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**ST. MARY'S UNIVERSITY  
SCHOOL OF GRADUATE STUDIES  
DEPARTMENT OF MARKETING MANAGEMENT**

**FACTORS INFLUENCING LOGISTICS SERVICE DELIVERY: THE CASE OF  
ETHIOPIAN SHIPPING AND LOGISTICS SERVICE ENTERPRISE**

**BY  
BIRTUKAN EBUY**

**MAY, 2019  
ADDIS ABABA, ETHIOPIA**

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**A THESIS SUBMITTED TO ST.MARY'S UNIVERSITY SCHOOL  
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**MAY, 2019  
ADDIS ABABA, ETHIOPIA**

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## **Declaration**

I, the undersigned, declare that this thesis entitled as “*Factors influencing Logistics Service Delivery the Case of Ethiopian Shipping and Logistics Service Enterprise*” is my work and has not been presented for the award of any degree or diploma in this or any other university. All sources of materials used in the thesis have been accordingly acknowledged.

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Addis Ababa, Ethiopia May, 2019

## **Endorsement**

This is to certify that this thesis entitled as *“Factors influencing Logistics Service Delivery the Case of Ethiopian Shipping and Logistics Service Enterprise”*, A Thesis submitted to St. Mary’s university school of graduate studies department of marketing management Green Campus, done by Birtukan Ebuy is an authentic work carried under our guidance.

**Advisor**

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**Date**

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## **List of Abbreviations**

<b>ANOVA:</b>	Analysis of Variance
<b>ESL:</b>	Ethiopian Shipping Lines
<b>ESLSE:</b>	Ethiopian Shipping and Logistics Service Enterprise
<b>FGD:</b>	Focus Group Discussion
<b>GDP:</b>	Gross Domestic Product
<b>ICT:</b>	Information Communication Technology
<b>IT:</b>	Information Technology
<b>LP:</b>	Logistic Performance
<b>SPSS:</b>	Statistical Package for Social Sciences

## Abstract

*Logistics becomes a more important part of the business economic system and perhaps complex in the competitive globalized economy of today due to the new requirements of the service-oriented economy. Although the government of Ethiopia has been taking initiatives related to logistics to improve the capacity of the subsector, existing practices are not performing in order to provide an improved logistics service. Given the greater governmental recognition of the sector as a strategic sector and the associated inefficiencies and shortcomings in the provision of services, it was hoped that this study would contribute to the improvement of ESLSE in the provision of logistics services. Thus, the general objective of the study was to assess the factors that influence the provision of logistic services in the ESLSE, being the specific objectives of the study; assess the influence of the process of the enterprise in the provision of logistic services; determine the influence of the ESLSE staff's competencies in the provision of logistics services, examine the influence of distribution support in the provision of logistics services and analyze the influence of information and communication technologies in the provision of logistics services. For this purpose, this study used quantitative research methods as the main source of data. In addition, the study used explanatory types of research design with the SPSS 22 tool used for the analysis of the resulting data. The population from which the information required for the analysis was derived is the 187 respondents (customers), as exporter, importer and transporter of the company. The study incorporated descriptive and inferential statistics to analyze the data collected from the respondents. The results obtained from the multiple regression analysis show that distribution support and information and communication technology are important factors that influence the provision of logistics services of the enterprise. Based on the findings, it has been recommended that the enterprise work mainly on the use of information technology and basic infrastructure and software in order to guarantee reliable present and future quality service provision.*

**Key words:** logistics, service delivery,

# CHAPTER ONE

## 1. INTRODUCTION

This chapter consists of background information, statement of the problem, research objectives and scope of the study. The chapter presents the gaps in the knowledge that the study intended to fill.

### 1.1 Background of the Study

In today's competitive globalized economy logistic service provision is one of the key instruments in fulfilling the customer's expectations on the one hand; and driver of the economic development of a country on the other. Hence, businesses in both developed and developing countries are working hard to establish the best logistics and transportation professionals, systems, and infrastructure. Logistics also improve business performance through its flexibility and advanced technology application (Tracey, 1998). Of course, the word logistics seems the buzzword in the current hypercompetitive business environment.

According to Joshi, (2005) the word 'logistics' is originally coined from a French word 'loger' that means the art of transport, supply, and quartering of troops. Logistics was conceptually designed for use in military so as to ensure meticulous planning and implementation of supply of weapons, food, medicines, and troops in the battlefield. However, logistics should be understood in its wider sense and applicability. Frazelle (2002) defined logistics as the flow of material, information, and money between consumers and suppliers. Thus, this conception of logistics portrays the fact that logistics has lately become an integral part of business in connection with the flow of materials and funds.

Logistics services include many elements and these elements form the logistics chain. Specifically, some of basic elements required for logistics services are presented as follows: (1) Transport factors: In the logistics chain elements, the forwarding is the most important factor and often accounts for more than 1/3 of the total cost of logistics

operations; (2) Marketing elements; (3) Distribution factor; (4) Managing element and (5) Other factors: warehouse, workshop, spare parts and repairs, technical documentation, test equipment and support (et al).

Ethiopia, as a landlocked country, has established its trade route along the Ethio-Djibouti corridor. The Ethio-Djibouti corridor is a main outlet to the sea and 925 Kilometers from Addis Ababa. It is the main route for Ethiopia's import and export trade which is dominated by freight transport.

Although ESLSE has endeavored to provide various logistic services at different levels, it is not reaching the expected level due to a deficient logistics management system and lack of coordination of freight transport, low level of logistics infrastructure development. and inadequate fleets of cargo vehicles in number and condition (aged vehicles), as well as in the warehouse (Fekadu, 2013).

The studies carried out by Fekadu, (2013) revealed that the logistic performance is characterized by the lack of coordination in the chain, the lack of coordination in the areas of inventory planning and warehouse management, less attention to satisfaction of the customer, inadequate vehicles in the delivery of goods to Customers and also lack of coordination with the carriers.

To this end, Ethiopia, as indicated in the GTP I and GTP II plans, has undertaken several development initiatives that not only require the availability of financial resources, but also the availability of adequately integrated service providers and solid implementation capabilities. Consequently, in order to expand the competent services of maritime transport and of dry and land ports with an expected improved production in the export and import trade and the quality of the maritime, dry and multimodal land transportation services system, expected to be updated at the end of Second Growth and Transformation Plan. Therefore, the government of Ethiopia has been implementing a Multimodal Transportation System since January 2012. The Multimodal Transportation System is a concept aimed at improving commercial efficiency and transforming the relationship between business partners and international operators under a single system of



responsibility, leading to a better command, control and coordinated transportation system.

In general, several studies have been carried out on the provision of logistics services at a national and international level. Among these Fekadu (2013), who studied general logistics practices in Ethiopia, put the poor integrated transport system, the warehouse control system, the inventory management system, the information communication technology (ICT), the product damage and deterioration of quality while stored, packaging, transportation, lack of organization and management tools necessary to promote the intermodal system and customer satisfaction as main characteristics and challenges associated with the logistics system in Ethiopia. However, the study did not indicate vividly the main factors that affect the provision of logistics services of the specific company (ESLSE) in an integral manner.

Therefore, the main objective of this study is to assess the factors that influence the provision of logistics services in light of the enterprise's process, staff competencies, distribution support and information technology.

## **1.2 Background of the Organization**

In an effort to manage for an ever-increasing volume of import-export in a coordinated way, the government of Ethiopia took a strategic measure (through establishment Council of Ministers Regulation No. 255/2011) by merging the former ESL with two other governmental enterprises called Maritime and Transit Service Enterprise (MTSE) and Dry port services Enterprise. Originally, MTSE was rendering transit, customs clearing and logistics services to its customers for many decades, ESL was rendering sea transport services, agency services and Dry port services Enterprise was also rendering dry port and terminal services to pave the way to adopt the multimodal transport system. Following the reestablishment proclamation, the newly merged company named as “Ethiopian Shipping and Logistics Services Enterprise (ESLSE)” and it has been nominated to function as a Multimodal Transport Operator.

The new enterprise was reestablished as a public enterprise in 2011 with an authorized capital of ETB 3,760,000,000.00 of which ETB 940,799,000.00 was paid up in cash and

in kind to give an efficient and integrated multimodal service to its customers being a single company.

The objectives for which the ESLSE is established are: to reduce coastal and international marine and inland water transport services, to reduce freight forwarding agency, multimodal transport, shipping agency, to provide the services of stevedore, shore-handling, dry-port, warehousing and other logistics services, to provide container terminal services, to engage in the development, management and operation of ports, to establish and run human resources development and training center in the fields of maritime profession, to study the country's, import and export trade demand and thus develop technological capacity in order to render maritime and transit transport services and to engage in other related activities conducive to the achievement of its objectives.

Accordingly, the enterprise put in place its own new organizational structure in Dec 2012 on the basis of which, it has one chief executive officer and four deputy chief executive officers appointed by the government to lead and direct the enterprise at top management level. The enterprise has four sectors led by the four deputy CEO's, namely: Shipping Sector, Freight Forwarding Sector, Port& Terminal sector and Corporate Services Sector. ESLSE is giving so many services to the country by using the major service such as Shipping Sector (Sea Transport Services, Agency Services, Stevedoring, Shore handling), Freight Forwarding Sector (Multimodal transport service: Unimodal transport service, Customs and port clearing Trucking) ,Corporate services sector handling the finance management ,budgeting and Port& Terminal Sector (Receiving and delivering cargoes) to generate income.

Presently, ESLSE has a multitude of vessels, heavy duty trucks, sea and dry port facilities, and chicaneries that enable it render efficient sea and land transport services as well as sea and dry port services. ESLSE has its headquarters located in the heart of Addis Ababa, Ethiopia, with main branches at Djibouti, Modjo, and Kality (the former Comet) and other branches in Mekelle, Dire Dawa, Kombolcha, Semera and Gelan towns and customer's bonded warehouse for both passenger cars as well as containers were

instituted as part of the logistics service chain. ESLSE also offered carriage possibilities to inland dry ports.

### **1.3 Statement of the Problem**

Logistics becomes more important and complex today due to the new requirements of the service-oriented economy. The literature on the subject revealed that logistics deals with the efficient transfer of goods from the source of supply through the place of manufacture to the point of consumption in a cost-effective manner while providing an acceptable service to the customer (Alan R. et.al., 2014).

To this end, government initiatives have been taken to improve the capacity of the subsector to provide efficient and good quality services by creating a logistics system backed by technologies that reduce the time invested, the cost of logistics and processing of imports and exports. In addition, a multimodal service provision system and an improvement of dry port capacity have been implemented (GTP II, 2010).

However, being the planned objective as it is, empirical studies on the subject matter have shown that the Ethiopian logistics system is characterized by a deficient logistics management system and a lack of coordination of freight transport, a low level of development of the logistics infrastructure and inadequate fleets Vehicles in number and age, damage and deterioration of the quality of the goods during handling, transport and storage (Fekadu, 2013).

In addition, given that the subsector is markedly characterized by the lack of logistical results, these practices are greatly affecting its provision of logistics services linked to the estimation of customer needs, efficient and effective delivery, integration and collaboration in the entire supply chain, the exchange of information and informal methods and the use of specialists to carry out specific tasks along the supply chain. The qualitative data collected from the enterprise's customers affirmed the fact that, although ESLSE has improved the provision of services, there are many complaints related to poor services and inefficiency in almost all service areas. Specifically, the absence of networks, the slow service speed, the deficient treatments of the clients, the delays, etc. ...

Any inefficiency of operations and capacity constraints can threaten the growth of the organization's service and, therefore, a pressing problem that will quickly get worse, unless a critical action is taken (Fekadu, 2013). The recently published report (2018) by the enterprise also highlighted that the logistics system still lacks something very serious for its success. Specifically, it is believed that the best logistical practices that can be obtained through the integration of those logistic activities in the enterprise and the interaction within the organization produce a better service provision (efficient and effective).

Although many authors have written articles on the provision of logistics services and various performance indicators, there is very little literature regarding the provision of logistics services in a comprehensive manner; Covering the entire chain of operations and not just the performance to operate efficiently.

For the researcher's knowledge, there is no empirical analysis conducted in this area, specifically in the transport sector. Consequently, the researcher evaluated the factors that influence the provision of logistics services by taking ESLSE as a case study. Therefore, this study would contribute to filling the information gap, in relation to improving the provision of logistics services.

## **1.4 Research Questions**

In doing this study the following basic questions were raised.

1. What is the influence of enterprises' process on logistics service delivery in ESLSE?
2. What is the influence of staff competence on logistics service delivery in ESLSE?
3. What is the influence of Distribution support on logistics service delivery in ESLSE?
4. What is the influence of Information and communication technology (ICT) on logistics service delivery in ESLSE?

## **1.5 Objectives of the Study**

### **1.5.1 General Objective**

The study aims to assess the factors influencing logistics service delivery in Ethiopian Shipping and Logistics Services Enterprise.

### **1.5.2 Specific Objectives**

1. To assess the influence of enterprises' process on logistics service delivery.
2. To determine the influence of ESLSE staff competences on logistics service delivery.
3. To examine the influence of Distribution support on logistics service delivery.
4. To analyze the influence of Information and communication technology on logistics service delivery.

## **1.6. Significance of the Study**

The expected result of the study would help to reveal the relationships between the proposed factors and the provision of logistics services. Therefore, it would be a contribution to the management body of the company to have a better image and facilitate realistic, appropriate and timely measures to improve and improve logistics management activities, specifically aimed at the effective and efficient provision of logistics services for customers. In addition to these additional investigations, they would be carried out considering this study as an initial effort of the literature.

## **1.7. Scope of the Study**

This study is delimited to evaluate the factors that influence the provision of logistic services in the ESLSE considering the enterprise's process, the competence of the personnel, the distribution support and the information technology and the communication systems of the information.

The types of customers that was considered in this study are customers (importers, exporters and transporters) of ESLSE. In addition, the main points of sale of logistics

services of the enterprise are its two offices (former Ethiopian Shipping Lines and former Maritime and Transit Services Enterprise) which are located in the Leghar area, Addis Ababa and the respondents were contacted in those places. Consequently, among the ESLSE departments, the study focuses on the customers of the Department of Transportation and the Shipping division in the main office of Addis Ababa.

## **1.8. Organization of the Study**

The proposed research consists of three parts, which include the following: the first part has an introduction that includes the background of the study and organization, the statement of the problem, the basic research questions, the objectives of the study, the importance of the study and the delimitation / scope of studying. In the second part, review of the literature that deals with the subject of the subject; and, finally, it presents a methodology that includes the design of the research, the data tools to be used; the data collection procedures; and the methods of data analysis.

## **1.9. Definition of Terms (The meaning in the study)**

### **Logistics**

As per the definition of Harrison and Hooke (2008), logistics is about managing material flow and information flow.

### **Service**

Zeithaml and Bitner (2003), the definition of services describes that services are needs, processes and results. Kotler and Keller (2012) defined the Service from another perspective, as is any act or action that one party can offer to another that is essentially intangible and does not result in the ownership of anything.

### **Multimodal**

The United Nations Convention on International Multimodal Transport of Goods (United Nations, 1980), defines it as a means of transporting goods by at least two different modes of transport based on a multimodal transport contract from a place in a country in which the multimodal transport operator is responsible for taking the goods to a place designated for delivery located in a different country.

## **CHAPTER TWO**

### **2. REVIEW OF RELATED LITERATURE**

This chapter documented the review of published and unpublished works ranging from magazines, periodicals, books, newspapers and other relevant and reliable sources related to logistics services competencies in the logistics sector. The review of the literature focused on the theoretical review, the empirical review, the conceptual framework and the operationalized variables.

#### **2.1 Theoretical Review**

##### **2.1.1 Concepts of Logistics**

Logistics is, by definition, a functional system that consists of combining and coordinating the operations of different modes of transport as a fundamental prerequisite to guarantee an efficient service (Leal 2012). In other words, logistics is defined as a commercial planning framework for the management of material, service, information and capital flows. It includes the increase of the complex information, communication and control systems required in the current business environment. It is also defined as the acquisition, maintenance, distribution and replacement of personnel and material. A typical logistics framework consists of physical supply, internal operations and the physical distribution of goods and services (NSDC 2010). At the same time, logistics can be defined as having the right type of product or service in the right place, at the right time and in the right conditions (the best logistics guide n.d.). The expectations of the customer define the purpose of a logistics system: it ensures that the right products, in the right amounts, in the right conditions, are delivered in the right place, at the right time, at the right cost. In logistics, these are referred to as the six rights (USAID 2011).

According to Alan R. et.al (2014) Logistics cares about the efficient transfer of goods from the source of supply through the place of manufacture to the point of consumption in a profitable manner and at the same time provides an acceptable service to the customer.

Logistics management is the part of the administration that plans, implements and controls the forwarding and efficient and effective flow of goods, services and related information between the point of origin and point of consumption to meet the customer's requirements. Logistics management activities normally include inbound and outbound transport management, fleet management, storage, material handling, order fulfillment, logistics network design, inventory management, supply planning or the demand and management of external logistics service providers. To varying degrees, the logistics function also includes procurement and procurement, planning and scheduling production, packaging and assembly, and customer service. He is involved in all levels of strategic, operational and tactical planning and execution. Logistics management is an integrating function that coordinates and optimizes all logistics activities, as well as integrates logistics activities with other functions, including marketing, sales, manufacturing, finance and information technology (Morris & Imrie, 2012).

### **2.1.2 Historical Development of Logistics**

The term, logistics, was initially developed in the context of military activities in the late 18th and early 19th century. In military science, logistics is concerned with maintaining army supply lines while disrupting those of the enemy, since an armed force without resources and transportation is defenseless. Military logistics was already practiced in the ancient world and as modern military have a significant need for logistics solutions, advanced implementations have been developed. In military logistics, logistics officers manage how and when to move resources to the places they are needed. Logistics becomes more important and complex today it is because of new requirements of the service-oriented economy, disparate business functions, and the impact of various contemporary IT. Best logistics practices can come through integration of those logistics activities in the firms and create interaction within the organization and can avoid setting up conflicting goals between departments (DHL 2008).

### **2.1.3 Components and Processes of Logistics**

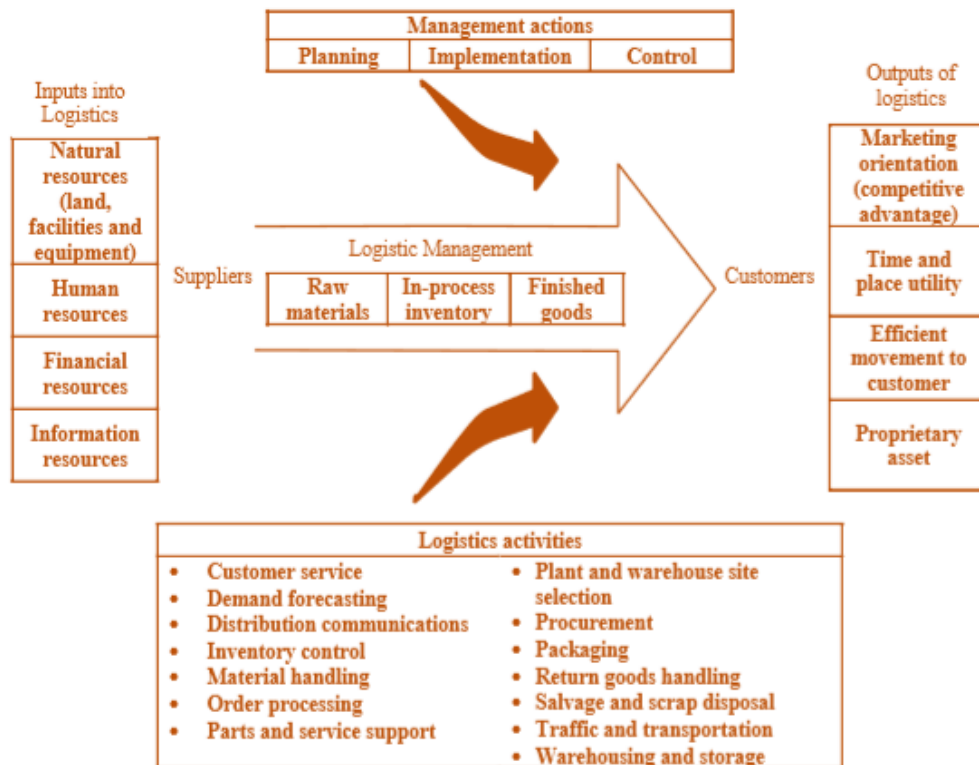
Logistics is not confined to manufacturing operations alone. It is relevant to enterprises, including government, institutions such as hospitals and schools, and service



organizations such as retailers, banks, and financial service organizations. Examples from these sectors will be used throughout some main books of the field to illustrate the relevance of logistics principles to a variety of operations. Some of the many activities encompassed under the logistics umbrella are given in Figure 2.1, which illustrates that logistics is dependent upon natural, human, financial, and information resources of inputs. Suppliers provide raw materials which logistics manage in the form of raw materials, in process inventory and finished goods. The outputs of the logistics system are competitive advantage, time and place utility, efficient movement to the customer, and providing a logistics service mix such that logistics becomes a proprietary asset of the organization (Lambert, Stock & Ellram 1998).

The fundamental goal of international logistics are processing, warehousing and transport (Vallee & Dirksen 2011). However, the value chain for logistics as follows (NSDC 2010).

**Figure 2.1: Components of Logistics Management**



Source: (Lambert, Stock & Ellram 1998).

Goods that are received from the manufacturers are loaded and stuffed into containers of right size. The goods are then transported by the appropriate mode of transportation (land transport, transport via pipelines, water transport, and air transport) (The Economist, 2012). The transported goods are brought to a warehouse and stored safely. Warehousing requires planning of resources, assets, processes, and accurate demand forecasting supported by scalable infrastructure to be profitable (KPMG, 2009). The goods are then re-packed in the format suitable to be sent to the customer, and then finally delivered to the customer (Figure 2.1).

Logistic activities, which can be explained into six different categories i.e., customer service level, transportation, warehousing, inventory order processing/information system, lot quantity, are a critical component that is essential and relevant across service sectors and which has to be optimally managed for smooth functioning of production and distribution operations. These activities are the drivers for the logistics costs associated with different stages in the import and export trade flow and, consequently, it is the total logistics cost structure of the trade chain that will ultimately enable decisions to be made on cost trade-offs or choice of alternative import/export trade routes. Of course, the significance of logistics has evolved from a more passive and cost minimization-oriented activity to a key success factor for firm competitiveness. More recently it has become an integral part of a firm's strategic planning process Carter et al., (1997). Logistics management (right performance) tries to have the "right product", in the "right quantity", at the "right place", at the "right time", with the "right cost". However, balancing between total logistics cost and customer service level is essential to successful logistics Alan R. et.al. (2014). It is now also recognized that distribution and logistics can be source of competitive advantage to company by helping to achieve either least cost or by offering value in the form of positioning the product or service exactly where, when and how the customer wants it.

#### **2.1.4 The Contribution of Logistics Service in Marketing**

Effective logistics Service contributes immensely to the achievements of the business and marketing objectives of a firm. It creates time and place utilities in the products and thereby helps in maximizing the value satisfaction to consumers. By ensuring quick

deliveries in minimum time and cost, it relieves the customers of holding excess inventories. It also brings down the cost of carrying inventory, material handling, transportation and other related activities of distribution. In nutshell, an efficient system of physical distribution/logistics has a great potential for improving customer service and reducing costs (Agrawal,2003).

### **2.1.5. Theoretical Framework**

The research was guided mainly by Borman and Harter's Competence Theory; The main focus being linked to performance of individuals and holistic approach to performance and service delivery in an organization.

#### **2.1.5.1 Borman Personal Constructs Theory**

Personal construct theory by Borman (1987), supported by empirical evidence, states that people develop theories of performance based on their experiences and perceptions of what it takes to be successful in a job. These perceptions can differ between people, resulting in what Borman refers to as "folk theories of work performance." The performance theories of inexperienced managers tend to be one dimensional. Statements such as "The key to this (sales) job is thinking on your feet with customers" or "Show me a person who comes to work on time and I'll show you a good customer" reflect simplistic, one-dimensional views of performance (Borman, 1987). With growing experience of managers, their personal performance constructs tend to become more sophisticated and multidimensional. Personal performance constructs have been shown to vary significantly among managers, even within relatively homogeneous samples such as a unit of US Army officers.

#### **2.1.5.2. Harter's Competence Theory**

According to Harter; in perceived competence, people do not just act, they also reflect upon their actions. Through these reflections they develop a perception of themselves. One of the aspects of these perceptions concerns their own competence, their capacities in performing particular activities. Perceived competence is that part of the self-concept that contains the perception and evaluation of the person's own competences in different

fields. Perceived competence has an important function in the interaction with the environment. It gives information about which tasks and activities are within the possibilities of a person, which interactions and activities are worth trying. In adults, perceived competence is not one homogeneous construct, but is divided in specific competences for different skills and fields. A global perceived competence could be described as a general perception of one's own competence to cope with different aspects of life. Perceived competence can be described as the whole complex of beliefs and cognitions people have about their own capacities. Bandura (1978) assumes that perceived competence is determined by two processes: first the selection and second the processing of information. This information may consist of one's own previous achievements, characteristics of the tasks performed, information about performances of others and the characteristics of these others and the reactions of others to successes and failures and performance attempts in general.

There are individual differences in the way available information is selected and used to form a perceived competence. The differences depend on personal ideas and theories about what causes one's achievements (Coopersmith, 1967). These personal theories are influenced by past experiences with achievement-outcomes and by information from others. People tend to attribute to such a way that their perceived competence is confirmed (Bandura, 1978). There is a circular influence between ideas about one's own competence and attributions. This raises a 'chicken-egg' question:

"what came first, the perceived competence or the attribution preference?" The same question can be asked with regard to the selection of information. People with a high perceived competence tend to forget information about their own failures more readily, evaluate similar performances to more positive, and are less sensitive to evaluations of others (Burns, 1979). This selectivity in turn has a positive influence upon perceived competence. Apparently, people have a kind of theory or perception of their competence and use rules for selecting and processing information about their own competence in such a way that this theory or perception is confirmed. Optimally, formation of perceived competence requires a complex cognitive process. It appears that in general people use only a small amount of information and use simple rules which are not always rational

(Bandura, 1978). It can be concluded that the perceived competence of an individual is determined by the information that is available and by the individual style of selecting and processing this information. A factor which is closely related to this individual style of selecting and processing is the attribution style -the preference for internal, stable and controllable attributions- of an individual. Theories about attributing are discussed in the next section.

## 2.2. Logistics Capability and Service Delivery Competency

It seems that the conceptualization and measurement of the logistics competence is a complex task. However, some publications on logistics research have provided a conceptual model for "Competence in logistics" in order to deal with the main logistics processes and functions accompanied by their measurements in various business environments.

Arayman et al. (2007) developed a performance measurement system, which consists of a set of key performance indicators that were divided according to the variables of the model, as shown in Table 2.1:

**Table 2.1: Aramyman categories and performance indicators**

<b>Categories</b>	<b>Definition</b>	<b>Key Indicators</b>
Efficiency	Seeks to measure how resources are used, consisting of financial metrics framework.	Production costs; Distribution costs; Transaction cost; Results; Return on investment.
Flexibility	Indicates the degree to which the supply chain responds to changes in the environment and to customer requests.	Customer satisfaction; Volume flexibility; Delivery Flexibility; Exceptional orders.
Responsiveness	Assesses the ability to respond to customers and helps to promote product requirements in a short time cycle.	Service level; Delays in orders; Response time to customer; Complaints and shipping errors.
Quality	Evaluates aspects of sensory property, shelf-life, safety, production and marketing.	Product quality; Process quality.

Source: Aramyman et al. (2007).

According to Töyli et al. (2008), logistic performance includes three components: (1) the service level that aims to characterize the service quality for logistics clients, the level of perfect orders and the duration of the cycle; (2) operational metrics that characterize the logistics performance based on time, including stock rotation and average payment and receipt; (3) the level of logistics costs that characterize the efficiency of logistics operations.

**Figure 2.2: Töyli Logistic performance dimensions**



**Source: Töyli et al. (2008)**

Töyli et al. (2008) propose a research framework that includes the following elements:

<i>Constructs</i>	<i>Theoretical Dimensions</i>
Logistics Performance	Logistics Cost Efficiency
	Logistic Service Quality
	Logistics Performance based on time

Source: Töyli et al. (2008)

Good performance of the logistic function provides a good level of organizational performance, which can be achieved by market competitiveness. Thus, logistics performance is assumed to be a determinant of organizational profitability because good performance of logistics activities is associated with efficient operations and reduced costs, and leads to high asset productivity (Yang, 2012). In relation to this, studies have acknowledged the importance of logistics capabilities in imparting the firm with

competitive advantage (Daugherty et al., 1998). Logistics capabilities are those specialized skills, attributes and knowledge within a firm that helps a firm to manage its logistics activities (for e.g. transportation and distribution of raw materials and finished goods) efficiently and effectively (Morash et al, 1996; Mentzer et al., 2004; Gligor and Holcomb, 2012).

Customer focused capabilities were defined as “the competency of building lasting distinctiveness with customers of choice” and “identifying the long-term requirements, expectations, and preferences of current and/or potential customers and markets, and focusing on creating customer value” (Bowersox et al.,1999). Customer focused capabilities were measured through four other capabilities (1) segmental focus (aimed at identifying the appropriate customer segment and fulfilling its requirements) (2) relevancy (aimed at satisfying present and future needs of customers) (3) responsiveness (aimed at fulfilling unpredicted/unexpected demands) (4) flexibility (aimed at adjusting to sudden emerging circumstances).

Competences of staff and staff skills have been found to influence the efficiency of logistics performance in different industries. It is nowadays crucial to understand the importance of logistics both in the levels of the individual firm and the total economy, because it influences not only costs but also services and service quality perceived by the customers. Christopher, Peck and Towill (2006) found that organization that had their employees trained on logistic and supply chain management were found to be efficient in management of their supply chain and had competitive advantage over their rival in the industry. Logistics has become more prominent and is recognized as a critical factor in competitive advantage for any organization (Bowersox et al., 2010).

Similarly, information focused capabilities were measured in terms of information technology, information sharing and connectivity. Information technology was defined as the hardware and software used for distributing information; information sharing was defined as an urge to share routine and non-routine data; connectivity was defined as the capability to share and exchange data in an appropriate manner. The growth of IT poses opportunities and challenges for logistics. As internet retailing increases, the companies

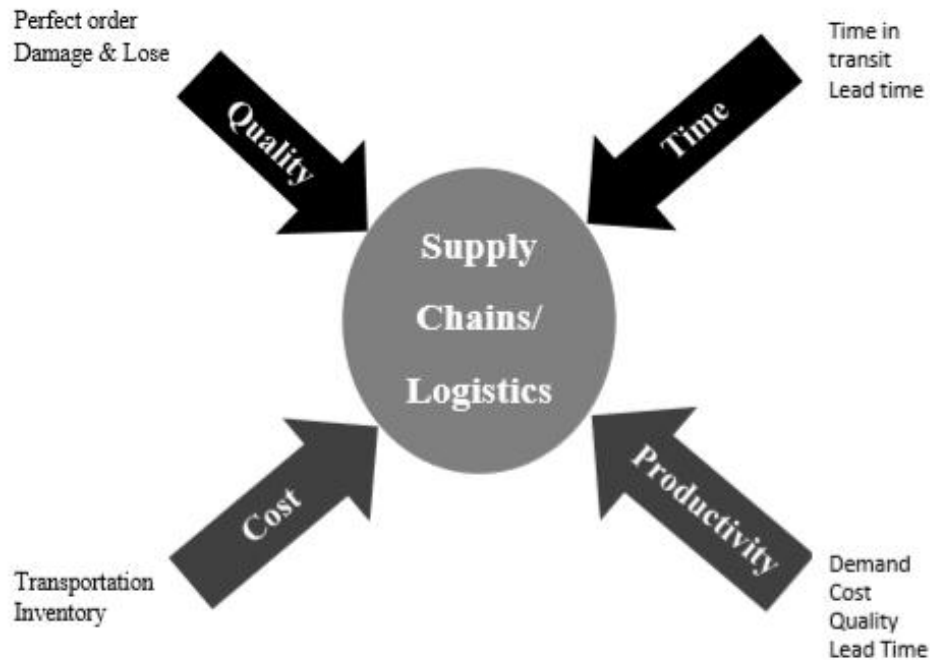
are accepting orders from their clientele across the borders. On such occasions the companies have no option but to turn towards 3rd party logistics operators for physical flow of goods. Investment in technology in supply chain management has been found to have positive effect in the efficiency of logistics performance in companies. According to Petrovic-Lazarevic and Prasevic (2010), integrating technology in supply chain management helps on reduction of lead time as well as efficiency in logistics. Yeung and Tung (2010) revealed that technology integration helps in effective management of the supply chain and has a significant importance to achieving and sustaining a competitive advantage for firms.

Mentzer et al. (2004) developed a unified theory of logistics in their conceptual study. They adopted the definition of logistics management as suggested by Council of Logistics Management (2003) (Mentzer et al., 2004). “Logistics Management is that part of Supply Chain Management that plans, implements and controls the efficient, effective forward and reverse flow and storage of goods, services and related information between the point of origin and the point of consumption in order to meet customer requirements”.

According to Mentzer et al., (2004) also classified logistics capabilities into five broad categories in line with other classifications: (a) customer focus capability (also referred to as demand management capability) that aims to target a customer base and satisfy its requirements through differentiated products and services (b) supply management capability that aims to achieve total cost reduction in supply chain operations through efficient management of resources and wastes in addition to meeting demand profitably.



**Figure 2.3: Logistics Performance Drivers**



**Source: (Forrestn. D.)**

(c) integration capability that aims to unify the inter organizational efforts for overall gain  
(d) measurement capability that determines the degree to which a firm monitors its internal and external operations  
(e) information exchange capabilities that aim to collect, store, analyze and distribute routine and non-routine information for supporting firm operations. Logistics service providers (LSPs) routinely engage in a large array of operations. These routinized operations are socially complex, causally ambiguous, and woven into the fabric of organizations. They are a potent source of rent-generating mechanisms, which form the backbone of flexible and agile practices vital to effective logistics and supply chain (L&SC) service operations.

It has been widely recognized that logistic quality is the foundation of logistics enterprises and the level of logistics service provided by those enterprises determines customer's satisfaction, thus determining their competitive edge over other competitors. This is acknowledged by Bowersox *et al.* (1995), and Bowersox *et al.* (1992) that leveraging a firm's logistics service capabilities is an effective tool for building close

relationships between the firm and its customers. Therefore, improving logistics service quality should be an ongoing focus for logistics service providers and they should never refrain from becoming more and more proactive with customers' satisfaction by providing better and better logistics service (Stank *et al.* 1999).

A number of researchers discuss logistics outsourcing from the Supply Chain Management point of view. Rao, Young and Norvick (2013), suggest that firms consider outsourcing of logistics to an external Logistics Services Provider (LSP) when logistics complexity is high. Wilding and Juriado (2011), observe that cost reduction is the main motivation for logistics outsourcing. Welch and Nayak (2012) mentioned that firms which outsource for operational and cost-based reasons tend to restrict the Logistics Service Provider's involvement to the basic logistics functions. Therefore, an outsourcing decision might be influenced by a firm's supply chain characteristics logistics complexity and demand uncertainty or logistics strategy.

Generally, Ling *et al.*, (2008) highlight that the differences in the quality and cost infrastructure, policy, procedure and institution would affect the speed and cost of the logistics services across border. However, from the perspective of trade and transport facilitation, most consistent measures are port infrastructure, custom environment, regulatory environment and e-business environment.

### **2.3 Review of Empirical Literature on Variables**

Logistics is that part of the Supply Chain Management that plans, implements, and controls the efficient, effective forward and reverse flow and storage of goods services and related information from the point of origin and the point of consumption in order to meet customers' requirements (CSCMP, 2007). The ultimate objective of logistics function is to support corporate goals by delivering products to the consumer at a time and place of his choosing. However, this objective must be balanced against the cost of providing the service. Logistics is one of the major enablers of growth and commerce activity in a country.

A key determinant of business performance nowadays is the role of the “logistics function” in ensuring the smooth flow of materials, products and information throughout a company's supply chains (Smyth, 2004). More recently, logistics has become more prominent and is recognized as a critical factor in competitive advantage (Bowersox & Closs, 2010). The logistics operations process includes the inputting, storing, transporting and distributing of physical goods. Over the years, logistics has developed from single-party logistics (self-managed) to multi-party, using logistics networks focusing on global operations.

There have been several empirical studies conducted on Logistic competency distinctly in-service delivery the researcher review some of related to title conducting.

Gacuru et al., (2015) conducted a study among logistics firm workers at Jomo Kenyatta International Airport Area on factors affecting efficiency in logistics performance of trading and distribution firms. The study descriptively analyzed information technology, competence and business to business relationship and their impact on logistics performance. The study concludes that that information technology, level of competence and business to business relationship affects the efficiency of logistics performance in trade and distribution firms. Hence, the study recommends that the logistic firms should enhance the use information technologies that are compatible with their logistics activities. Besides, the trade and distribution firms should employ a change agent to oversee the staffs of the logistics forms undergo on the job training, in order to improve their skills and capabilities to enhance efficiency of logistics performance. It also underlined the need to exerting efforts to reach across the entire logistics industry to help streamline essential infrastructure and processes to enhance service delivery, reduce costs and improve responsiveness to customer demand in the logistics activities.

Gassenheimer et al (1989) conducted an empirical analysis on data obtained by mail survey from executives to define and further measure performance with respect to logistics that resulted in identifying length of promised order cycle times for base-line/in-stock products, manufacturer’s performance in meeting promised delivery dates, fill rate on base-line/in-stock items, advance notice on shipping delays, accuracy of manufacturer

in forecasting and committing to estimated shipping dates on contract/project orders, manufacturer's adherence to special shipping instructions, accuracy in filling orders as appropriate measures for logistical performance. The study basically dealt with measures of logistics performance that can be characterized with their focus on customer satisfaction regarding to transport, warehouse, communication and document clearness. In light of a perspective that dictates the very existence of an ideal logistics service is for identifying the requirement of the customer it serves and ultimately ensuring an excelled customer satisfaction, the attention given to such measures that align with logistics customer service is appropriate and is believed to be highly applicable in a pragmatic manner for an ideal service delivery entity. In other words, such soft measures have a significance importance in capturing the logistical performance aspects of firms.

A study conducted by Larson et al., (2007) among business leaders on the impact of the perception of logistics performance on business results, found that a significant number of managers said that the perceived impact of logistics performance consisted of better performance in customer service, better inventory levels and optimization costs.

Some authors, such as Zhou and Benton (2007) investigated the link between logistics management practices and distribution performance regarding reliability of service, and concluded that practices related to the distribution and sharing of information have a direct impact on performance. Baker et al. (2006) asserts that, parallel to the development in the significance of distribution and logistics has been the growth in the number of related names and distinctive definitions that are utilized. A portion of the diverse names that have been applied in distribution and logistics include: physical circulation; logistics; business coordination; materials management; purchasing and supply; production flow; sales promotion logistics; inventory network management; demand chain management and many others.

Also, Green et al. (2008), addressing the relationship between logistics practices and organizational performance in a large number of companies in the United States, concluded that logistic practices have a positive impact on business performance, namely in speed of delivery, the responsiveness and flexibility of delivery.

According to Chow et al. (1994), who focus on analyzing the relationship between objectives, practices, skills and management performance in the supply chain, concluded that logistics practices influence logistics capabilities positively in terms of quality and service, operation distribution and efficiency.

Logistics capabilities do influence the way a firm operates in the market. Lynch et al. (2000) investigated the effect of logistics capabilities and strategy on firm performance. Capabilities are the skills and knowledge that enable firms to make use of their assets. Logistics capabilities are capabilities that essentially support the logistics functions of the firms to be executed properly. Studies have also explored the relationship between logistics capabilities and firm performance in attaining competitive advantage.

Finally, a study which was conducted by Sezen (2005) argued that logistics performance can be evaluated by considering logistics costs, customer satisfaction, product availability in the market, conforming to the promised delivery dates and quantities, flexibility in all logistics activities, and efficiency in inventory management.

Addis (2017) conducted a study among employees, importers, exporters and transportation associations of Ethiopia Shipping and Logistic Service Enterprise on logistics performance. The result of the study revealed that ESLSE had a lower performance in its logistical performance. The findings of the study revealed that each dimension of logistic performance (logistic differentiation, logistic efficiency and logistic effectiveness) has had a lower performance. The study recommended continuously improving its logistics performance, among other things, by strengthening and developing a good relationship with others to modernize its order management practices. In addition, it also recommended an additional improvement of the relationship between the client and another company or sister company of a foreign country.

Tessema (2017) conducted a study on the challenges and prospects of the application of the multimodal transport system in the logistics and shipping services company of Ethiopia using the exploratory research design. The study's finding reveals that the main challenges in the MMT system are the absence of integrated ICTs, the shortage of qualified logistics personnel, the absence of an enabling environment and the facilitation

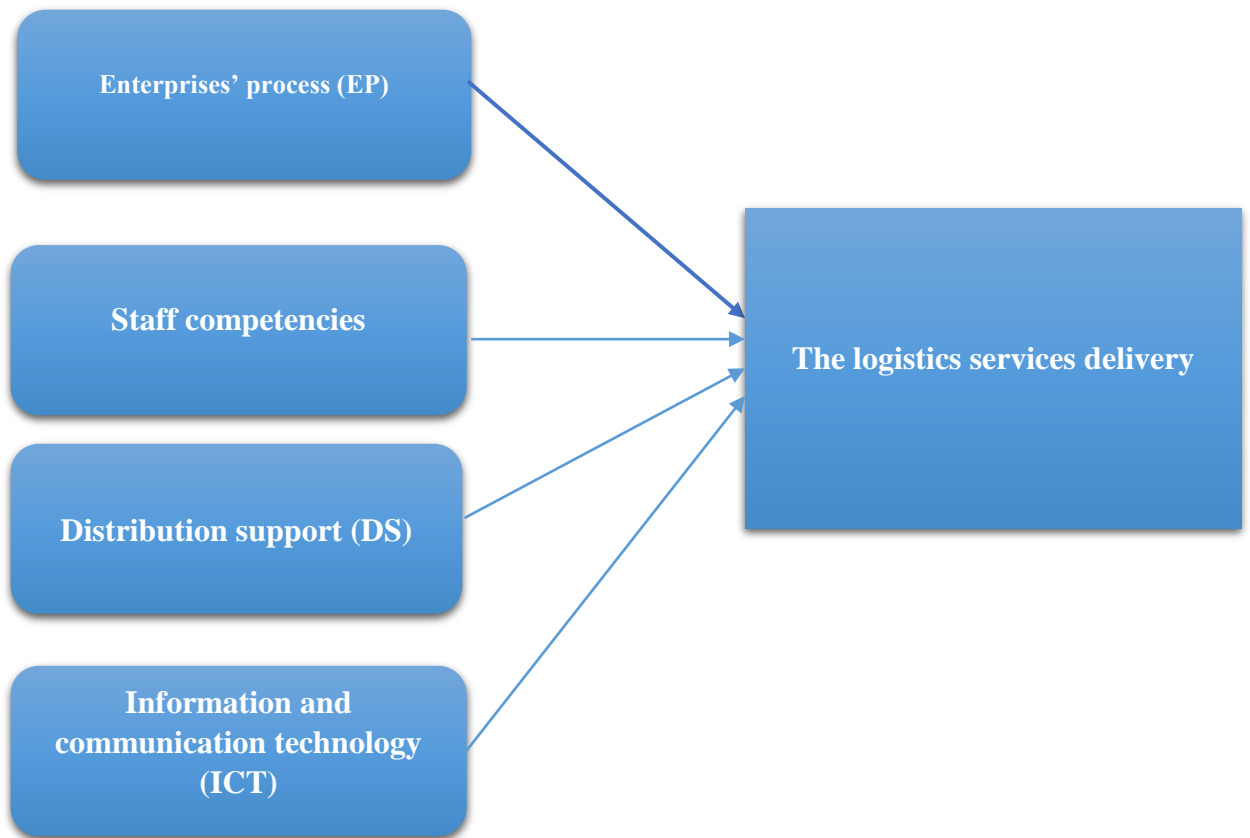
of customs. The study's finding also identified the future construction of railroads; technological development; rate of rapid economic growth of the country; political stability; Current and future infrastructure improvement programs as perspectives for improving the implementation of the multimodal transport system. Therefore, the researcher recommends that the company focus on the challenges and perspectives mentioned above.

Ayele (2014) conducted a study among different clients and stakeholders on the main challenges that affect multimodal transport services in ESLSE through the use of both qualitative and quantitative methods. The result of the study indicated that the main limitations were the poor performance of the employees, the poor management of the documentation and the lack of availability of physical facilities among the internal challenges. Unprofessional participation by stakeholders, inadequate financial capacity to carry out the operation in a sustainable manner, and foreign commission agents receiving orders beyond their actual capacity, and other logistical problems have been identified as external challenges. Therefore, the researcher recommended that the company take an immediate corrective action on the gaps identified.

## **2.4 Conceptual Framework**

Since the overall objective of the study is the factors affecting logistics service delivery in the ESLSE, the researcher has taken the 'Logistics service delivery' as dependent variable, and influencing factors; such as enterprise process, staff competencies, distribution support, Information and communication technology as independent variables.

**Figure 2.4: A model for the logistics service (Phan Dang, 2016) modified by researcher**



Source: Constructed from Literatures

## **2.5 Literature Gaps Identified**

In general, the articles and research papers reviewed above have the following main gaps; inability to reach a general conclusion of the enterprise, considering the enterprise as an acquisition to others, poor sampling method, inability to justify the selection of the sample size and lack of focus. Hence, the researcher contributes to the existing literature through the summary of all the activities that were carried out to give a general idea of the activities and show the main activity in the area.

## **CHAPTER THREE**

### **3. METHODOLOGY OF THE STUDY**

The research methodology is a scientific way of solving a research problem (Kothari, 2004). It elaborates relevant techniques and strategies to obtain valid information for a specific problem under study (Ahuja, 2001).

The chapter details the approach that will guide the study and also the design of the study, the study population, the sample size and the sample selection procedure. It also addresses the type of data and its source, the methods and instruments of data collection, as well as the processing and analysis of data, below.

#### **3.1 Research Approach**

In this study, the quantitative approach was used to describe the current state of a variable and seek to establish a relationship between two or more variables to support or refute the assertions of alternative knowledge.

#### **3.2 Research Design**

From the points of view of the objectives and the research questions of the study, it implies explanatory types of research design. The explanatory research design is chosen because the study attempts to explain the influence of one variable on another and test the assertion using statistical hypothesis techniques.

#### **3.3 Population, Sample Size and Sampling Procedure**

##### **3.3.1 Target Population**

The study focused on the customers (exporters, importers and transporters) of ESLSE that are served in the shipping line, multimodal and unimodal in the main office. Since the majority of the customers who participate in the enterprise's import and export activities are located in Addis Ababa, the study considered a total population (customers)



of 350 of the enterprise. Based on the data obtained from Ethiopian Shipping and Logistic Services Enterprise headquarters, the shipment line served 2100 customers, unimodal and multimodal services during the six months between Hamle and Tahisas (2010 E.C). From these six-month data, the researcher took the average value of the data for one month and the study population is 350.

### 3.3.2 Sample Size and Sampling Procedure

To study about the ESLSE's logistics Service Delivery, customers of the enterprise were used to get the relevant information through questioner. Therefore, samples were drawn from the population groups using convenience sampling techniques.

Yamane (1967) provides a simplified formula to calculate sample sizes. This formula is used to calculate the sample sizes of the target population.

$$n = \frac{N}{1 + Ne^2}$$

Where,

N = is the population size

n = is the sample size

e = is the level of precision

Based on this data, assuming that 0.05 level of precision. the sample size is determined as:

$$N=350/1+ 350 (0.05)^2$$

$$n=187$$

Taking into account a non-response rate of 10%, this sample size is revised upwards (10% \* 187). That is, in this study a total sample of 206 respondents was considered.

This sample is divided among the unimodal, multimodal and shipping or division customers of the enterprise according to the proportion of customers. Therefore, a total of 114 customers (60 multimodal and 54 unimodal customers) are selected from the transport division and the remaining 73 customers are selected from the shipping division. (See Table 3.1).

**Table 3.1: Study Area and Sample Size**

Service Divisions	Population Size (2018)	% of sample size	Sample Size
Multimodal user	114	32	60
Unimodal user	102	29	54
Shipping division user	134	39	73
Total	350	100	187

### **3.3.3 Sampling Technique**

A probabilistic sampling technique was used for data collection. The customers who left the divisions (departments) were intercepted and those who were willing to participate in the survey received a questionnaire to complete. Finally, during the first and second week of March 2019, a sample size of 187 was selected and it was judged that 171 questionnaires from the customers were usable for the data analysis for this study, which yields a response rate of 91.4%.

## **3.4 Data Source and Data Collection Method**

### **3.4.1 Data Source**

In this research primary and secondary data sources were used. The primary source of the data was collected through questionnaires. Primary data are originated by a researcher for the specific purpose of addressing the problem at hand (Malhotra and Birks, 2006). The secondary source materials of the research were journals, manuals, and documents of the enterprise.

### **3.4.2 Data Collection Methods**

Questionnaire: This comprised of questions and other prompts for the purpose of gathering information from respondents. Questionnaires were used because it is a more efficient tool for exploratory research, and most statistical analysis software can be used to process them. The questionnaire is self-completed by the customers, with assistance available if required.

### **3.5 Data Analysis Method**

Data gathered from questionnaires were analyzed in two major ways. Those are quantitatively and qualitatively.

All collected data were systematically organized, coded, edited and entered in spread sheets of SPSS (statistical Packages for Social Science) version 22.0. Here, descriptive and inferential statistics were employed to analyze the collected data. In descriptive statistics; averages, percentages and standard deviation were used. Along with these descriptive statistics, inferential statistics; correlation and regression analysis were used.

Correlation analysis was used to establish the relationship between the dependent and the independent variables. Factors influencing logistics service delivery were regressed against four independent variables as expressed in the following equation:

$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$ , where, Y = Logistics Service Delivery  $\beta_0$  = Constant (coefficient of intercept), X1 = enterprise process X2 = employee's competencies X3 = Distribution support X4 = Information and communication technology  $\varepsilon$  = error term

Non-quantifiable data were also composed, organized and analyzed in words (narration). But data gathered through close ended questionnaires were analyzed in quantitative (numerical ways).

Finally, based on results interpretation was done, conclusion and recommendation has been drawn.

## 3.6 Validity and Reliability Tests

### 3.6.1 Validity

The very purpose of the validity check is to ensure that the developed instruments measure what was intended to be measured and also the clarity, length and structure of the questions. Consequently, the student researcher used a factorial analysis to verify the validity of the constructs. The KMO and Bartlett test is used prominently to measure the adequacy of sampling in most academic and business studies by verifying the case to variable relationship for the analysis performed. While the KMO varies from 0 to 1, the accepted global index is greater than 0.5. In addition, Bartlett's Sphericity Test is related to the importance of the study and, therefore, shows the validity and suitability of the responses collected to the problem that is addressed through the study. For the appropriate factor analysis to be recommended, Bartlett's sphericity test must be less than 0.05.

**Table 3.2 KMO Bartlett**

KMO and Bartlett's Test	
Kaiser-Meyer-Olkin Measure of Sampling Adequacy	0.887
Bartlett's Test of Sphericity Approx. Chi-Square	6654.319
Df	741
Sig.	.000

Source: Computed by the Researcher

The study applied the KMO measures of sampling adequacy and Bartlett's sphericity test to check whether the relationship between the variables was significant or not, as shown in Table 3.2. Factor 1 was based on nine elements that represented the business process; Factor 2 was based on seven elements that represented the skills of the staff, factor 3 was based on thirteen elements that represented the support of the distribution, factor 4 was based on five elements that represented information and communication technology, Factor 5 was based on five elements that represented the provision of logistics services. The Kaiser-Mayor-Oklin measures of sampling adequacy show that the value of the test

statistic is 0.887, which is greater than 0.5 therefore, an acceptable index. While Bartlett's sphericity test shows the value of the test statistic as 0.000, which is less than 0.05 acceptable indices. This result indicates a highly significant relationship between the variables.

### 3.6.2 Reliability Analysis

Before the actual study, a pilot study was carried out to perform a prior test of the validity and reliability of the data collected through the questionnaire. The pilot study allowed to carry out a preliminary test of the research instrument. The results on the reliability of the research instruments are presented in Table 3.3.

**Table 3.3 Reliability Analysis**

Scale	Cronbach's Alpha	Number of Items	Remarks
Enterprise's Process	0.928	9	Accepted
Staff Competences	0.901	7	Accepted
Distribution Support	0.952	13	Accepted
Information and Communication Technology	0.825	5	Accepted
Logistics Service Delivery	0.860	5	Accepted

Source: Computed by the Researcher

Cronbach's general alpha for the four categories, which is 0.893. The results of the pilot study showed that the five scales were reliable, since their reliability values exceeded the prescribed threshold of 0.7 (Bryman and Bell, 2015).

### 3.7 Ethical Considerations

According to the Belmont Report (1974), the three basic ethical principles relevant to research with human beings. Consequently, in this investigation, the researcher adheres to all ethical and legal problems and manages them professionally. Things like confidentiality, respect for the right of respondents to participate or research at any time are protected.

## CHAPTER FOUR

### 4. DATA ANALYSIS, RESULTS AND DISCUSSIONS

#### 4.1 Introduction

This chapter presents the analysis of data on the factors that influence the provision of logistics services in the Ethiopian Logistics and Shipping Services Enterprise (ESLSE). It also provides the main findings and results of the study, and analyzes those findings and results in comparison with the literature reviewed and the objectives of the study. The data are presented mainly in frequency tables, percentages, means and standard deviation.

#### 4.2 Response Rate

The study was aimed at 187 ESLSE customers who are mainly engaged in import, export and transport. Of the study, 171 of the 187 respondents in the sample completed and returned the questionnaires with a response rate of 91.4% according to Table 4.1 below.

**Table 4.1 Respondents' Response Rate**

	Frequency	Percent
Response	171	91.4
Non-Respondents	16	8.6
Total	187	100.0

Source: Own Survey (2019)

According to Babie, (1979), the rate of return or success of 50% is "adequate" for analysis and reporting; a response rate of 60% is "good" and a response rate of 70% or more is "very good"; therefore, this response rate (100%) was more appropriate for analysis and reporting.

### 4.3 Background Information of Respondents

The background information collected was based on sex, education, work experience, the company that works and the type of organization.

**Table 4.2 Background Information of Respondents**

<b>Item</b>	<b>Measurement</b>	<b>Frequency</b>	<b>Percent</b>
Gender	Male	110	64.3
	Female	61	35.7
	<b>Total</b>	<b>171</b>	<b>100.0</b>
Level of Education	Diploma	15	8.8
	Degree	132	77.2
	Masters	20	11.7
	PhD	1	.6
	Other	3	1.8
	<b>Total</b>	<b>171</b>	<b>100.0</b>
Working Experience	Below 2 Years	18	10.5
	Between 2 – 5 Years	56	37.7
	Between 6 – 10 Years	55	32.2
	Between 11 – 15 Years	18	10.5
	Between 16 – 20 Years	12	7
	Over 20 Years	12	7
	<b>Total</b>	<b>171</b>	<b>100</b>
Job Title	Importer	74	43.3
	Exporter	36	21.1
	Transporter	38	22.2
	Other	23	13.5
	<b>Total</b>	<b>171</b>	<b>100</b>
Organization type	Private	110	64.3
	State owned	61	35.7
	<b>Total</b>	<b>171</b>	<b>100.0</b>

Source: Own Survey (2019)

As can be seen in Table 4.2 above, the majority of the respondents (64.3%) were men and the remaining 61 (35.7%) of the respondents were women.

With respect to the educational background of customers of the Ethiopian Transport and Logistics Enterprise, the majority of respondents (77.2%) were graduates, while 20 (11.7%) and 15 (8.8%) percent of the respondents were masters and diploma holders, respectively. The remaining 1 (0.6%) and 3 (1.8%) were PhD holders.

As regard to the Ethiopian Shipping Transport and Logistics Enterprise's customers educational background, majority of the respondents (77.2%) were degree holders, whereas 20 (11.7%). 20(8.8%) percent of the respondents were masters and diploma holders respectively. The remaining 1 (0.6%) and 3(1.8%) were PhD holders and other respondents.

Regarding the working experience of respondents, the third item in the Table 4.2 revealed that respondents who have worked for below 2 years were 10.5%, between 2 – 5 years were 37.7%, between 6 – 10 years were 32.2%, between 11- 15 years were 10.5%, between 16 – 20 years were 7% and over 20 years were 7% with a mean score of 2.92 and a standard deviation of 1.33 as shown in Table 4.2 above. This shows that the majority of the respondents have a working experience of between 2 – 10 years. Since majority of two category age respondents have been working fairly long time with Ethiopian Shipping and Logistics Service Enterprise. Student researcher believed that respondents can give reliable information on the ESLSE's overall logistics services delivery competency level.

The study also sought to establish the area in which the enterprise's customers work. The results of the study revealed that the respondents who participate in import activities were 43.3%, exporters were 21.1%, the carrier was 11.6% and the remaining 13.5% was the one that once participated in various activities, such as processors of documents and others, constitute an average score of 2.06 and a standard deviation of 1.094 as shown in Table 4.2 (third item). This shows that the majority of the respondents who participated in the study were more familiar with the shipping lines, the unimodal and multimodal



service provisions. Therefore, this provides the opportunity to collect reliable data (information) from respondents.

With respect to the types of organization of the respondents, the majority (64.3%) of the respondents were private companies and the remaining 35.7% of the respondents were public organizations, as shown in Table 4.2 (fourth item).

## **4.4 Descriptive Analysis**

In the analysis of the research, the research student used a tool rating scale of 5 to 1; where 5 were the highest and 1 the lowest. The opinions of the respondents were rated as follows, 5 = Strongly agree, 4 = Agree, 3 = Neutral, 2 = Disagree, and 1 = Strongly disagree. The analyzes for the mean, the standard deviation were based on this rating scale.

### **4.4.1 Enterprise's Process**

The first objective of the study was to assess the influence of the process of the enterprise in the provision of logistics services in the Logistics and Shipping Services Enterprise of Ethiopia (ESLSE). In this context, ESLSE investment in the institutional framework is considered an important variable that affects the general provision of logistics services, since it determines the speed, cost and capacity of logistics operations to meet the needs of the client, those oriented mainly to logistics. To this end, respondents were asked to answer a set of questions related to the overall process of the enterprise and give their opinions.

**Table 4.3 Enterprise's Process**

<b>Descriptive Statistics</b>			
<b>Items</b>			
ESLSE's capability in utilizing or having:	<b>N</b>	<b>Mean</b>	<b>SD</b>
time-based continuous replenishment logistic solutions	171	2.78	1.216
time-based quick response logistics solutions	171	2.67	1.246
time-based Just-in-time to support customers logistics solutions	171	2.48	1.155
providing shorter or smaller lot size shipments wherever possible	171	2.46	1.209
established clearly stipulated operational procedures for expressing service deliveries	171	2.43	1.158
operational procedures to provide customers with door-to-door delivery services	171	2.18	1.165
established process to support flexible scheduling solutions as needed by clients	171	2.25	1.162
established processes to meet changing customer requirements at short notice	171	2.45	1.102
operational procedures has helped customers achieve efficient order processing as needed by clients	171	2.62	1.102
Valid N (listwise)	171	2.48	

An agreement that ESLSE is capable of using continuous replacement logistics solutions based on time, quick response and just-in-time logistics solutions to support the logistic solutions of the customers had an average score of 2.78, 2.67 and 2.48., and a standard deviation of 1.216 ,1.246 and 1.155 respectively. The average value of three elements of the response, 2.64, is between neutral and disagree, and a standard deviation of 1.21, perhaps tending more towards neutral. This indicates that the supply / process of logistics services of the enterprise is not providing its services in light of the replenishment solutions, the rapid response measures and just in time. An agreement that ESLSE is able

to provide smaller or smaller lot size shipments whenever possible had an average score of 2.46 and a standard deviation of 1.209. The statement that ESLSE has established clearly stipulated operating procedures to express service deliveries had an average score of 2.43 and a standard deviation of 1.158.

An agreement that ESLSE has operating procedures to provide customers with door-to-door delivery services and their support for efficient order processing as required by customers had an average score of 2.18 and 2.62, and a standard deviation of 1.165. and 1.102 respectively. Given that the mean value of two items of the answers is between disagree and neutral, ESLSE has not established operational procedures for the delivery of logistic services and its final inefficient order has adversely affected the general competencies of service delivery.

The statement that ESLSE has established a process to support flexible scheduling solutions as required by clients and their ability to meet changing customer requirements in the short term had an average score of 2.25 and 2.45, and a standard deviation of 1.162 and 1.102 respectively. The average value of the responses that are located between disagreement and neutral indicates the inability of the enterprise to have a well-established process to support flexible programming solutions and meet the short-term logistics service requirements of the customers.

The mean average value and the standard deviation of nine questions is 2.48 and 1.17 respectively, which seems to indicate that the ESLSE business process is somewhat unsatisfactory to guarantee a flexible, fast and less expensive service delivery. The result of the study seems to be in agreement with Ayele, (2014) waiting for a documentation process is one of the challenging factors in Ethiopia's logistics and shipping services.

#### 4.4.2 Staff Competences

**Table 4.4 Staff Competences**

<b>Descriptive Statistics</b>			
<b>Items</b>	<b>N</b>	<b>Mean</b>	<b>SD</b>
ESLSE's staff are having positive attitude towards their work	171	3.15	1.016
ESLSE's staff have adequate knowledge/understanding to customers' needs and requirements	171	2.87	1.032
ESLSE's staff have adequate skill of handling customer feedback	171	2.99	1.101
ESLSE's staff are excellent at communicating with customers to ensure order processing	171	2.99	1.138
ESLSE's staff have a good customer service approach to clients	171	3.06	1.094
ESLSE's staff are willing to help customers	171	2.92	1.124
ESLSE's staff have never been too busy to respond to customers' needs and requirements	171	2.90	1.044
Valid N (listwise)	171	2.98	

The second objective of the study was to establish the influence of the competence of ESLSE personnel in the provision of logistic services. The respondents had to answer a series of questions related to the competence of the personnel of the enterprise in various tasks and give their opinions. The positive attitude of the ESLSE staff towards their work had an average score of 3.15 and a standard deviation of 1.016. The knowledge / understanding of the ESLSE staff to the needs and requirements of the clients had an average score of 2.87 and a standard deviation of 1.032. The ability of ESLSE staff to

handle customer feedback had an average score of 2.99 and a standard deviation of 1.101. The excellent ESLSE staff communicates with customers to ensure that order processing has an average score of 2.99 and a standard deviation of 1.138. The customer service approach of ESLSE staff for clients had an average score of 3.06 and a standard deviation of 1.094. The ESLSE staff's willingness to help clients had an average score of 2.92 and a standard deviation of 1.124. The response capacity of ESLSE personnel to the needs and requirements of the clients had an average score of 2.90 and a standard deviation of 1.044.

The average value and the standard deviation of seven items of questions is 2.98 and 1.08 respectively, which indicates the fact that there is no solid basis to conclude that the competence of ESLSE personnel to influence the provision of services. This statement seems to agree with Ayele, (2014) and Abdurezak, (2016) that unqualified human resources and uncommitted employees are among the challenging factors of the multimodal transport operation in the Ethiopian transport and logistics enterprise.

#### **4.4.3 Distribution Support**

The third objective of the study was to assess the influence of the support of the distribution of the enterprise in the provision of logistics services in the Logistics and Shipping Services Enterprise of Ethiopia (ESLSE). In this context, ESLSE's investment in infrastructure elements and the establishment of local and international subsidiary operations to find growth opportunities is considered an important variable that affects the overall delivery of the logistics service, due to the existence of adequate facilities, service support for distribution in convenient centers, efficient warehouse The storage management system, distribution, etc. allows the enterprise to deliver logistics orders to its customers in a satisfactory manner, with the ultimate goal of achieving the desired speed, providing less expensive and sustained logistics services.

**Table 4.5 Distribution Support**

<b>Descriptive Statistics</b>			
<b>Items</b>	<b>N</b>	<b>Mean</b>	<b>SD</b>
ESLSE is capable of providing customers with adequate facility services	171	2.65	.978
ESLSE is capable of providing customers with extensive logistic service distribution coverage	171	2.71	1.014
ESLSE is capable of providing customers with global distribution coverage	171	2.47	1.059
ESLSE is capable of providing door to door transportation services	171	2.33	1.046
ESLSE is capable of providing customers with adequate warehousing and storage services	171	2.60	1.210
ESLSE is capable of providing customers with modern warehousing and transportation (distribution) management system	171	2.39	1.059
ESLSE is capable of providing customers with damage free shipment	171	2.29	1.020
ESLSE is capable of providing customers with adequate packaging services	171	2.46	1.075
ESLSE is capable of providing customers with efficient loading services before shipment	171	2.61	1.129
ESLSE is capable of providing customers with efficient unloading service after shipment	171	2.57	1.147
ESLSE's charges in relation to the facility services rendered are reasonable	171	2.58	1.089
ESLSE that supply the transport services/network has helped customers achieve cost saving service	171	2.48	1.139
ESLSE that supply the distribution network has helped customers achieve cost saving service	171	2.42	1.039
Valid N (listwise)	171	2.5	

Consequently, the respondents had to answer a series of questions about the specific topic in question and give their opinions.

With regard to the adequacy of the provision of logistics services, ESLSE's ability to provide customers with adequate facilities services had an average score of 2.65 and a standard deviation of 0.978. An agreement with Ayele, (2014) that the lack of availability of enough containers is one of the physical factors that challenge the multimodal transport operation in the logistics and transport company of Ethiopia. ESLSE's ability to provide customers with adequate packaging services had an average score of 2.46 and a standard deviation of 1.075. The company's ability to provide customers with broad distribution coverage of logistics services had an average score of 2.60 and a standard deviation of 1.210.

Regarding the company's logistic services coverage, ESLSEs able to provide customers with a wide distribution coverage of logistics services had an average score of 2.71 and a standard deviation of 1.014. This statement is in agreement with Ayele, (2014) that an inadequate dry port is one of the determining factors that challenge the multimodal transport operation in Ethiopia's logistics and shipping company. The ability of the enterprise to provide customers with global distribution coverage had an average score of 2.47 and a standard deviation of 1.059. ESLSE competition in the provision of door-to-door transportation services had an average score of 2.33 and a standard deviation of 1.046.

In relation to the level of the installed management system and its resulting effect on the service provision of the company's distribution supports, ESLSE's ability to provide customers with a modern storage and transport (distribution) management system had an average score of 2.39 and a standard deviation of 1.059. In the same way, the company able to provide customers with an undamaged shipment had an average score of 2.29 and a standard deviation of 1.020. ESLSE's ability to provide customers with efficient freight services before shipment had an average score of 2.61 and a standard deviation of 1.129. The ability of ESLSE to provide customers with an efficient download service after shipment had an average score of 2.57 and a standard deviation of 1.147.

Regarding the issues related to the fairness of the provision of logistics services, ESLSE charges in relation to the services provided are reasonable had an average score of 2.58 and a standard deviation of 1.089. The ESLSE network transport / support services to achieve the cost saving service had an average score of 2.48 and a standard deviation of 1.139. ESLSE that supplies the distribution network has helped customers achieve a cost saving service had an average score of 2.42 and a standard deviation of 1.039.

The mean average value and the standard deviation of thirteen questions are 2.5 and 1.08 respectively. The ESLSE distribution support seems to explain the fact that ESLSE's distribution support commitment and performance is too low to improve customer service provision.

These statements seem to agree with Addis (2017) in the sense that the general design of the warehouse is still deficient to access the items and it is not convenient to upload and download. The transport practice of the company increases the logistics cost. The unsafe and delayed delivery, failure to achieve economies of scale and distance to minimize the unit cost of transport were mentioned as the main problems posed. The researcher also specifically noted that ESLSE has not performed well in its inventory control practices, delivery of order management and orders sent to customers from the main location, as well as the average order cycle time. Similarly, the study carried out by Abdurezak (2016) confirmed that the cargo handling equipment, the port infrastructure, and the size of the dry port are challenging factors in the performance of the Dry Port service of Modjo.



#### 4.4.4 Information and Communication Technology

**Table 4.6 Information and Communication Technology**

<b>Descriptive Statistics</b>			
<b>Items</b>	<b>N</b>	<b>Mean</b>	<b>SD</b>
ESLSE uses advanced computerized documentation systems to manage order processing	171	2.92	.994
It is easy to access the ESLSE's systems to process your documents	171	2.80	1.061
It is secure to use ESLSE's systems by all customers at their convenience	171	2.65	1.037
ESLSE uses state-of-the-art software to forecast and organize delivery schedules	171	2.72	1.134
ESLSE's ICT works is facilitating service delivery process	171	2.67	1.182
Valid N (listwise)	171	2.75	

The fourth objective of the study was to assess the influence of ESLSE information and communication technology in the provision of logistics services. Therefore, respondents were asked to answer a series of questions about the specific topic in question and give their opinions.

With respect to the use of ICT, the statement that advanced computerized documentation systems to manage order processing had an average score of 2.92 and a standard deviation of 0.994. It is easy to access the ESLSE systems to process your documents had an average score of 2.80 and a standard deviation of 1.061. It is safe to use ESLSE systems for all clients at their convenience had an average score of 2.65 and a standard deviation of 1.037.

The claim that ESLSE uses state-of-the-art software to forecast and organize delivery schedules had an average score of 2.72 and a standard deviation of 1.134. ESLSE's ICT work is facilitating the service delivery process had an average score of 2.67 and a standard deviation of 1.182.

The mean average value and standard deviation of thirteen items of questions is 2.75 and 1.06 respectively. This figure indicates that ESLSE's competence in the use of information and communication technology to improve customer service delivery is below the expected average performance. This statement seems to agree with Ayele, (2014) that the lack of information technology questions the multimodal transport operation in Ethiopia's logistics and shipping company.

#### 4.4.5 Logistics Service Delivery

**Table 4.7 Logistics Service Delivery**

<b>Descriptive Statistics</b>			
<b>Items</b>	<b>N</b>	<b>Mean</b>	<b>SD</b>
ESLSE is capable of delivering expedited shipments to meet customer needs	171	2.80	.980
ESLSE is capable of providing accurate shipment pickup and delivery	171	2.65	1.082
ESLSE is capable of providing rapid response to customer requests	171	2.64	.992
ESLSE is capable of arranging a flexible delivery schedule to fit with customer's schedule	171	2.62	1.041
ESLSE's current overall logistics service delivery is satisfactory	171	2.56	1.198
Valid N (listwise)	171		

With regard to the company's ability to provide logistics services, ESLSE's ability to deliver expedited shipments to meet customer needs had an average score of 2.80 and a standard deviation of 0.980. ESLSE's ability to provide accurate shipment pickup and delivery had an average score of 2.65 and a standard deviation of 1.082. The ability of ESLSE to provide a rapid response to customer requests had an average score of 2.64 and a standard deviation of 0.992.

ESLSE's ability to organize a flexible delivery schedule that fits the client's schedule had an average score of 2.62 and a standard deviation of 1.041. With respect to the current level of satisfaction of ESLSE with respect to logistics, the service delivery had an average score of 2.56 and a standard deviation of 1.198.

## **4.5 Correlation Analysis**

To establish the relationship between the independent variables and the dependent variable, the study performed a correlation analysis that involved the correlation coefficient and the coefficient of determination

### **4.5.1 Coefficient of Correlation**

The bivariable Pearson correlation coefficient was used to calculate the correlation between the dependent variable (Logistics Service Delivery) and the independent variables (Company process, Personnel competences, Distribution support and ICT). According to Sekaran, (2015), this relationship is assumed to be linear and the correlation coefficient varies from -1.0 (perfect negative correlation) to +1.0 (perfect positive relationship). The correlation coefficient was calculated to determine the strength of the relationship between dependent and independent variables (Kothari and Gang, 2014).

In trying to show the relationship between the study variables and their findings, the study used the Karl Pearson correlation coefficient ( $r$ ). This is as shown in Table 4.8 below.

**Table 4.8 Pearson Correlation Coefficient**

	Logistics Service Delivery	Enterprise Process	Staff Competence	Distribution Support	ICT
Logistics Service Delivery	1				
	171				
Enterprise Process	0.668**	1			
	.000				
	171	171			
Staff Competence	0.549**	0.551**	1		
	.000	.000			
	171	171	171		
Distribution Support	0.711**	0.717**	0.494**	1	
	.000	.000	.000		
	171	171	171	171	
ICT	0.798**	0.378**	0.563**	0.664**	1
	.000	.000	.000	.000	
	171	171	171	171	171

**\*\* . Correlation is significant at the 0.01 level (2-tailed).**

The findings clearly show that there is a positive correlation between the independent variables, the process of the companies, the competences of the personnel, the distribution support and the ICT and the provision of variable dependent logistics services. The analysis indicates the correlation coefficient,  $r$  equal to 0.668, 0.549, 0.711 and 0.798 for the enterprise process, staff competences, distribution support and ICT, respectively. This indicates a positive relationship between the independent variable, that is, the enterprise process, the competencies of the personnel, the distribution support and the information and communication technology, and the provision of dependent variable logistics services.

## **4.6 Regression Analysis**

### **4.6.1 Assumption Test**

Assumption 1: The relation between the dependent and independent variable is linear (See Annex2)

Assumption 2: There is no multicollinearity (VIF scores were well below 10)

Assumption 3: Values of the residuals are independent (Durbin-Watson =1.868)

Assumption 4: Variance of the residuals is constant (Plot of standardized predicted values showed no obvious signs of funneling, suggesting the assumption of homoscedasticity has been meet)

Assumption 5: The values of the residuals are normally distributed

### **4.6.2 Analysis of Variance (ANOVA)**

The study used ANOVA to establish the importance of the regression model. When testing the level of significance, the statistical significance was considered significant if the value of p was less than or equal to 0.05. The importance of the regression model is as shown in Table 4.9 below, with a P value of 0.00 that is less than 0.05. This indicates that the regression model is statistically significant to predict the factors of the provision of logistic services. Basing the confidence level at 95%, the analysis indicates a high reliability of the results obtained. The general results of ANOVA indicate that the model was significant at  $F = 98.267$ ,  $p = 0.000$ .

**Table 4.9 ANOVA**

ANOVA <sup>a</sup>						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	90.952	4	22.738	98.267	.000 <sup>b</sup>
	Residual	38.411	166	.231		
	Total	129.363	170			
a. Dependent Variable: Service Delivery						
b. Predictors: (Constant), ICT, Staff competency, Distribution Support, Enterprise process						

**4.6.3 Model Summary**

To evaluate the research model, an analysis of confirmatory factors was carried out. The four factors were then subjected to a linear regression analysis to measure the success of the model and predict the relationship between independent variables (enterprise process, staff competencies, distribution support and information and communication technology) and the dependent variable (logistics service delivery).

**Table 4.10 Model Summary**

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.838 <sup>a</sup>	.703	.696	.48103
a. Predictors: (Constant), ICT, Staff competence, Distribution support, Enterprise Process				
b. Dependent Variable: Service Delivery				

The model explains 70.3% of the variance (Adjusted R adjusted = 0.696) in the delivery of the logistics service. Clearly, there are other factors besides the four proposed in this model that can be used to predict the delivery of logistics services. However, this remains a good model, since Cooper and Schinder (2013) pointed out that both the lower value of R squared 0.10-0.20 is acceptable in social science research.

This means that 70.3% of the relationship is explained by the four factors identified, namely, the enterprise process, staff competencies, distribution support and information and communication technology. The remaining 29.3% is explained by other factors in the provision of logistics services not studied in this investigation. In summary, the four factors studied determine 70.3% of the relationship, while the rest 29.3% is explained or determined by other factors.

#### 4.6.4 Multiple Regression

The researcher performed a multiple regression analysis as shown in Table 4.11 to determine the relationship between the value chain and the four variables investigated in this study.

**Table 4.11 Multiple Regression**

Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.120	.147		.819	.414
	Enterprise Process	.075	.064	.079	1.166	.245
	Staff Competencies	.083	.055	.081	1.509	.133
	Distribution Support	.278	.067	.269	4.152	.000
	ICT	.511	.063	.520	8.162	.000

a. Dependent Variable: Service Delivery

The regression equation was:  $Y = 0.120 + 0.075X_1 + 0.083X_2 + 0.278X_3 + 0.511X_4$

Where; Y = the dependent variable (Logistics Service Delivery)

X<sub>1</sub> = Enterprise process

X<sub>2</sub> = Staff competencies

X<sub>3</sub> = Distribution support

X<sub>4</sub> = Information and Communication Technology

The previous regression equation has established that taking into account all the factors (the provision of logistics services as a result of the companies' process, the competencies of the personnel, the distribution support and the information and communication technology) constant in the delivery of zero logistics services will be 0.120. The presented findings also show that when taking all the other independent variables to zero, an increase of the unit in the process of the companies will lead to an increase of 0.075 in the scores of the provision of logistic services; an increase in the unit in the skills of the personnel will lead to an increase of 0.083 in the provision of logistic services; a unitary increase in the distribution support will lead to an increase of 0.278 in the scores of the provision of logistic services; a unitary increase in information and communication technology will lead to an increase of 0.511 in the score for the provision of logistics services.

Therefore, this implies that all the two variables have a positive relationship with information and communication technology and the distribution support that contributes the most to the dependent variable. This, therefore, implies that the two variables have a positive relationship with the commitment of the top management of the company with the development of ICT and with adequate logistical support (infrastructure), equitably distributed and efficient in the convenient centers most contribute to the dependent variable.



## **CHAPTER-FIVE**

### **5. SUMMARY OF THE FINDINGS, CONCLUSION AND RECOMMENDATIONS**

#### **5.1 Introduction**

The chapter provides a summary of the findings in chapter four and also provides the conclusions and recommendations of the study based on the objectives of the study. The chapter finally presents the limitations of the study and suggestions for further studies and research.

#### **5.2 Summary of the Findings**

The objectives of this study were to examine the factors that influence the provision of logistics services in the logistics and shipping services enterprise of Ethiopia. The study was performed on 171 of 187 that constituted the sample size. To collect data, the researcher used a structured questionnaire that was personally administered to the respondents. The questionnaire consisted of 39 items. The respondents were customers of the Ethiopian shipping and logistics service company. In this study, the data were analyzed using frequencies, mean scores, standard deviations, percentage, correlation and regression analysis. The results revealed that the majority of respondents who participated in the study have a work experience of between 2 and 10 years working with the company. In addition, the results revealed that there was a strong positive correlation between the independent variables and the dependent variable. The coefficient of determination was 70.3%.

The results of the study showed that the investment of ESLSE in the institutional framework has not achieved a significant logistic service provision, since it failed to guarantee fast and less expensive services, and the capacity of the logistics operations satisfies the needs of the clients, those oriented mainly to logistics.

The results of the study revealed that the attitude, knowledge and work skills of ESLSE staff related to the needs of clients and the provision of requirements services can be taken as an average.

The results of the study revealed that the provision of ESLSE logistics services in the light of having adequate services in the facilities, a wide distribution coverage of logistics services and its ability to provide customers with adequate packaging services is, in a way, low. Similarly, the company's ability to provide logistics service coverage, in terms of extensive distribution of logistics services, global distribution and its door-to-door transportation services, is also low.

ESLSE is not well established with the modern storage and transport management system. Similarly, the ability of ESLSE to provide customers with an undamaged, efficient upload and download service is still low. In addition, the services of cost savings / charges of the company in relation to the service provided by the client's facilities and the services / network have a poor performance. The result of the study seems to be in agreement with Zhou and Benton (2007) that logistics practices related to distribution have a direct impact on performance. The result of the study also seems to agree with Fekadu (2013) that the limitations associated with the logistics system in Ethiopia are hampered by a deficient logistics system, the lack of coordination of freight transport / which resulted in a low rate of cargo /, damage to goods and deterioration of quality during storage, packaging, transport and lack of organization and management tools necessary to promote the intermodal system.

The results of the study revealed that it is low and uncertain the use of advanced computerized documentation systems to manage the processing of orders and access to ESLSE systems to process their documents and also to ensure the use of ESLSE systems by all clients at their convenience. Similarly, the use of ESLSE software to forecast and organize delivery schedules is low, as it should have been. Therefore, ESLSE's ICT work is not facilitating the process of providing services as it should be. The result of the study seems to be in agreement with Zhou and Benton (2007) that logistical practices related to the exchange of information have a direct impact on performance. It also seems in agreement with Tessema (2017) that ICTs are among the main challenges in the multimodal system.

### **5.3 Conclusion**

Based on the results of the research, the study concluded that two independent variables studied have a significant influence on the provision of logistics services, as indicated by the strong correlation coefficient and a p-value that is less than 0.05. The overall effect of the factors analyzed was very high, as indicated by the coefficient of determination. This implies that the independent variables studied, namely the support of ICT and Distribution support, have significant factors that influence the provision of logistics services in the ESLSE. The introduction of multiple regressions indicated that, among the factors that influence the provision of logistics services in ESLSE, had more effects on improving the provision of logistics services of ESLSE, ICT and distribution support explained a statistically significant part of the variance associated with the scope of the provision of logistics services in ESLSE. This result was an emphasis on the role of the information system; the distribution support explained a statistically significant part of the variation associated with the scope of the provision of logistics services in the ESLSE.

From the findings, the study concludes that information technology systems accelerate the communication of the company and its customers, which would ultimately improve quality, reduce time and costs and generate future growth. Consequently, a stable and successful investment in the ICT context is essential for the efficient and effective provision of logistics services. In this sense, the study deduces that the efficiency and effectiveness of logistic operations can be significantly increased in function of a better use of information communication technology.

The study also concludes that distribution support affects the company's logistics service delivery competence. From the findings, the study deduces that the competence of the provision of logistics services depends on the distribution management selected, which is based on cost, quality, quantity, punctuality and place of delivery. As a result, cost pressures are forcing the enterprise to look for low-cost management strategies and systems by delivering services and products to the consumer at the time and place they choose.

## **5.4 Recommendations**

The study recommended the following:

- 1) That there is a need to dedicate more efforts in an accessible and reliable ICT-based order processing system for a better provision of logistics services. To this end, the enterprise must focus on developing information technology related hard (for example, a modern transportation management system, basic facilities service) and soft infrastructure compatible with its logistics activities and human resource developments. This would promote a better service delivery with the client through its information-centric capabilities.
- 2) The company should strengthen and/or establish local and international subsidiary operations to find growth opportunities. In other words, the company must dedicate itself enormously to studying and exploiting the most convenient and profitable routes, channels and modes of transport at all times in order to improve the satisfactory provision of customer service without compromising the management operations of the enterprise logistics.

## **5.5 Limitation of the Study**

The study is having the population group of ESLES's Head Office customers (importers/exporters, transporter). Here, due to security problems in major branch offices of the enterprise data is not collected from the entire population. The study which assesses factors influencing logistics service delivery from the customer's perspective can also be considered as a limitation, because it would be more complete if the service providers' perspective is incorporated.

## **5.6. Suggestion for Further Studies**

This study focused on the factors that influence the provision of logistics services in the ESLSE. Given that only 70.3% of the results were explained by the independent variables in this study, it is recommended that a study be made on other factors in the provision of logistics services.

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# APPENDIX

# Appendix I

## St. Marry University School of Graduate Studies

### Department of Marketing Management

Questionnaire to be filled by Customer of Ethiopian Shipping and Logistic Service Enterprise.

**Dear respondents,**

My name is Birtukan Ebuy, a graduate student of St. Marry University in the Marketing Management Department. I am conducting a study on *factors influencing logistics service delivery in Ethiopian Shipping and Logistics Service Enterprise (ESLSE)*. The data, which is going to be collected through this questionnaire, is completely confidential and purely used for the research purpose. Hence, please respond to all questions, using your best estimates. Your genuine and timely response is necessary for the success of the study. For any further inquiry you can contact me via – 0914023616; E-mail- [Birtukanebuy8@gmail.com](mailto:Birtukanebuy8@gmail.com).

*Thank you for your cooperation and support.*

NB: No need of writing your name

#### **Part One: General Information**

After carefully reading each question, indicate your response by ticking (√) the box which is relevant for you.

##### **1.1. Gender**

A. Male

B. Female

##### **1.2. Level of education**

A. Diploma

B. Degree

C. Masters

D. PHD

E. Other

##### **1.3. Years of Experience in the enterprise**

A. Below 2 Years

E. Between 16 – 20 Years

B. Between 2 – 5 Years

F. Over 20 Years

C. Between 6 – 10 Years

D. Between 11 – 15 Years

**1.4. Indicate type of the organization you work for.**

- A. Private                       B. State owned

**1.5. Your organization**

- A. Importer     B. Exporter     C. Transport     D. Other

**1.6. Your current position in the enterprise.**

- A) Director     D) Group leader   
B) Supervisor     E) Other   
C ) Expert

## Part Two: Questionnaire

This section of the survey deals with customers opinion on factors influencing logistics service delivery in ESLSE. Please show the extent (level of agreement) to each question listed under four components using the following rating scales.

5= Strongly Agree, 4= Agree, 3= Neutral, 2= Disagree and 1= Strongly Disagree.

Put tick mark in the answer box which is relevant for you.

2	Component 1: Enterprise's Process (X1)	Scale				
		1	2	3	4	5
2.1	ESLSE is capable of utilizing time-based continuous replenishment logistic solutions					
2.2	ESLSE is capable of utilizing time-based response logistics solutions					
2.3	ESLSE is capable of utilizing time-based Just-in-time to support customers logistics solutions					
2.4	ESLSE is capable of providing shorter or smaller lot size shipments wherever possible					
2.5	ESLSE has established clearly stipulated operational procedures for expressing service deliveries					
2.6	ESLSE has operational procedures to provide customers with door-to-door delivery services					
2.7	ESLSE has established process to support flexible scheduling solutions as needed by clients					
2.8	ESLSE has established processes to meet changing customer requirements at short notice					
2.9	ESLSE's operational procedures has helped customers achieve efficient order processing as needed by clients					
3	Component 2: Staff Competences (X2)	1	2	3	4	5
3.1	ESLSE's staff are having positive attitude towards their work					
3.2	ESLSE's staff have adequate knowledge/understanding to customers' needs and requirements					
3.3	ESLSE's staff have adequate skill of handling customer feedback					
3.4	ESLSE's staff are excellent at communicating with customers to ensure order processing					
3.5	ESLSE's staff have a good customer service approach to clients					
3.6	ESLSE's staff are willing to help customers					
3.7	ESLSE's staff have never been too busy to respond to customers' needs and requirements					

<b>4</b>	<b>Component 3: Distribution Support (X3)</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
4.1	ESLSE is capable of providing customers with adequate facility services					
4.2	ESLSE is capable of providing customers with extensive logistic service distribution coverage					
4.3	ESLSE is capable of providing customers with global distribution coverage					
4.4	ESLSE is capable of providing door to door transportation services					
4.5	ESLSE is capable of providing customers with adequate warehousing and storage services					
4.6	ESLSE is capable of providing customers with modern warehousing and transportation (distribution) management system					
4.7	ESLSE is capable of providing customers with damage free shipment					
4.8	ESLSE is capable of providing customers with adequate packaging services					
4.9	ESLSE is capable of providing customers with efficient loading services before shipment					
4.10	ESLSE is capable of providing customers with efficient unloading service after shipment					
4.11	ESLSE's charges in relation to the facility services rendered are reasonable					
4.12	ESLSE provide transport services/network that helped customers to achieve cost saving .					
4.13	ESLSE provide distribution network that helped customers to achieve cost saving .					
<b>5</b>	<b>Component 4: Information and Communication Technology (X4)</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
5.1	ESLSE uses advanced computerized documentation systems to manage order processing					
5.2	It is easy to access the ESLSE's systems to process your documents					
5.3	It is secure to use ESLSE's systems by all customers at their convenience					
5.4	ESLSE uses state-of-the-art software to forecast and organize delivery schedules					
5.5	Ict is facilitating service delivery process					

**Part Three: Logistics Service Delivery (Y)**

Indicate your responses to the following statements regarding logistics service that your enterprise uses. Put your choice number in the answer box. Where: 5= Strongly Agree, 4= Agree, 3= Neutral, 2= Disagree and 1= Strongly Disagree

<b>6.</b>	<b>Logistics Service (Y)</b>	<b>Scale</b>				
		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>6.1</b>	ESLSE is capable of delivering expedited shipments to meet customer needs					
<b>6.2</b>	ESLSE is capable of providing low cost shipment service delivery					
<b>6.3</b>	ESLSE is capable of providing rapid response to customer requests					
<b>6.4</b>	ESLSE is capable of arranging a flexible delivery schedule to fit with customer's schedule					
<b>6.5</b>	ESLSE's current overall logistics service delivery is satisfactory					

**MANY THANKS FOR YOUR VALUABLE CO-OPERATION**



# Appendix II

## SPSS OUT PUT

### Annex I-Cronbach's Alpha values

Enterprises Process

#### Reliability Statistics

Cronbach's Alpha	N of Items
.928	9

Staff Competence

#### Reliability Statistics

Cronbach's Alpha	N of Items
.901	7

Distribution Support

#### Reliability Statistics

Cronbach's Alpha	N of Items
.952	13

ICT

#### Reliability Statistics

Cronbach's Alpha	N of Items
.825	5

Logistics Service Delivery

#### Reliability Statistics

Cronbach's Alpha	N of Items
.860	5

## Factor Analysis

### KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.887
Approx. Chi-Square		6654.319
Bartlett's Test of Sphericity	Df	741
	Sig.	.000

## Multicollinearity Check

### Coefficients<sup>a</sup>

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	.120	.147		.819	.414		
1 EnterProcess	.075	.064	.079	1.166	.245	.394	2.537
1 StafCompet	.083	.055	.081	1.509	.133	.627	1.595
1 DisSupp	.278	.067	.269	4.152	.000	.425	2.352
1 ICT	.511	.063	.520	8.162	.000	.441	2.270

a. Dependent Variable: SerDelivery



Values of the residuals are independent

**Model Summary<sup>b</sup>**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.838 <sup>a</sup>	.703	.696	.48103	1.868

a. Predictors: (Constant), ICT, StafCompet, DisSupp, EnterProcess

b. Dependent Variable: SerDelivery

Correlations						
		SerDelivery	EnterProcess	StafCompet	DisSupp	ICT
Pearson Correlation	SerDelivery	1.000	.668	.549	.711	.798
	EnterProcess	.668	1.000	.551	.717	.678
	StafCompet	.549	.551	1.000	.494	.563
	DisSupp	.711	.717	.494	1.000	.664
	ICT	.798	.678	.563	.664	1.000

**ANOVA<sup>a</sup>**

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	90.952	4	22.738	98.267	.000 <sup>b</sup>
	Residual	38.411	166	.231		
	Total	129.363	170			

a. Dependent Variable: SerDelivery

b. Predictors: (Constant), ICT, StafCompet, DisSupp, EnterProcess

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error			
				Beta		
1	(Constant)	.120	.147		.819	.414
	EnterProcess	.075	.064	.079	1.166	.245
	StafCompet	.083	.055	.081	1.509	.133
	DisSupp	.278	.067	.269	4.152	.000
	ICT	.511	.063	.520	8.162	.000

a. Dependent Variable: SerDelivery

## Regression Analysis

### Model Summary<sup>b</sup>

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.838 <sup>a</sup>	.703	.696	.48103

a. Predictors: (Constant), ICT, StafCompet, DisSupp, EnterProcess

b. Dependent Variable: SerDelivery