. Coyle, J.J, Bardi, E.J. & Langley Jr, C.J. (2003), *Logistics relationships and third-party logistics. The Management of Business Logistics: A Supply Chain Perspective (7l Ed.)*, Thomson South-Western.
37. Kent, J.L.Jr. and Flint, D.J. (1997), Perspectives on the evolution of logistics thought, *Journal of Business Logistics, Vol. 18, No. 2*, pp. 15-29.
38. Lambert, D.M., Knemeyer, A.M. and Gardner, J.T. (2004), Supply chain partnerships: Model validation and implementation, *Journal of Business Logistics, Vol. 25, No. 2*, pp.21-42.
39. Neely, A., Gregory, M. and Platts, K. (2005), *Performance measurement system design: A literature review and research agenda, International Journal of Operation and Production Management, Vol. 25, No. 12*, pp. 1228-1263.
40. Mentzer, J.T. and Konrad, B.P. (1991), An efficiency/effectiveness approach to logistics performance analysis, *Journal of Business Logistics, Vol. 12, No.1*, pp. 33-61.

41. Hudson, M., Smart, A. and Bourne, M. (2001), Theory and practice in SME performance measurement systems, *International Journal of Operations and Production Management*, Vol. 21, No. 8, pp. 1096-1115.
42. Bourne, M., Neely, A., Platts, K. and Mills, J. (2002), The success and failure of performance measurement initiatives: Perceptions of participating managers, *International Journal of Operations and Production Management*, Vol. 22, No. 11, pp.1288-1310.
43. Lai, K.H., Ngai, E.W.T. and Cheng, T.C.E. (2002), Measures for evaluating supply chain performance in transport logistics, *Transportation Research Part E*, Vol. 38, pp.439-456
44. Narasimhan, R. and Kim, S.W. (2002), Effect of supply chain integration on the relation between diversification and performance: *evidence from Japanese and Koreanfirms*, *Journal of Operations Management*, Vol. 20, pp. 303-323.
45. Flynn, B.B., Huo, B. and Zhao, X. (2010), The impact of supply chain integration on performance: *A contingency and configuration approach*, *Journal of Operation Management*. Vol. 28, pp. 58-71.
46. Aastrup, J. and Halldorsson, A. (2008), Epistemological role of case studies in logistics: A critical realist perspective, *International Journal o f Physical Distribution & Logistics Management*, Vol. 38, No. 10, pp. 746-763.
47. Porter, M.E. (1985), *Competitive Advantage*, *The Free Press*.
48. Yin, R.K. (2003), *Applications of Case Study Research*, (2nd Ed.), *Applied Social Research Methods Series, Volume 43*, Sage Publication. USA.
49. Churchill, G.A. (1976), *Marketing research: Methodological foundation*, Illinois: *The Epyrden Press*.
50. Bryman, A. and Bell, E. (2007), *Business Research Method*, (2nd Ed.), Oxford: *Oxford University Press*.
51. Churchill, G.A. and Iacobucci, D. (2002), *Marketing research: Methodological foundation*, (8 Ed.), Orlando: *Harcourt College Publishers*.
52. Clark, D., Lotto, L. and Astuto, T. (1984), Effective schooling and school improvement: A comparative analysis of two lines to inquiry, *Educational Administration Quarterly*, Vol. 20, pp. 41-68.
53. Avison, D.E. and Fitzgerald. G. (1995), *Information systems development: methodologies, techniques and tools*. London: *McGraw-Hill*.

54. Miller, D. (1983), *Handbook of Research Design and Social Measurement*, (4th Ed.), London: Longman.
55. Naslund, D. (2002), Logistics need qualitative research-especially action research, *International Journal of Physical Distribution & Logistics Management*, Vol. 32, No. 5, pp. 321-338.
56. Saunders, M., Lewis, P. and Thornhill, A. (2007), *Research Methods for Business Students*, 4th Ed., London: Prentice Hall.
57. Guba, E. & Lincoln, Y.S. (2005), Paradigmatic Controversies, Contradictions, and Emerging Confluences. In: Denzin, N.K. and Lincoln, Y.S. (Eds.), *Handbook of qualitative research*. (3rd Ed.), Thousand Oaks: Sage. pp. 191-215.
58. Mentzer, J.T. and Kahn, K.B. (1995), A framework of logistics research, *Journal of Business Logistics*, Vol. 16, No.1, pp. 231-250.
59. Maylor, H. and Blackmon, K. (2005), *Researching Business and Management*, Palgrave Macmillan: NY.
60. Sweeney, J.C. and Soutar, G.N. (2001), Consumer perceived value: The development of a multiple item scale. *Journal of Retailing*. No. 77, pp. 203-220.
61. Williamson, K., Spitzer, D.M. and Bloomberg, D.J. (1990), Modern logistics systems: theory and practice, *Journal of Business Logistics*, Vol. 11, No. 2, pp. 65-68.
62. Mentzer, J.T., Flint, D.J. and Hult, G.T.M. (2001), Logistics service quality as a segment-customized process, *Journal of Marketing*, Vol. 65, pp. 82-104.

Annexure

Annex-1-Respondents profile descriptive statistics analysis

		Types of industry	Types of company	Total company employees(par-time+ full-time)	Company experience in the business	Value of company assets(in million birr)
N	Valid	60	60	60	60	60
	Missing	0	0	0	0	0

Statistics

		Value of company annual total import(in million birr)	Position in the company
N	Valid	60	60
	Missing	0	0

Frequency Table

Types of industry

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Automotive	7	11.7	11.7	11.7
	Electrical appliance	1	1.7	1.7	13.3
	Industrial machinery	2	3.3	3.3	16.7
	Medicine/health	17	28.3	28.3	45.0
	Plastic products	5	8.3	8.3	53.3
	Textile and clothing	2	3.3	3.3	56.7
	Whole sale/retail	2	3.3	3.3	60.0
	Biotechnology	2	3.3	3.3	63.3
	Construction	3	5.0	5.0	68.3
	Electronic technology	1	1.7	1.7	70.0
	Information technology	4	6.7	6.7	76.7
	Printing	5	8.3	8.3	85.0
	Service industries	4	6.7	6.7	91.7
	Others	5	8.3	8.3	100.0
	Total	60	100.0	100.0	

Types of company

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Limited company	28	46.7	46.7	46.7
Share company	13	21.7	21.7	68.3
Partnership	2	3.3	3.3	71.7
Joint venture	3	5.0	5.0	76.7
Sole proprietorship	13	21.7	21.7	98.3
Others	1	1.7	1.7	100.0
Total	60	100.0	100.0	

Total company employees(par-time+ full-time)

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Less than 50	31	51.7	51.7	51.7
50-99	4	6.7	6.7	58.3
100-199	4	6.7	6.7	65.0
200-499	7	11.7	11.7	76.7
1000 or more	14	23.3	23.3	100.0
Total	60	100.0	100.0	

Company experience in the business

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Less than 2 years	4	6.7	6.7	6.7
2-5 years	10	16.7	16.7	23.3
5-7 years	8	13.3	13.3	36.7
7-10 years	11	18.3	18.3	55.0
Over 10 years	27	45.0	45.0	100.0
Total	60	100.0	100.0	

Value of company assets (in million birr)

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Less than 15	19	31.7	31.7	31.7
15-29	13	21.7	21.7	53.3
30-49	3	5.0	5.0	58.3
50-99	4	6.7	6.7	65.0
100 or above	21	35.0	35.0	100.0
Total	60	100.0	100.0	

Value of company annual total import (in million birr)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than 5	11	18.3	18.3	18.3
	5-9	8	13.3	13.3	31.7
	10-19	9	15.0	15.0	46.7
	20-49	11	18.3	18.3	65.0
	50-99	8	13.3	13.3	78.3
	Over 100	13	21.7	21.7	100.0
	Total	60	100.0	100.0	

Position in the company

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Senior management	37	61.7	61.7	61.7
	Middle management	12	20.0	20.0	81.7
	Front-line manager	4	6.7	6.7	88.3
	Front-line staff	3	5.0	5.0	93.3
	Other	4	6.7	6.7	100.0
	Total	60	100.0	100.0	

Annex-2 Descriptive statistics analysis of MMTS

FREQUENCIES VARIABLES=MMTS1 MMTS2 MMTS3 MMTS4 MMTS5 MMTS6
MMTS7 MMTS8 MMTS9 MMTS10 MMTS11 MMTS12MMTS13 MMTS14 MMTS15
MMTS16 MMTS17 MMTS18 MMTS19 MMTS20/ORDER=ANALYSIS.

Statistics

Note

	Has accurate documentation	Has efficient transit time	Has reliable schedule	Has special cargo handling equipment	Regular availability of booking space
N Valid	60	60	60	60	60
Missing	0	0	0	0	0

	Has frequent schedule	Provision of inland transport arrangement	Provision of warehousing service	Provision of dependable customs clearance	Has effective service coverage
N Valid	60	60	60	60	60
Missing	0	0	0	0	0

	Has flexible tariff	Has flexible payment mode	Has cargo safety	Notifying delays in advance	Has quality information system
N Valid	60	60	60	60	60
Missing	0	0	0	0	0

	Has efficient and reliable cargo tracking system	Provision of timely response to customer complaint	Provision of timely response to cargo claims	Has cargo loss or damage records	Understanding customers need
N Valid	60	60	60	60	60
Missing	0	0	0	0	0

Frequency Table

Has accurate documentation

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly disagree	1	1.7	1.7	1.7
Disagree	1	1.7	1.7	3.3
Moderately disagree	3	5.0	5.0	8.3
Moderately agree	27	45.0	45.0	53.3
Agree	20	33.3	33.3	86.7
Strongly agree	8	13.3	13.3	100.0
Total	60	100.0	100.0	

Has efficient transit time

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly disagree	1	1.7	1.7	1.7
Disagree	2	3.3	3.3	5.0
Moderately disagree	17	28.3	28.3	33.3
Moderately agree	19	31.7	31.7	65.0
Agree	18	30.0	30.0	95.0
Strongly agree	3	5.0	5.0	100.0
Total	60	100.0	100.0	

Has reliable schedule

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly disagree	1	1.7	1.7	1.7
Disagree	4	6.7	6.7	8.3
Moderately disagree	19	31.7	31.7	40.0
Moderately agree	19	31.7	31.7	71.7
Agree	16	26.7	26.7	98.3
Strongly agree	1	1.7	1.7	100.0
Total	60	100.0	100.0	

Has special cargo handling equipment

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly disagree	1	1.7	1.7	1.7
Disagree	4	6.7	6.7	8.3
Moderately disagree	25	41.7	41.7	50.0
Moderately agree	14	23.3	23.3	73.3
Agree	13	21.7	21.7	95.0
Strongly agree	3	5.0	5.0	100.0
Total	60	100.0	100.0	

Regular availability of booking space

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly disagree	3	5.0	5.0	5.0
Disagree	3	5.0	5.0	10.0
Moderately disagree	31	51.7	51.7	61.7
Moderately agree	16	26.7	26.7	88.3
Agree	6	10.0	10.0	98.3
Strongly agree	1	1.7	1.7	100.0
Total	60	100.0	100.0	

Has frequent schedule

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly disagree	1	1.7	1.7	1.7
Disagree	6	10.0	10.0	11.7
Moderately disagree	29	48.3	48.3	60.0
Moderately agree	12	20.0	20.0	80.0
Agree	9	15.0	15.0	95.0
Strongly agree	3	5.0	5.0	100.0
Total	60	100.0	100.0	

Provision of inland transport arrangement

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly disagree	1	1.7	1.7	1.7
Disagree	3	5.0	5.0	6.7
Moderately disagree	12	20.0	20.0	26.7
Moderately agree	14	23.3	23.3	50.0
Agree	27	45.0	45.0	95.0
Strongly agree	3	5.0	5.0	100.0
Total	60	100.0	100.0	

Provision of warehousing service

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly disagree	3	5.0	5.0	5.0
Disagree	6	10.0	10.0	15.0
Moderately disagree	10	16.7	16.7	31.7
Moderately agree	8	13.3	13.3	45.0
Agree	25	41.7	41.7	86.7
Strongly agree	8	13.3	13.3	100.0
Total	60	100.0	100.0	

Provision of dependable customs clearance

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly disagree	1	1.7	1.7	1.7
Disagree	7	11.7	11.7	13.3
Moderately disagree	20	33.3	33.3	46.7
Moderately agree	13	21.7	21.7	68.3
Agree	16	26.7	26.7	95.0
Strongly agree	3	5.0	5.0	100.0
Total	60	100.0	100.0	

Has effective service coverage

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly disagree	1	1.7	1.7	1.7
Disagree	3	5.0	5.0	6.7
Moderately disagree	28	46.7	46.7	53.3
Moderately agree	16	26.7	26.7	80.0
Agree	10	16.7	16.7	96.7
Strongly agree	2	3.3	3.3	100.0
Total	60	100.0	100.0	

Has flexible tariff

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly disagree	6	10.0	10.0	10.0
Disagree	22	36.7	36.7	46.7
Moderately disagree	14	23.3	23.3	70.0
Moderately agree	5	8.3	8.3	78.3
Agree	13	21.7	21.7	100.0
Total	60	100.0	100.0	

Has flexible payment mode

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly disagree	7	11.7	11.7	11.7
Disagree	21	35.0	35.0	46.7
Moderately disagree	15	25.0	25.0	71.7
Moderately agree	5	8.3	8.3	80.0
Agree	11	18.3	18.3	98.3
Strongly agree	1	1.7	1.7	100.0
Total	60	100.0	100.0	

Has cargo safety

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	1	1.7	1.7	1.7
	Moderately disagree	20	33.3	33.3	35.0
	Moderately agree	9	15.0	15.0	50.0
	Agree	27	45.0	45.0	95.0
	Strongly agree	3	5.0	5.0	100.0
	Total	60	100.0	100.0	

Notifying delays in advance

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	5	8.3	8.3	8.3
	Disagree	11	18.3	18.3	26.7
	Moderately disagree	18	30.0	30.0	56.7
	Moderately agree	14	23.3	23.3	80.0
	Agree	9	15.0	15.0	95.0
	Strongly agree	3	5.0	5.0	100.0
	Total	60	100.0	100.0	

Has quality information system

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	2	3.3	3.3	3.3
	Disagree	13	21.7	21.7	25.0
	Moderately disagree	22	36.7	36.7	61.7
	Moderately agree	9	15.0	15.0	76.7
	Agree	9	15.0	15.0	91.7
	Strongly agree	5	8.3	8.3	100.0
	Total	60	100.0	100.0	

Has efficient and reliable cargo tracking system

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	3	5.0	5.0	5.0
	Disagree	9	15.0	15.0	20.0
	Moderately disagree	24	40.0	40.0	60.0
	Moderately agree	12	20.0	20.0	80.0
	Agree	8	13.3	13.3	93.3
	Strongly agree	4	6.7	6.7	100.0
	Total	60	100.0	100.0	

Provision of timely response to customer complaint

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	5	8.3	8.3	8.3
	Disagree	11	18.3	18.3	26.7
	Moderately disagree	22	36.7	36.7	63.3
	Moderately agree	15	25.0	25.0	88.3
	Agree	6	10.0	10.0	98.3
	Strongly agree	1	1.7	1.7	100.0
	Total	60	100.0	100.0	

Provision of timely response to cargo claims

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	5	8.3	8.3	8.3
	Disagree	7	11.7	11.7	20.0
	Moderately disagree	29	48.3	48.3	68.3
	Moderately agree	13	21.7	21.7	90.0
	Agree	5	8.3	8.3	98.3
	Strongly agree	1	1.7	1.7	100.0
	Total	60	100.0	100.0	

Has cargo loss or damage records

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	3	5.0	5.0	5.0
	Disagree	7	11.7	11.7	16.7
	Moderately disagree	35	58.3	58.3	75.0
	Moderately agree	8	13.3	13.3	88.3
	Agree	6	10.0	10.0	98.3
	Strongly agree	1	1.7	1.7	100.0
	Total	60	100.0	100.0	

Understanding customers need

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	9	15.0	15.0	15.0
	Disagree	14	23.3	23.3	38.3
	Moderately disagree	18	30.0	30.0	68.3
	Moderately agree	11	18.3	18.3	86.7
	Agree	6	10.0	10.0	96.7
	Strongly agree	2	3.3	3.3	100.0
	Total	60	100.0	100.0	

Annex-2: Descriptive statistics analysis of LSV

FREQUENCIES VARIABLES=LSV1 LSV2 LSV3 LSV4 LSV5 LSV6 LSV7 LSV8 LSV9 LSV10 LSV11 LSV12/ORDER=ANALYSIS.

Statistics

Note

	Logistic services provided are reasonably priced	ESLSE offers value for money	ESLSE provides good service for price	ESLSE services are appropriate when price and costs are considered	ESLSE delivers superior services
N	Valid	60	60	60	60
	Missing	0	0	0	0

	ESLSE provides standardized services	ESLSE provides consistent services	ESLSE provides dependable services	ESLSE has good working relationship with customers	ESLSE responds to customer needs promptly
N	Valid	60	60	60	60
	Missing	0	0	0	0

	ESLSE visits customers when needed	ESLSE keeps customers better informed of new services
N	Valid	60
	Missing	0

Frequency Table

Logistic services provided are reasonably priced

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly disagree	3	5.0	5.0	5.0
Disagree	11	18.3	18.3	23.3
Moderately disagree	20	33.3	33.3	56.7
Moderately agree	16	26.7	26.7	83.3
Agree	10	16.7	16.7	100.0
Total	60	100.0	100.0	

ESLSE offers value for money

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly disagree	1	1.7	1.7	1.7
Disagree	7	11.7	11.7	13.3
Moderately disagree	21	35.0	35.0	48.3
Moderately agree	19	31.7	31.7	80.0
Agree	7	11.7	11.7	91.7
Strongly agree	5	8.3	8.3	100.0
Total	60	100.0	100.0	

ESLSE provides good service for price

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly disagree	3	5.0	5.0	5.0
Disagree	4	6.7	6.7	11.7
Moderately disagree	22	36.7	36.7	48.3
Moderately agree	19	31.7	31.7	80.0
Agree	10	16.7	16.7	96.7
Strongly agree	2	3.3	3.3	100.0
Total	60	100.0	100.0	

ESLSE services are appropriate when price and costs are considered

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly disagree	4	6.7	6.7	6.7
Disagree	3	5.0	5.0	11.7
Moderately disagree	23	38.3	38.3	50.0
Moderately agree	12	20.0	20.0	70.0
Agree	16	26.7	26.7	96.7
Strongly agree	2	3.3	3.3	100.0
Total	60	100.0	100.0	

ESLSE delivers superior services

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly disagree	6	10.0	10.0	10.0
Disagree	11	18.3	18.3	28.3
Moderately disagree	15	25.0	25.0	53.3
Moderately agree	14	23.3	23.3	76.7
Agree	13	21.7	21.7	98.3
Strongly agree	1	1.7	1.7	100.0
Total	60	100.0	100.0	

ESLSE provides standardized services

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	1	1.7	1.7	1.7
	Disagree	10	16.7	16.7	18.3
	Moderately disagree	24	40.0	40.0	58.3
	Moderately agree	13	21.7	21.7	80.0
	Agree	9	15.0	15.0	95.0
	Strongly agree	3	5.0	5.0	100.0
	Total	60	100.0	100.0	

ESLSE provides consistent services

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	6	10.0	10.0	10.0
	Moderately disagree	25	41.7	41.7	51.7
	Moderately agree	12	20.0	20.0	71.7
	Agree	13	21.7	21.7	93.3
	Strongly agree	4	6.7	6.7	100.0
	Total	60	100.0	100.0	

ESLSE provides dependable services

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	3	5.0	5.0	5.0
	Moderately disagree	19	31.7	31.7	36.7
	Moderately agree	19	31.7	31.7	68.3
	Agree	13	21.7	21.7	90.0
	Strongly agree	6	10.0	10.0	100.0
	Total	60	100.0	100.0	

ESLSE has good working relationship with customers

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	1	1.7	1.7	1.7
	Disagree	2	3.3	3.3	5.0
	Moderately disagree	20	33.3	33.3	38.3
	Moderately agree	22	36.7	36.7	75.0
	Agree	13	21.7	21.7	96.7
	Strongly agree	2	3.3	3.3	100.0
	Total	60	100.0	100.0	

ESLSE responds to customers needs promptly

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	2	3.3	3.3	3.3
	Disagree	4	6.7	6.7	10.0
	Moderately disagree	21	35.0	35.0	45.0
	Moderately agree	19	31.7	31.7	76.7
	Agree	11	18.3	18.3	95.0
	Strongly agree	3	5.0	5.0	100.0
	Total	60	100.0	100.0	

ESLSE visits customers when needed

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly disagree	13	21.7	21.7	21.7
Disagree	10	16.7	16.7	38.3
Moderately disagree	22	36.7	36.7	75.0
Moderately agree	9	15.0	15.0	90.0
Agree	6	10.0	10.0	100.0
Total	60	100.0	100.0	

ESLSE keeps customers better informed of new services

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly disagree	6	10.0	10.0	10.0
Disagree	11	18.3	18.3	28.3
Moderately disagree	29	48.3	48.3	76.7
Moderately agree	6	10.0	10.0	86.7
Agree	6	10.0	10.0	96.7
Strongly agree	2	3.3	3.3	100.0
Total	60	100.0	100.0	

Annex-4: Descriptive statistics analysis of CSRQ

FREQUENCIES VARIABLES=CSRQ1 CSRQ2 CSRQ3 CSRQ4 CSRQ5 CSRQ6 CSRQ7
CSRQ8 CSRQ9 CSRQ10/ORDER=ANALYSIS.

Statistics

Notes

		MMTO keeps promises	Customers find it unnecessary to be cautious in dealing with the MMTO	The MMTO is trustworthy	Customers do not suspect that the MMTO will withhold certain piece of critical information	Customers feel that they are loyal to the multimodal transport operator's offerings
N	Valid	60	60	60	60	60
	Missing	0	0	0	0	0

		The services offered by the MMTO is our first choice	Even with more choice, customers do not choose other service providers	The service offered by the MMTO always meets customer's expectation	Customers are satisfied with the current MMTO	The service offered by the MMTO always meet the desired level
N	Valid	60	60	60	60	60
	Missing	0	0	0	0	0

Frequency Table

MMTO keeps promises

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Moderately disagree	19	31.7	31.7	31.7
	Moderately agree	23	38.3	38.3	70.0
	Agree	16	26.7	26.7	96.7
	Strongly agree	2	3.3	3.3	100.0
	Total	60	100.0	100.0	

Customers find it unnecessary to be cautious in dealing with the MMTO

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	1	1.7	1.7	1.7
	Disagree	6	10.0	10.0	11.7
	Moderately disagree	31	51.7	51.7	63.3
	Moderately agree	11	18.3	18.3	81.7
	Agree	9	15.0	15.0	96.7
	Strongly agree	2	3.3	3.3	100.0
	Total	60	100.0	100.0	

The MMTO is trustworthy

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Moderately disagree	19	31.7	31.7	31.7
	Moderately agree	15	25.0	25.0	56.7
	Agree	21	35.0	35.0	91.7
	Strongly agree	5	8.3	8.3	100.0
	Total	60	100.0	100.0	

Customers do not suspect that the MMTO will withhold certain piece of critical information

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	2	3.3	3.3	3.3
	Moderately disagree	18	30.0	30.0	33.3
	Moderately agree	18	30.0	30.0	63.3
	Agree	15	25.0	25.0	88.3
	Strongly agree	7	11.7	11.7	100.0
	Total	60	100.0	100.0	

Customers feel that they are loyal to the multimodal transport operator's offerings

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Moderately disagree	11	18.3	18.3	18.3
	Moderately agree	24	40.0	40.0	58.3
	Agree	18	30.0	30.0	88.3
	Strongly agree	7	11.7	11.7	100.0
	Total	60	100.0	100.0	

The services offered by the MMTO is our first choice

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	10	16.7	16.7	16.7
	Moderately disagree	19	31.7	31.7	48.3
	Moderately agree	11	18.3	18.3	66.7
	Agree	16	26.7	26.7	93.3
	Strongly agree	4	6.7	6.7	100.0
	Total	60	100.0	100.0	

Even with more choice, customers do not choose other service providers

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	2	3.3	3.3	3.3
	Disagree	11	18.3	18.3	21.7
	Moderately disagree	22	36.7	36.7	58.3
	Moderately agree	11	18.3	18.3	76.7
	Agree	7	11.7	11.7	88.3
	Strongly agree	7	11.7	11.7	100.0
	Total	60	100.0	100.0	

The service offered by the MMTO always meets customer's expectation

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Disagree	12	20.0	20.0	20.0
Moderately disagree	29	48.3	48.3	68.3
Moderately agree	13	21.7	21.7	90.0
Agree	5	8.3	8.3	98.3
Strongly agree	1	1.7	1.7	100.0
Total	60	100.0	100.0	

Customers are satisfied with the current MMTO

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Disagree	3	5.0	5.0	5.0
Moderately disagree	28	46.7	46.7	51.7
Moderately agree	17	28.3	28.3	80.0
Agree	10	16.7	16.7	96.7
Strongly agree	2	3.3	3.3	100.0
Total	60	100.0	100.0	

The service offered by the MMTO always meet the desired level

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly disagree	1	1.7	1.7	1.7
Disagree	8	13.3	13.3	15.0
Moderately disagree	26	43.3	43.3	58.3
Moderately agree	14	23.3	23.3	81.7
Agree	10	16.7	16.7	98.3
Strongly agree	1	1.7	1.7	100.0
Total	60	100.0	100.0	

Annex-5: Descriptive statistics analysis of BP
FREQUENCIES VARIABLES=BP1 BP2 BP3 BP4 BP5 BP6 BP7 /ORDER=ANALYSIS.

Statistics

Notes

	Sales growth over the last three years	Return on sales are positive over the last three years	Return on sales grows over the last three years	Profit grows over the last three years	Market share increases over the last three years
N Valid	60	60	60	60	60
Missing	0	0	0	0	0

Statistics

	Return on Investment grows over the last three years	Logistics cost reduces over the last three years
N Valid	60	60
Missing	0	0

Frequency Table

Sales growth over the last three years

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Moderately disagree	6	10.0	10.0	10.0
Moderately agree	16	26.7	26.7	36.7
Agree	18	30.0	30.0	66.7
Strongly agree	20	33.3	33.3	100.0
Total	60	100.0	100.0	

Return on sales are positive over the last three years

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Disagree	1	1.7	1.7	1.7
Moderately disagree	8	13.3	13.3	15.0
Moderately agree	20	33.3	33.3	48.3
Agree	23	38.3	38.3	86.7
Strongly agree	8	13.3	13.3	100.0
Total	60	100.0	100.0	

Return on sales grows over the last three years

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Moderately disagree	15	25.0	25.0	25.0
Moderately agree	19	31.7	31.7	56.7
Agree	17	28.3	28.3	85.0
Strongly agree	9	15.0	15.0	100.0
Total	60	100.0	100.0	

Profit grows over the last three years

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	3	5.0	5.0	5.0
	Moderately disagree	15	25.0	25.0	30.0
	Moderately agree	17	28.3	28.3	58.3
	Agree	15	25.0	25.0	83.3
	Strongly agree	10	16.7	16.7	100.0
	Total	60	100.0	100.0	

Market share increases over the last three years

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	1	1.7	1.7	1.7
	Disagree	6	10.0	10.0	11.7
	Moderately disagree	16	26.7	26.7	38.3
	Moderately agree	16	26.7	26.7	65.0
	Agree	16	26.7	26.7	91.7
	Strongly agree	5	8.3	8.3	100.0
	Total	60	100.0	100.0	

Return on Investment grows over the last three years

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	2	3.3	3.3	3.3
	Moderately disagree	18	30.0	30.0	33.3
	Moderately agree	16	26.7	26.7	60.0
	Agree	19	31.7	31.7	91.7
	Strongly agree	5	8.3	8.3	100.0
	Total	60	100.0	100.0	

Logistics cost reduces over the last three years

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	2	3.3	3.3	3.3
	Disagree	12	20.0	20.0	23.3
	Moderately disagree	17	28.3	28.3	51.7
	Moderately agree	20	33.3	33.3	85.0
	Agree	8	13.3	13.3	98.3
	Strongly agree	1	1.7	1.7	100.0
	Total	60	100.0	100.0	

Annex 3: Questionnaires

Addis Ababa University

School of Business and Economics

A Survey Questionnaire for a research project to be carried out in partial fulfillment of Executive MBA at Addis Ababa University

This survey is intended to study the effect of multimodal transport system on import business in Addis Ababa, Ethiopia. All the information provided will be kept *confidential* and used for academic purposes only. Your cooperation in completing the survey questionnaire by providing genuine and reliable information is highly valuable and appreciated. Thank you so much in advance for your time and effort!

Part I: Background Information

Please assess the criteria statements by putting a tick mark () in the box that best suits your expectation or opinion.

1. What type of industry do you belong to?

- | | |
|--|---|
| 1. <input type="checkbox"/> Automotive parts and components | 10. <input type="checkbox"/> Biotechnology |
| 2. <input type="checkbox"/> Chemical | 11. <input type="checkbox"/> Construction |
| 3. <input type="checkbox"/> Electrical appliance | 12. <input type="checkbox"/> Electronic technology |
| 4. <input type="checkbox"/> Industrial machinery | 13. <input type="checkbox"/> Information technology |
| 5. <input type="checkbox"/> Medicine/health | 14. <input type="checkbox"/> Optical products |
| 6. <input type="checkbox"/> Plastic products | 15. <input type="checkbox"/> Printing |
| 7. <input type="checkbox"/> Textile and clothing | 16. <input type="checkbox"/> Toys |
| 8. <input type="checkbox"/> Watches and clocks | |
| 9. <input type="checkbox"/> Wholesale/retail (grocery, departmental store and cosmetics) | |
| 17. <input type="checkbox"/> Service industries (banking, finance, insurance, hotel, etc.) | |
| 18. <input type="checkbox"/> If other, please specify: _____ | |

2. What type of company do you belong to?

1. Limited company
2. Share Company
3. Partnership
4. Joint venture
5. Sole proprietorship
6. If other, please specify: _____

3. What is your company's total number of employees (including full-time and part-time employees)?

1. Less than 50 2. 51-99 3. 100-199
 4. 200-499 5. 500-999 6. 1000 or more

4. For how long has your company been operating in the business?

1. less than 2 years 2. 2-5 years 3. 5-7 years
 4. 8-10 years 5. Over 10 years

5. What is the value of your company's material assets (in million Birr)?

1. Less than 15 2. 16-29 3. 30-49 4. 50-99 5. 100 or more

6. What was your company's annual total import value in 2015 (in million Birr)?

1. Less than 5 2. 6-9 3. 10-19 4. 20-49 5. 50-99 6. 100 or more

7. What is your position in the company?

1. Senior management 2. Middle management 3. Front-line manager
 4. Front-line staff 5. If other, please specify: _____

Part II: Multimodal Transport Service

Please assess the criteria statements given below by putting a tick mark (☑) in the box that best suits your expectation or opinion or represents the level of your satisfaction of services rendered by the current Multimodal Transport Operator (The Ethiopian Shipping and Logistics Service Enterprise).

Sr.No.	LEVEL OF SATISFACTION	LEVEL OF SATISFACTION						
		Strongly agree	Agree	Moderately agree	Neutral	Moderately disagree	Disagree	Strongly disagree
	Multimodal Transport Service Measures							
1	Has accurate documentation							
2	Has efficient transit time							
3	Has reliable Schedule							
4	Has special cargo handling equipment							
5	Booking space is available regularly							
6	Has frequent schedule							
7	Provides inland transport arrangement							
8	Provides warehousing service							
9	Provides dependable customs clearance							

10	Has effective service coverage							
11	Has flexible tariff							
12	Has flexible payment mode							
13	Has cargo safety							
14	Notifies delays in advance							
15	Has quality information system (Fax, Email, Phone)							
16	Has efficient and reliable cargo tracking system							
17	Provides timely response to customer complaint							
18	Provides timely response to cargo claims							
19	Has cargo loss or damage record							
20	Understands the customers need							

Part III: Logistics Service Value

Please assess the criteria statements by putting a tick mark (☑) in the box that best suits your expectation or opinion that indicates your level of satisfaction on the logistics service value indicators.

Sr.No.	Logistics Service Value Measures	Level of Satisfaction						
		Strongly agree	Agree	Moderately agree	Neutral	Moderately disagree	Disagree	Strongly disagree
1	The logistic services provided are reasonably priced.							
2	The Ethiopian Shipping and Logistics Service Enterprise (ESLSE) offers value for money.							
3	The Ethiopian Shipping and Logistics Service Enterprise provides good service for the price							
4	Services provided by the Ethiopian shipping and logistics services are appropriate, when price and other costs are considered.							
5	The Ethiopian Shipping and Logistics Service Enterprise delivers superior service compared to other transport companies.							
6	Services provided by the ESLSE are of high standard.							
7	Services provided by the ESLSE are consistent.							
8	Services provided by the ESLSE are dependable.							
9	The ESLSE has good working relationship with customers.							
10	The ESLSE responds to customers service needs promptly.							
11	The ESLSE visits customers when needed.							
12	The ESLSE keeps customer better informed of new services.							

Part IV: Customer Relationship Quality

Please assess the criteria statements by putting tick mark (☑) in the box that best represents your expectation or opinion that indicates the extent to which you agree or disagree with each of the following statements describing your company's relationship with your current Multimodal Transport Operators (MTO).

Sr.No.	Customer Relationship Quality Measures	Level of Agreement						
		Strongly agree	Agree	Moderately agree	Neutral	Moderately disagree	Disagree	Strongly disagree
1	The Multimodal Transport Operator keeps promises.							
2	Customers find it unnecessary to be cautious in dealing with the Multimodal Transport Operator.							
3	The Multimodal Transport Operator is trustworthy.							
4	Customers do not suspect that the Multimodal Transport Operator will withhold certain pieces of critical information.							
5	Customers feel that they are loyal to the Multimodal Transport Operator's offerings.							
6	The service offered by the Multimodal Transport Operator is our first choice.							
7	Even with more choice, customers do not choose other service providers.							
8	The service offered by the Multimodal Transport Operator always meets customer's expectation.							
9	Customers are satisfied with the current Multimodal Transport Operator.							
10	The services offered by the Multimodal Transport Operator always meet the desired level.							