

**ADDIS ABABA UNIVERSITY**  
**SCHOOL OF COMMERCE**  
**DEPARTMENT OF LOGISTICS AND SUPPLY CHAIN**  
**MANAGEMENT**



***ASSESSEMENT OF SERVICE QUALITY OF DRY PORTS OF  
ETHIOPIA :THE CASE OF  
SEMERA DRY PORT***

***A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE  
REQUIREMENTS FOR THE DEGREE OF MASTERS OF ARTS IN  
LOGISTICS AND SUPPLYCHAIN MANAGEMENT***

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## Declaration

I, Lebassie Mesfin Mekonnen, announce this research paper entitled “Assessment of service quality of dry ports of Ethiopia the case of Semera Dry port” is my own and I dare to say original research work that has not been produced by others in any other universities for any other requirements in any form. To this end, I acknowledged all sources of information that I used to produce the study appropriately and I would say perfectly.

Lebassie Mesfin

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## Letter of Certification

This to certify that Lebassie Mesfin has carried out his thesis work on the topic entitled “Assessment of service quality the case of Semera Dry port” under my guidance and supervision. Accordingly, I here assure that his work is appropriate and standard enough to be submitted for the award of Master of Arts in Logistics and Supply Chain Management.

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## LIST OF ACRONOMYS

DPSE.....	Dry Port Service Enterprise
ESLSE.....	Ethiopian Shipping and Logistics Service Enterprise
F.Y.....	Ethiopian Fiscal Year
GTP .....	Growth and Transformation Plan
MoFED.....	Ministry of Finance and Economic Development
SERVQUAL.....	Service Quality
SPSS .....	Statistical Package for Social Science
TEU.....	Twenty Feet Equivalent Units
UNCTAD.....	United Nations Conference on Trade and Development
UNECA .....	United National Economic Commission for Africa

## ABSTRACT

*Ethiopia is landlocked. As a result, the country has been compelled to use neighbor countries for its imports and exports. In order to ease some of the problems in the transit countries, Ethiopia has started constructing dry ports in its hinterland along the transit corridors. Among the planned dry ports, Modjo and Semera dry ports have become operational. To reap the maximum benefit from those dry ports, the efficient and effective performance of the dry ports is very crucial and to do that it is important to identify factors which influence the performance of dry ports. Therefore, this study tried to examine factors that influence the performance of dry ports from port users perceptions. This paper assess on Service quality. Primary data was collected from 130 sample customers of the port which are selected based on convenience sampling technique. The data was collected using questionnaire and the data was analyzed using descriptive statistics. The result of the analysis indicated that, cargo handling equipment, customs operations, port infrastructure, size of dry port, port staff, reliability of port operations and quality of logistics service are found to be important factors in determining the performance of semeradry port. Based on the findings of the study it were recommended that investment in container handling equipment and other port infrastructure, improvement in efficiency of customs operations, expansion of port area, employing adequate skilled port staff and improving the reliability and quality of logistics service of the ports are important.*

*Key words: dry port, performance, determinants, customers*

# CHAPTER ONE

## 1. INTRODUCTION

### 1.1 Background of the Study

The business environment is constantly changing and the demand for adaptability among organizations tends to increase. According to Olle (2007), demands from customers, technological development, change of value and globalization are factors that drive the need to change and develop an organization. In cognizant to this, the importance of service quality is increasing both nationally and internationally and the delivery of high service quality is considered vital and strategic importance to not only a company's business but also the national and international economy (Ibid). Accordingly, extensive literatures on the service quality of different service provider organizations like that of banks, hospitals, universities, hotels, training institutions, telecommunication etc. are developed by different authors at different times and boldly underlined the very importance of service quality to the success of the respective business(Olle, S. (2007).Analyzing Service Quality).

The establishment and explosion in global supply chains in the 1990s, coupled with export oriented growth strategies adopted by developing countries resulted into a paradigm shift in freight distribution systems (UNCTAD (2003).development of multimodal transport and logistics services). Multi modal transport and dry ports turned out to be the focal point in the new supply chain and logistics strategy formulation, first with the implementation in USA and developed Europe, followed by East Asian countries and then more recently Africa. As rightly noted by UNCTAD (2003), this was mainly due to insatiable focus on trade which resulted into diminishing returns, congestion, and a significant fall in efficiency.

East Africa was comparatively late in regard to containerization and dry port development. East African countries were only under pressure recently to refocus on containerization aspects due to relatively impressive economic growth figures averaging 5% per annum, and rapid increase in trade volume with the Far East, particularly with China (UNCTAD (2002)). In order to reduce congestion and quicken the flow of containers and cargo at the regional major sea ports of Mombasa (Kenya) and Dares salaam (Tanzania) UNCTAD (2002) noted that governments recently took concrete steps to prioritize dry ports development to smoothen the flow of supplies and trade across the East African Countries that include; Kenya, TanzaniaUganda, Rwanda, Burundi,Democratic Republic of Congo and Southern Sudan. However, the process was gradual beginning with setting up necessary laws, conducting feasibility studies, creation and review of institutional structures and finally sourcing private investors in dry port development. Governments are making efforts to improve the road and railway networks to facilitate speedy and affordable movement of cargo to and from the region (Ibid).

UNCTAD (1991) informed that dry port as an inland terminal to which shipping companies issue their own import bills of lading for import cargoes assuming full responsibility costs and

conditions and from which shipping companies issue their own bills of lading for export cargo or a common user facility with public authority status, equipped with fixed installations and offering services for handling and temporary storage of any kind of goods (including containers) carried under customs transit by any applicable mode of transport, placed under control and with customs and other agencies competent to clear goods for home use, warehousing, temporary admission, re-export, temporary storage for onward transit and outright export.

Building a dry port with a capacity of handling full and empty container promotes the through-transport concept. The door-to-door transport concept involves the adoption of procedures to transfer goods from their place of origin to their final destination without intermediate customs examination. For land locked countries, the concept envisages no internal examinations of goods or containers by customs at the seaport. This concept offers a potential for substantial transit cost saving to be reaped (UNCTAD, 1991).

Ethiopia due to delay in clearance of goods as a result of the increase in the volume of goods imported and exported by Ethiopians who are the largest users of the port is partly attributed to the congestion of the port of Djibouti which the country relies on its trade industry. According to the report by Addis Ababa Chamber of Commerce and Sectorial Associations (2009), this increases the demurrage and opportunity costs incurred which calls the country for the construction of dry port. As indicated by the Chamber (2009) and Fekadu (2013) the adverse effects of uni-modal transport system were port congestion, long transit time for import transit cargoes and unavailability of empty containers for export transit cargoes at port of Djibouti. Accordingly, through bill of lading implementation has been signed between Ethiopia and Djibouti in 2008.

## **1.2. Statement of the Problem**

Many landlocked developing countries continuously face the challenge of physical isolation, Supply chain related barriers from the sea and the high costs of trading with the rest of the world (United Nations Economic Commission for Africa, 2011). In order to counter these challenges Associated with land locked ness, the dry port concept evolved. Dry ports also evolved out of the Challenges that faced existing sea ports i.e., due to the increase in size and capacity of container Vessels, sea ports increasingly faced the challenge of inability to handle import and export cargo in a regular manner. This resulted into congestion at different sea ports due to long waiting time of trucks and haulage vehicles (Woxenius, Roso, &Lumsden, 2004) (Notteboom& Rodriguez J.P., 2009), observed that the evolution of dry ports was looked at as the cycle in the continuous development of containerization and intermodal transport.

The major driving force for the establishment of multi-modal transportation system in Ethiopia are the problems of freight transit cost, freight delays and safety of freights leaving port lessness of the country aside. 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. It is the main route for Ethiopia's import and export trade which is dominated by freight transport. Ethiopia has moved to establish various inland dry ports. This move will help the country save foreign currency by mitigating demurrage charges that are paid at Djibouti port.ESLSE also offers on carriage possibilities to inland dry ports such as Modjo /Adama, Semera, Kombolcha, Dire Dawa, Mekele, gelan and Comet (Addis Ababa) and customer's bonded warehouse for both passenger cars as well as containers.

The research will try to assess the service quality of the multi modal transportation system specifically in semera dry port case in order to improve the service quality and enhance the overall picture of the company by identifying the major problems that the dry port faces in accordance with multi modal transport system such as freight transit cost, freight delays and safety of freights.

### **1.3 Research Questions**

- How much quality service Semera dry port delivers to its customers in terms of different service measurement?
- Which dimension of enterprise service's service quality contributes much towards overall customer satisfaction, loyalty and need to give priorities for improvement in semera dry port contexts?
- How the qualities of port infrastructure have impact on Semera dry port performance?
- How port staffs influence the performance of Semera dry port?
- What should semera dry port do to improve its Service quality to satisfy its customer?

### **1.4 Objective of the study**

#### **1. 4.1 General Objective of the Study**

General objective of the study is to assess service quality at Semera dry port.

#### **1.4.2 Specific objectives**

- To determine the service delivery quality of Semera dry port with respect to tangibility.
- To uncover the service delivery quality of the dry port in terms of reliability.
- To spell out the service quality of the dry port in cognizant to responsiveness.
- To indicate the service quality of the dry port in relation with assurance.
- To point out the service quality of the dry port in terms with empathy.

## 1.5 Significance of the Study

Dry port is a new concept to Ethiopia case which has had a history of only a decade. The findings of this study therefore would reveal the major problems of Semera dry port and terminal in terms of service delivery quality which help the dry port and the ESLSE (which is the administrator of the dry ports of the country) to recognize their weaknesses and to take any relevant decisions accordingly. As an aside, this study is going to be significant for planners, managers, leaders and experts in the area as they would get at least an initial idea out of it. Finally, student researchers or other academicians could use this study as a reference to conduct a more comprehensive study on the same topic or related topics.

## 1.6 Scope of the study

The study is confined assessing only service quality in semera dry port on assessing the overall functions and flow of procedures and guidelines throughout the organization. Among the dry ports in Ethiopia, this study will take the case of Semera dry port only. Scarcity of funds as well as time constraints will not permit the study to cover all the dry ports in Ethiopia. Furthermore, the study would not include all important variables that have an impact on the performance of dry port only the service quality is deeply scrutinized.

## 1.7 Limitation of the Study

Furthermore, the study will assess the service delivery quality of the samara dry port and terminal from the perspective of customers. This can be deemed as a limitation as it could be more complete if the perspective of the service providers would also be incorporated.

## 1.8 Definition of Key Terms

**Dry port:** is an inland intermodal terminal directly connected by road or rail to a seaport and operating as a Centre for the transshipment of sea cargo to inland destinations (Fekadu M.2013)

**Quality:** the average level... positive perception that customers have towards the services that they receive from the service provider(Hayes, 1997). In this case Semera dry port.

**Service:** the different logistic activities that Semera dry port delivers to its customers (own).

**Customer:**is commonly used to refer to end-user of a product or a service. “*Customer is a Generic term referring to anybody who receives a service or a product from some other Person or group of people*” (Hayes, 1997). In this case, customers or users of serviceare importers of goods, freight forwarders and custom clearing agents.

## **1.9 Organization of the study**

This thesis is organized as follows. The first section is chapter one including the background statement of the problem, objectives, significance, scope. The second section elaborates a review of some literatures which encompass theoretical, empirical, methodological, conceptual and practical about the overall logistics. A brief description of the study area and a detailed explanation of the methodologies used for the study are presented in section three. The findings of the study will be presented. Finally the summary, conclusions and recommendation will forwarded to improve the gaps in the study area.

## CHAPTER TWO

### 2.1 An Overview of Service, Quality and Service Quality

#### 2.1.1 The Concept of Service

It is important to distinguish between a service and goods. Goods are most tangible (an object) while services are more of an act (a deed, performance or an effort). Olle (2007).according to Gummesson, (1994), a service design which details a service, service system and the service delivery process must consider customers, staff, technology, the physical environment, and the consumption goods. one of the most important and unique characteristics of services is that service are processes, not things, which means that a service firm has no product, only interactive processes. A service is the intangible equivalent of an economic good. Service provision is often economic activity where the buyer does not generally, except by exclusive contract, obtain exclusive ownership of the thing purchased Kotler et al., 1996 (cited in Ashim , 2011).

A service is any act or performance one party can offer to another that is essentially intangible and does not result in the ownership of anything. Its production may or may not be tied to a physical product (Ibid) quality is insufficient to understand service quality due to intangibility, heterogeneity, inseparability and perishability.so as a conclusion Kotler and Keller (2012 ) defined service as 'any behavior or act based on a contact between two parties: the provider and the receiver, and the essence of this reciprocal process in intangible.

#### 2.1.2 The Essence of Quality

Quality has many different definitions and there is no universally acceptable definition of quality. They claim it is because of the elusive nature of the concept from different perspectives and orientations and the measures applied in a particular context by the person defining it. Wicks &Roethlein, (2009),Corporate esteem is represented in an organization as award winnings, badges such as ISO 9000, superior offices, and infrastructures and factors that possess power in the market place and government. This involves factors such as bigger rather than better, taking risks and seeking challenges, therefor the concept of benefits is the key to achievement of quality and of most importance (Dursun, 2013).so as a matter of fact quality is considered to be a really significant concept in our real life.and there for its recognized as a strategic tool (weapon) for attaining operational efficiency and improved business performance ( Kim& Gunther, 2007).

According to Parasuraman, Zeithaml, and Berry (1988) it is identified as two major payoffs of quality; quality creates true customers and it leads to efficiencies. Excellent service pays off because it creates true customers who are like annuities. They keep pumping revenues into an organization (Ibid). Quality improvements lead to operational efficiencies beyond those associated with scale economies.

### **2.1.3. Service quality Concept**

The harmonious mix up of the two pillar concepts is a major concept to look in to where Service quality is considered an important tool for a firm's struggle to differentiate itself from its competitors (Ladhari, 2008). especially the fact that it offers a competitive advantage hence bring customer satisfaction. And yet an expectations to perception of performance received from that of consumers judgments about entities overall excellence (Zeithaml and Parasuraman).

When we further seek to define service quality, companies will be able to deliver services with higher quality level presumably resulting in increased customer satisfaction. Understanding service quality must involve acknowledging the characteristics of service which are intangibility, heterogeneity and inseparability, (Parasuraman et al., 1985); (Ladhari, 2008). In that way, service quality would be easily measured. In this study, service quality can be defined as the difference between customer's expectation for service performance prior to the service encounter and their perception of the service received. Customer's expectation serves as a foundation for evaluating service quality because, quality is high when performance exceeds expectation and quality is low when performance does not meet their expectation (Asubonteng et al., (1996). The customer's total perception of a service is based on his/her perception of the outcome and the process; the outcome is either value added or quality undertaken by the customer (Edvardsson, 1998). Therefore, having a better understanding of customer attitudes will help know how they perceive service quality in dry port and terminal.

In the context of dry port and terminal, the researcher is interested in learning more about the factors associated to service quality perceived by customers and how service quality is measured. It is very vital to note here that, service quality is not only assessed as the end results but also on how it is delivered during service process and its ultimate effect on consumer's perceptions (Douglas & Connor, 2003).

According to Parasuraman et al. (1997) and Ham et al. (2003), information on service quality gaps (can be positive or negative) can help managers to diagnose where performance improvement can best be targeted. And it's Also where assessment of expectations are highest facilitates prioritization of performance improvement.

## 2.1.4 Service Quality Models

Measuring service quality has been one of the most recurrent topics in management literature, This is because of the need to develop valid instruments for the systematic evaluation of firms' performance from the customer point of view; and the association between perceived service quality and other key organizational outcomes, Cronin et al., (2010) in which this led to the development of models for measuring service quality.

**Gilbert et al.**, (2004) reviewed the various ways service quality can be measured. They include; ; 1) **the expectancy-disconfirmation approach** which is associated with the identifying of customer expectation versus what they actually experienced. It focuses on the comparison of the service performance with the customer's expectations. 2) **Performance-only approach** merely assesses service quality by merely asking customers about their level of satisfaction with various service 3) **Technical and functional dichotomy approaches** identify two service components that lead to customer satisfaction namely, the technical quality of the product which is based on product characteristics such as durability, security, physical features while functional quality like such as courtesy, speed of delivery. 4) **Service quality versus service satisfaction approach** mainly focuses on two service components the transition-specific assessment This approach links perceived quality at the time of the service encounter and overall satisfaction with the service. 5) **Attribute importance approach** focuses on the relative weight on the importance the customer places on attributes found to be linked

**Parasuraman et al.**( 1985) developed a conceptual model of service quality where they identified five gaps that could impact the customer's evaluation of service quality in four different industries (retail banking, credit card, securities brokerage and product repair and maintenance). These gaps were; Gap 1: Consumer expectation what features a service must have in order to meet consumer needs and what levels of performance on those features are needed to bring deliver high quality service. Gap 2: Management perception This gap arises when the company identifies want the consumers want but the means to deliver to expectation does not exist. These could affect service quality perception of the consumer.

Gap 3: Service quality specifications gap companies could have guidelines for performing service well and treating consumers correctly but these do not mean high service quality performance is assured. This affects the delivery of service impacting the way consumers perceive service. Gap 4: Service delivery can affect not only consumer expectations of service but also consumer perceptions of the delivered service and this could influence service quality perceptions by consumers. Gap 5: Expected Service – it showed that good service quality is meeting or exceeding what consumers expect from the service and that judgments of high and low service quality depend on how consumers perceives.

To measure quality of service various researches have been tried to develop quality Measurement models in the light of the changing business scenario and analyze the models Later in (1988) Parasuraman et al. developed the SERVQUAL model which is a multi- item scale developed to assess customer perceptions of service quality in service and retail businesses Which decomposes the service quality scale into five constructs as follows Tangibles, Reliability, Responsiveness, Assurance and empathy, which bases upon capturing the gap between customers' expectations and experience which could be negative or positive if the expectation.

The SERVPERF model developed by Cronin & Taylor, (1992), was derived from the SERVQUAL model by dropping the expectations and measuring service quality perceptions just by evaluating the customer's the overall feeling towards the service.

Notwithstanding its popularity and wide spread application SERVQUAL has been subjected to a number of theoretical and operational criticisms.

- 1) Theoretical paradigm objections, gaps, models, process orientations, dimensionality and
- 2) Operational expectations, items composition, moment of truth, polarity, scale point, two administration and variance extracted.

Even though such kinds of critics are given still the model has a wide acceptance with respect to measuring service quality. In addition to these SERQUAL has been tasted in many service industries and its results support its universal application.

## **2.2 Dryport Concept:**

The word dry port has been defined by many scholars and the definitions reflect the broad view of the concept from different perspectives. For example, Roso et al., defined dry port as an inland intermodal terminal directly connected to seaport(s) with high capacity transport mean(s), where customers can leave/pick up their standardized units as if directly to a seaport (Roso, 2009). Several definitions can be found in literature that describe the dry port concept as an inland intermodal terminal that is directly connected via rail and/or truck to one or more water ports, and which can substitute certain port services in certain areas. Important to note is that the definitions emanate from the perspective of the physical facility, function and purpose. The definitions were also born of the fact that the periodical steep rise in container flows resulted in crowded terminals, congestion and prolonged dwell time for containers. This definition takes into account the fact that a dry port does not only do the traditional role of transshipment as inland terminals but in addition to this role, it provides other services like; consolidation, storage(both cargo and empty containers), maintenance and repair of containers, and customs clearance.

According to the United Nations Conference on Trade and development(UNCTAD,1991), a dry port is “a common user facility with public authority status, equipped with fixed installations and offering services for handling and temporary storage of any kind of goods(including containers) carried under customs transit by any applicable mode of transport ,placed under customs control and with customs and other agencies competent to clear goods for home use, warehousing, temporary admissions, re-export, temporary storage for onward transit and outright export.” Additionally, to the basic services, trans-shipment, that a conventional inland terminal provides, such services as freight storage, consolidation, storage of empty containers, maintenance and repair of containers, customs clearance, and other services should be available at full-service (Roso et al., 2006). This definition takes into account, the value adding role of dry ports like freight consolidation and distribution of cargo.

The following key terminologies are defining and deriving a proper meaning from the word ‘dry port’. The three terms are Containerization relates to the fact that dry ports are linked with container handling, both maritime and domestic, as well other intermodal activities like swap bodies, consolidation, trans loading, deconsolidation and small scale manufacturing. Dedicated Link: A dry port must be linked with a high capacity corridor. Normally; rail and barge are the recommended links although haulages or trucks may also be used. **Massification:** economies of scale inform of reduced costs and time within the distribution process. Handling large volumes at a minimum unit cost and shortest time is paramount in positively impacting on the supply chain network. However it’s important to note the difference between a dry port and an inland container depot (ICD).Whereas an Inland container depot handles only containerized cargo, a dry port handles various types of cargo in addition to other services earlier mentioned.

- **Role and purpose of dry port :**The role of a dry port within this system is becoming particularly important. Due to the roles of dry ports in the coordination of materials and information flows; minimization of costs; as well as reliable cargo handling which is becoming crucial as a functional part of the global logistics and supply chain management. potential benefits of dry ports are summarized by **UNCTAD (1991)** as follows:
- **Avoidance of storage, demurrage and late documentation fees:**In traditional transit systems, goods are frequently held up it may be due to absence of documentation or commercial invoices, prepayment of handling charges in terms of currency or is can be availability of onward transport, lapse or documentation irregularities. With a dry port and combined transport bills of lading, customs inspection at the maritime ports and at the borders of transit countries should be unnecessary or at least greatly minimized and many of the usual causes of delay at maritime ports will be removed.

- **Greater use of containers:**In containerization cargo is carried in boxes of standard dimensions allows these containers to be handled mechanically, transferred from one mode of transport to another efficiently and without disturbing the actual cargo inside; owing to high unit volume and weight handled per move, were the productivity of handling equipment is greater than of cargo were handled in break-bulk.
- **Lower door-to-door freight rates:** containerization contribute to the introduction of lower through-rates.
- **Better utilization of capacity:** it reduce empty rail wagon increase in load factor may enable some savings to be made in overall transport costs.
- **Benefits to sea ports:** reduced handling of goods at related maritime ports. reduction in demand for storage space owing to faster onward transit, saving in both capital costs of providing handling equipment and warehousing as well as in equipment maintenance costs.
- **Increased trade flows:** beneficial to a region or to the country as a whole.
- **Improved communications:** now a days information is the key for everything so, rapid transfer of documentation and information, fundamental to efficient cargo transit, this introduce computerized freight tracking or customs clearance to the provision of a dry port.
- **Avoidance of clearing and forwarding agents' fees at sea ports:**this in turn avoids combined transport bills of lading or multi-modal transport documents. This is due to documents are issued by a shipping line because the shipping line takes responsibility for the passage of goods through the maritime port. This in this in turn hence importer or exporter does not need to employ a clearing and forwarding agent.

### **2.2.1 Theoretical Literature Review**

Globalization, emerged from trade growth between continents, regions and countries, has led to an expansion of global sea trade with huge impacts for ports. In this regard dryports or in general Ports have always had an important role in the development of national and international trade of countries, this in turn facilitates globalization, implications for sustained economic development of their regions (Gaur, 2005). This facilitation will further enhance infrastructure, equipment, governance structure and integration in logistic networks (Caldeirinha et al. 2011).

With the introduction of global multimodal supply chains, dry ports have been assumed increasing importance to suit the need for market development, smooth integration and closer collaboration between the different participants of the supply chain and transport network. Forming strategic alliances or buying out existing dry ports so as to optimize the supply chain (Lee and Kim, 2003).

The integration into the world economy today is mainly due to be expressed in delving and/or receiving goods and services on time and at the lowest possible cost. Consequently, the efficient supply of logistics services helps to facilitate international trade. Hence, the more timely, reliable and efficient the logistics supply chain, the more efficiently and reliably goods can be delivered from the point of production to the point of consumption (Tilahun, 2014).

In this manner dry ports/ inland centers are playing an increasingly pivotal role in the multimodal transport network that sustains economic activity by delivering key inputs to local enterprises and facilitating their exports (Tongzon & Heng, 2005). Mostly port authorities and operators have made significant infrastructure investments in order to reduce operational costs and improve service quality, which are important factors that influence terminal performance, in an extinguishing manner the environment, and its performance of a container terminal is determined by several factors, such as the market of the region where it is located, the physical and organizational capacity, the integration in the logistic networks, the level of competition, maritime and inland accessibilities, the type of handling equipment used at the quay and parking areas, the liner shipping services and inland networks to which they are connected (Tongzon & Heng, 2005). The measures of port efficiency or performance indicators use a diverse range of techniques for assessment and analysis. UNCTAD (1982) suggests two categories of port performance indicators: macro performance indicators aggregating port impacts on economic activity, and micro performance indicators input/output ratio measurements of port operations. (Richard (2004)). There are many ways of measuring port efficiency or productivity, which could be categorized into three broad aggregations which are: physical indicators, factor productivity indicators, and economic and financial indicators. Physical indicators generally refer to time measures and are mainly concerned with the ship (e.g. ship turnaround time, ship waiting

time, berth occupancy rate, working time at berth). Sometimes, co-ordination with land modes of transport is measured, e.g. cargo dwell time or the time elapsed between cargo being unloaded from a ship until it leaves the port. Factor productivity indicators also tend to focus on the maritime side of the port, for example to measure both labor and capital required to load and unload goods from a ship. Similarly, economic and financial indicators are usually related to the sea access, for example, operating surplus or total income and expenditure related to gross registered tons (GRT) or net registered tons (NRT), or charge per twenty foot equivalent unit (TEU).

Furthermore, Inland accessibility and terminal hinterland are driven by transport costs, alternative modes, capacity and quality of inland connections and transport service quality, as well as integration on the main land transport networks or at the crossroads of inland trade routes.

Some argued that coordination between the active players of both hinterland network and port is necessary. port service quality majorly depends on the port authority and that influences the overall port performance and including many players like , freight forwarders, container operators and port operators.and also one shall bear in mind that improve competitiveness and performance of the supply chains in which they are integrated shall enhance service quality, ports and terminals. And also the transport network necessarily be an efficient and effective connection point between different transportation modes.

Nation stated that port performance is notably associated with operational issues, i.e. the efficient use of infrastructure, superstructure, and all other resources used. This association has for long affected the structuring of port performance measurement frameworks. Contrary to what is observable in other service industries, attention on the demand side reflections, i.e. the users point of view, has been a recent phenomenon, according to the European Commission (CEU, 2007) mentioned that port users and their views are important elements in the whole process and deserve further attention – endorsing in essence that port performance is a construct of two components, namely efficiency and effectiveness (Brooks and Pallis, 2008; Brooks et al, 2011; Brooks and Schelinck, 2013).and also different financial institutes studs indicate that Logistics Performance Index is broader than a study of ports alone, and measures logistics instead.and its yet ever increasing and interesting as it includes port users' evaluations on specific factors dealing with logistics performance, as well as a framework on how to measure them. The Logistics Performance Index measures on-the ground trade logistics performance based on six dimensions: timeliness, international shipments, tracking and tracing, customs, infrastructures and services quality.

In order to help the study of Logistics Performance there are two major questionnaires developed by the World Bank namely international and domestic ones. The international questionnaire is concerned with major six key areas specifically: Efficiency of the clearance process (including customs), Competence and quality of services, the time difference between the scheduled or expected delivery time, Quality of trade and transport infrastructure, Ability to track and trace, arranging competitively priced shipments.

When we come to the domestic one, which tries to provide qualitative and quantitative data on the logistics environment in the countries they work. Including five major points of analysis factors like quality, cost and efficiency. Each category having its own fractions these critical issues need to show flexibility/agility in adapting new requirements and market changes, making the necessary adjustments to meet increased customer demands. In addition, a well-organized terminal layout can improve the terminal productivity and capacity and, consequently, affect performance and service quality, particularly when large vessels call demanding for large space areas.

## **2.2.2 Empirical Literature Review**

In the following sub-section we shall see some basic empirical evidences which are basic to our study. According to Caldinahaet.al (2011) on their study they focus on analyzing the impact of characterizing factors on the port performance, using operational, financial and efficiency indicators. In which the study aims to analyze which characterizing factors are relevant and what measure the relationships. Where the study employed statistics of factor analysis and linear regression methods based on a sample of 43 European ports and the results of this study indicate the existence of a relationship between performance and several variables that characterize the port. This study also revealed the impacts of other factors like infrastructure, specialization, governance, size location and logistic integration services in the efficiency ports operational and financial performance.

As the studies indicate logistical factors influencing port performance taking Kenya port Authority as a case study. The study uses survey research design and employs descriptive statistics analysis and summarizes the causes of poor performance in the port of Mombasa according to the findings are: lengthy customs clearing procedures, rapid growth of container trade, frequent break down of Kenya Revenue Authority (KRA) and Kenya Ports Authority (KPA), IT Systems, slow gate out process and slow container off-take to Container Freight Ruto and Datche (2015)

Kim and Gunther (2007) also express that as a result of the huge growth rates on major maritime container routes; competition between container ports has considerably increased. Not only handling capacities of container terminals worldwide got larger and large. Moreover, significant gains in productivity were achieved through advanced terminal layouts, more efficient IT support and improved logistics control software systems, as well as automated transportation and handling equipment. Storage and stacking policies should be also taken in to account. Large container terminals in Europe store a total of several 10,000 containers with average dwell times of 3-5 days and daily turnover of 10-20,000 containers. The storage area is separated into blocks, which are organized into bays, rows and tiers. UNESCAP (2010) further proposes the possible dry port layout that could facilitate service efficiency. Its design depends on factors like functions, locations, handling system selected, design capacity and main modes of transport handled. According to UNCTAD (2003) in international logistics; corruption, theft and accidents not only imply a direct cost, but also reduce competition of exports and imports.

Leveque & Roso (2002) similarly mentioned that port effectiveness operating objectives differ between privately- owned and government- owned ports. If the port is privately owned, its effectiveness objectives focus on economic operating objective that might be to maximize profits or to maximize throughput subject to a minimum profit constraint. But if the port is owned by government, its effectiveness economic operating objective might be to maximize throughput subject to a zero operating deficit this state is where revenue equals cost.

Nyema (2014) assess factors influencing container terminals efficiency with a case study of the Mombasa Entry Port using a descriptive survey design. This study revealed that factors such as inadequate cargo handling equipment, reducing berth times and delays of container ships, dwell time, container cargo and truck turnaround time, custom clearance, limited storage capacity, poor multi-modal connections to hinterland and infrastructure directly influencing container terminal efficiency. Panayides and Song (2009) also identified information systems, communication and informal relations in the supply chain as essential to performance, productivity and competitiveness of supply chains and port networks. Information and communication systems can improve the efficiency of supply chain operations contributing to achieve its purposes (Cachon and Fisher, 2000).

We can also see and add additional references like identifying the determinant factors for port performance which is out stated by Rajasekar and Deo (2014) as a study conducted on major ports in India during 1993 – 2011. For identifying the factors panel data models like pooled ordinary least square method, fixed effect model and random effect model are used. The results of the study indicated that berth throughput, operating expenses, number of employees, cargo equipment's and idle time showed significant effect on port performance. and this also is emphasized by Ng (2006) asserted that, targeting the container ports in Northern Europe, shipping company considered the effectiveness of port, geographical location, and service quality more important than the cost of port. Also, Ng (2006) proposed that individual groups of port users showed different priority ranks for the importance of different factors. Besides study points out the fact that the select factors for port depend reliability, proximity, frequency, security, and reputation and cost factors that are qualitative factors.

In general, the performance of a port has a multivariable behavior. According to Brooks and Pallis (2008) port performance research can be divided into effectiveness research and efficiency research. Efficiency has been noted as 'doing things right' while effectiveness is 'doing the right things'. The right things are those that are important to the customer. If a negative and significant gap exists between the importance of those right things and the performance of them, in the overall the feedback shows that provided this points government policy-makers with the essential feedback for assessing the governance structure of ports in meeting national strategic objectives.

### **2.3. Basic Functions and performance of Dry Port**

In Being an effective dry port there are two general objectives consolidation of maritime goods in intermodal short and long distance transport flows; and collecting and distribution of local, regional and international transports. To achieve these two objectives it is necessary for the terminal to carry out the following functions: hinterland warehousing; management of container flows to different ports; consolidation of individual container flows; reduction of pre- and end haulage with road transport and expansion of rail transport; offering special- and extra services; reduction of transport costs; and increase the firms of ship owners and the port influence to ensure an intensification of the Transport Chains effectiveness.

This further implies that overall goal for the dry port is to help to improve efficiency and sustainability in complete door-to-door transport chains. The dry port could function as a common multi-modal junction for several ports and transport companies in general. Several others services can be provided at the dry port. Storage of units is frequently offered. It can for instance be storage of empty containers as well as storage of waiting units. This service is indeed very important for the transport system as some regions naturally receive more containers than they send and vice versa. and also Maintenance of units is also a well-developed service.

Dry ports also offer a customs station destined to handle imports and exports. Therefore, they can become an important storage and distribution center of goods to the whole country and to the international market as well.

Dry Ports can be built from scratch or it may be developed from an inland terminal including some additional facilities that are characteristic for dry ports. factors like connection to a seaport either by rail or by road; high capacity traffic mode like rail, offering facilities as can be found in a seaport, line with this conditions there are three main objective of dry ports, functioning as an extra hinterland space for the port/ports and a terminal, act as a high quality terminal while improving the efficiency and effectiveness, and also promoting a modal shift

So In order to implement these objectives, the following functions should be performed in a terminal: Management of container flows to different ports: relevant when a dry port has the connections and communication with several relatively close and the same type of ports (regarding the type of cargo they are handling). Sorting When the goods are transported by a ship, containers have to be sorted in the receiving port since a number of supply chains, which have different points of destination, are concentrated in one ship (Notteboom and Rodrigue, 2009). Consolidation of individual container flows: containers from different shippers can be transported to a dry port, loaded on one shuttle train and transported to the port or far inland destination, for example from Europe to the Far East Transshipment of cargo between different transportation means: having special equipment in a terminal to be able to transfer units from one mode to another. co-ordination of transshipment operations is necessary in order to make the operations less time-consuming. (Beresford and Dubey, 1990) Storing: it is mainly used for distribution service, then the goods are stored for a long time period. Moreover, the space in a dry port hinterland can be used for the long-term storage of empty containers and waiting units. Storing service is very important for the transport networks as some regions naturally receive more containers than they send and vice versa. (Beresford and Dubey, 1990). Reduction of pre- and post-haulage and expansion of rail transport; ports are mostly linked by rail. That brings the possibility to consolidate the goods from different shippers at a dry port and transport them further to the port by rail. (Beresford and Dubey, 1990). Offering special- and extra Services one of special services is customs clearance. When it is done in a dry port instead of the seaport the waiting time is reduced in the port. Usually this time is long and causing congestion. (Beresford and Dubey, 1990)

This service is more relevant if a dry port provides a storage of empty containers that gives enough time for the maintenance of the unit. Many other extra services may be provided in the dry port.

**2.3.1 Determinants of Port Performance:** in identifying the indicators of port performances. Since the environment in which ports operate has changed dramatically, ports are affected by various new forces driving global competition, including the far reaching unitization of general cargo, the rise of mega-carriers, the market entry of logistics integrators, the creation of network linkages among port operators, the development of inland transport networks, and so on (Notteboom and Winkelmanns, 2001). There are seven key determinants of port performance proposed based on the existing literature. These determinants include: Infrastructure: The quality of access to a dry port and the quality of the road/rail/waterway interface determines the quality of terminal performance therefore it is necessary to have scheduled, reliable, transport by high capacity means to and from seaport (Rosset al., 2008). Cargo handling equipment: . Usually container handling equipment are viewed as the main machines for dry ports as well as seaports, and they can greatly influence both the container handling capacities and, in turn, the performance of the dry port (Gujar,2011). Quality of Logistics Service role of freight forwarders is to organize international (or eventually domestic) logistics on behalf of shippers and consignee. This includes organizing transportations with railways or trucking companies, and customs representation activities at the border. They make a key contribution to supply chains by linking with forwarding partners abroad, which essentially insures the continuity of the supply chain, and makes it possible to track shipments in transit. Reliability strikes, equipment breakdown, weather etc, shipping companies and shippers will suffer huge losses due to this kind of unreliability. Supply chain reliability is a major concern for traders and logistics providers alike. In a global environment, consignees require more certainty about when and how deliveries will take place. Customs play a supportive role as it is a logistics center which can provide services such as handling, storage, stuffing/un-stuffing, consolidation, customs clearance and container maintenance. Size of the dry port since the land size determines the total storage capacity of a seaport. It is especially important in the peak season in order to accommodate more as expected, Number of stafflabor costs are also considered as a potential factor that may influence the performance of dry port (Guar, 2011). The number of employees is usually taken as a critical factor influencing businesses of dry ports as more staffs can handle the inbound and outbound containers or bulk cargos more efficiently.

## **2.4 Dry ports experience in different countries: Historical Perspectives**

### ***West European Experience***

Countries like Belgium and Netherlands are more attractive for European distribution center that generates and adds 4-8 billion euro to their GDP by employing several workers. the Netherlands and Belgium, attracting relatively many of these EDCs, deliver clear net economic gains for the regions that attract them. The existence of these EDCs delivers a different kind of benefits. EDCs have a specific set of location preferences, of which (i) proximity to the market, (ii) good multimodal accessibility, (iii) a favorable fiscal climate and (iv) a stable macro-economic and political context are the most important, besides cost levels and a well-educated (multilingual) labor force.

The better these EDCs succeed in efficiently offering necessary services to the logistical supply chain, the more the European economy benefits goods that are imported eventually boil down to lower consumer prices and higher quality levels and availability and For the goods that are exported in lower integrated transportation and production costs, greater availability and higher quality thereby enforcing the competitive strength. Furthermore, when sea ports are facing congestion and efficiency problems appear, expanding the port area by the water may not be the only solution possible. With the implementation of the dry port concept, ports can obtain a great benefit due to the possibility to expand its hinterland into the inland areas, further away from the water, and hereby outsource some of the services to another terminal, for example, container storage, and distribution or customs clearance.

With such a solution, ports are able to send out the freight from their territory quicker and thus emptying space for the newly incoming cargo. For example, in the case of the Netherlands, at the end of 20th century a realization of public policy, which was unfavorable for massive terminal expansion, was especially growing the initiative for establishing the new dry port can be taken by the port authorities, even if the port is not facing congestion problem, or if the port authority simply sees the need to expand its market and attract more companies. Moreover, regarding the fact that the infrastructure of ports' terminals also has negative influence on environment, and therefore ports sometimes have no possibility to expand when they are lacking storage area, due to environmental restrictions, dry ports could be a solution. It would serve as a hinterland of a port, avoiding the expansion of the port's infrastructures by the waterside and water pollution together with other negative impacts for the environment.

#### **China Experience:**

The growing demand of transport logistics service and increase its efficiency the government of china has introduced a directive entitled "Advisory opinions on ways to speed up the development of China's logistics" was introduced on 2001, by six ministries in China. The main function of the system is to accelerate the essential interaction and coordination among transport logistics enterprises, government agencies and relevant institutions at the national level. In order to meet the international demand for integrated logistics services, China needs to restructure its transport system through encouraging a modal shift from sustainable modes of transport-particularly road transport to environmentally modes. The development of Chinese dry port industry is just at the beginning stage. The first Chinese dry port was established in 2002 at Beijing as cooperation between Beijing Government and Tianjin Port. Since then, more dry ports have been established in different regions of China.

Influenced by major seaport of east coast of China, three groups of dry port are formed These three groups mainly contribute to Dalian Port, Tianjin Port and Ningbo and Shanghai Port respectfully. A Comparative Perspective on dry ports in India, China and Western Europe Gujar and Yan, 2010

## **Nigeria Experience**

The rail/ rail head from port to ICD/ Inland Container Depot/ is public NRC/ Nigerian ports authority/ whereas road from port to ICD is federal government and it has no inland water ways transport to ICDs. The ICD's distant from the port is 200km-1500km. There are only few alternative routes that could link multimodal transport from port to ICD. Regarding the regional transport development plans/ transport policies there is no connection to Africa Union (AU) or transport policies.

By considering the above mentioned operations of dry ports of Nigeria the author made a SWOT analysis. Thus substantial revenues from the hinterland shippers' participation, large volumes of cargo to hinterland, control cargoes, destined for neighboring countries, notably Chad, Sudan and Niger, industrial development encouragement and locking Nigeria into international trade flows are taken as the strength of the Nigerian ICD. But the level of government involvement /interference in ports, inadequate infrastructural development in rail ways, excessive pressure on road transport, slow implementation of the new ICD project, lack of an integrated transport system and trained and inexperienced personnel in ICD operations, shortage of computerized cargo tracking system like RFID technology for road haulage vehicles are the weakness.

Moreover, the Nigeria's ICD's have opportunities that could benefit the country as a whole like increased revenue to government from expanded rate, multimodal transport connections and positive tradeoffs, consultation on freight rates, diversified trade, maritime development like expanded shipping activities, connection to landlocked countries, facilitating trade, connection to Africa Union transport policies and attraction of foreign investors. there are also some circumstances that could be challenging like Commercialization, putting pressure on freight charges, Increase in freight rate charges and security measures to counter terrorist threats and arms smuggling, Excessive imports leading to cargo imbalance, High cost of inland transport, Loss of maritime land due to privatization sales, Port activities and environmental hazards.

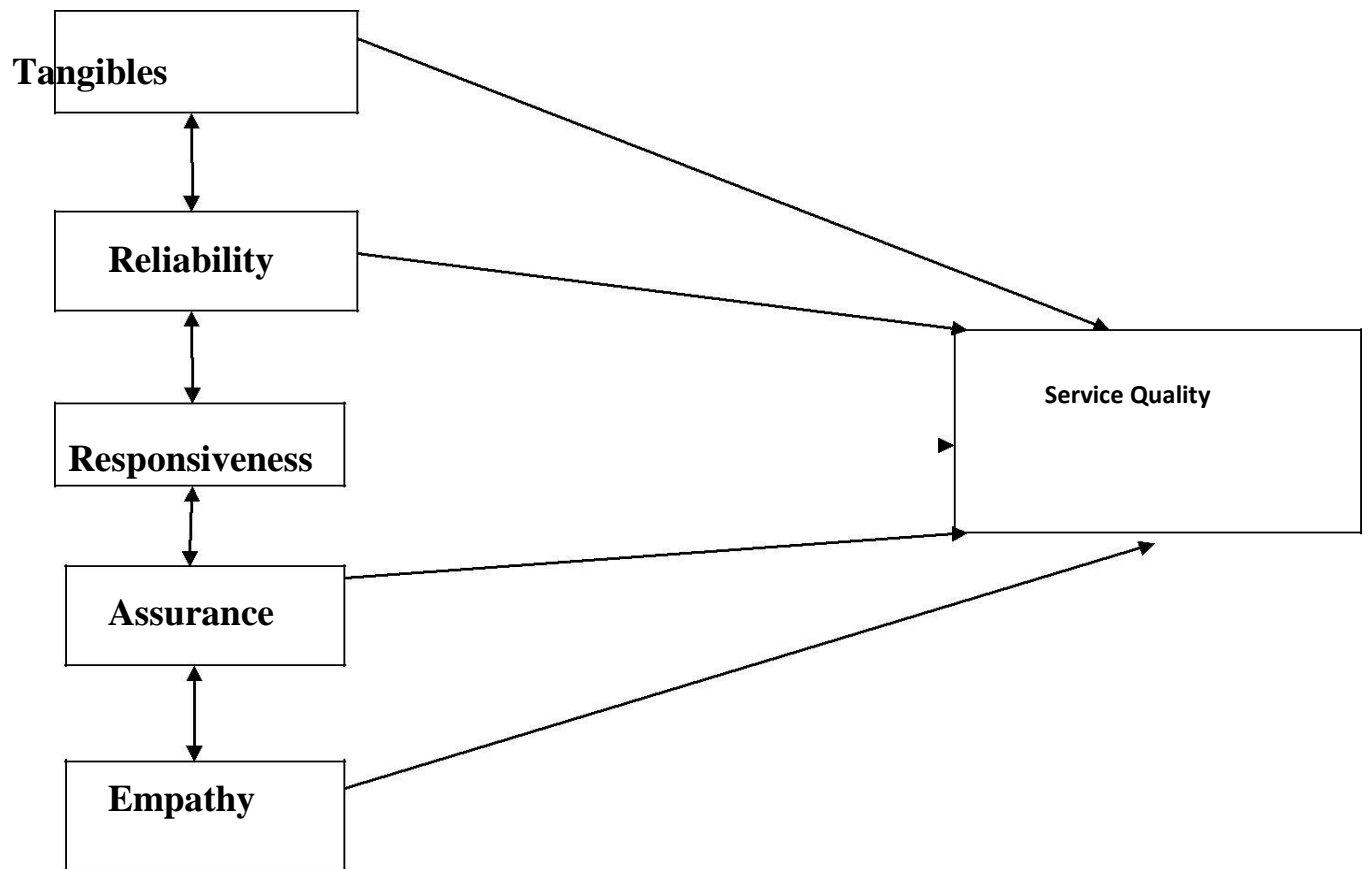
## **Dry Ports in East Africa**

Mombasa and Dares Salaam Sea ports found in Kenya and Tanzania respectively are the current gateways to East Africa from the Indian Ocean, although a third Sea port in Lamu(Kenya) is under construction by China Communications construction Company in a deal worth \$478.9 million to directly link the coast, Kenya, Ethiopia and Southern Sudan. Traditionally, dry ports development and expansion was linked to economic growth and increase in volume of trade. The growth in the volume of trade turned such regions or places into the centers of attraction (Grishi, 2010).Key South East Asian ports like Singapore, Hong Kong, Mumbai and Shanghai are a classic example. Continuous rise in trade resulted in a rapid rise in demand for port services, of which failure to meet capacity needs created inefficiency and operational bottlenecks. Challenges to expansion in original sea ports included limited land or high cost of land, together with the high cost of relocating people and compensations for the destroyed property to pave way for port expansion.

Andrew Roberts (2013), reported that as the trade and economic growth figures in East Africa increased, Sea port activities, traffic jam and congestion increased at Mombasa Sea port too. For example, from 2005 to 2008, imports at Mombasa port grew at an annual rate of 9.7 %( liquid bulk), 11.5% containerized cargo and at 23 %( dry bulk).This implies that as trade and economic growth increased, the need for port services also increased and due to limitations in expansion of existing sea ports, investment in dry ports was required and this trend has led to recent investment in dry ports in East Africa.so this further shows that traffic in East African ports increased as trade and economic growth figures rose in recent times in the East African region. In the meantime, as traffic increased, other bottlenecks came in hence increasing operating costs (i.e. operational costs increased as a result of many bottlenecks that set in due to increase a in the volume of trade).

## 2.5 Conceptual Framework

Based on the literature review, I identified factors that take part in determining the level of dry port operation service quality. Since dry ports play a role of origin and destination for transportation service, its contribution for the economic enhancement of the country is more than significant. This fact becomes strong in our situation where there are no options than the few and still underdeveloped dry ports. It is also a fact that the absence of competition in service provision of these public dry ports on market share affects its service efficiency.



Source: Adapted from Cronin, T.(1992)

All in all, the above conceptual framework shows that service quality of a dry port is the function of five underlying dimensions such as tangibles, reliability, responsiveness, assurance, and empathy.

## **CHAPTER THREE**

### **RESEARCH DESIGN AND METHODOLOGY**

#### **3.1 Introduction**

This chapter tries to highlight the overall methodological considerations of the thesis. This includes the research design, sample size and sampling technique, source and Tools/instruments of data collection, procedure of data collection, methods of data analysis, validity and reliability and finally ethics issue.

Furthermore most researches are on factors which influence the selection criteria of ports by users. Factors which are identified as selection criterion by port users indirectly considered as indicators variable which influence ports performance. Hence, for the purpose of this study we use those identified variables and collect the data on those variables. In order to identify users perceived determinants of Semera dry port overall assessment, the study required to use a standardized survey questionnaire and collect primary data from a sample customers of Semera dry port. The simplest thought is to define as port user is anyone who uses a port there for The study therefore took business entities which are involved in import and export business and use the dry port and logistics provider companies as a sampling frame from which the sample were selected.

In this study, customers or users of Semera dry port was approached to indicate their feeling about each characteristics. The study then analyzes the information collected through a survey of a group of port users.

#### **3.2. Research design**

The research design in this study is survey research design. Survey research design is a procedure in quantitative research in which researchers administer a survey to a sample or to the entire population of people to describe the attitudes, opinions, behaviors, or characteristics of the population (Cresswel, 2012). ). In this procedure, data was collected using questionnaires and statistically analyzed the data to describe trends about responses to questions and to test research questions and then the meaning of the data was presented and interpreted

This study was mainly on Semera dry port. Engaged in identifying users' perceived factors which mainly associated with the service quality of the dry port, so in order to identify those factors data is collected from users or customers of the dry port i.e. importers, exporters and freight forwarders (the overall customers).

### **3.3. Population, sample size and Sampling technique**

According to Keller (2009), "a population is the group of all items of interest to a statistics Practitioner" Target population is a total group of people from whom the researcher may obtain information to meet the research objectives (McDaniel, 2001). So, the target population is the all customers utilizing Semera dry port services. Therefore the study therefore took business entities which are involved in import and export business and use the dry port and logistics provider companies as a sampling frame from which the sample will be selected

The research uses non-probability sampling technique called convenience sampling. According to Cresswel (2012) in convenience sampling the researcher selects participants because they are willing and available to be studied. Because there is no exact registered customer's list total numbers of Semera dry port customers were not known. Therefore, sampling formula was not applied. Instead, the data was collected from customers coming for service to Semera Dry port. This is a relatively easy choice for researchers when a group of people cannot be found to survey or question. The main reason for using convenience sampling is to reduce the cost of the surveys and the time required to complete the overall process.

In this specific case the researcher cannot be certain that the individuals are representative of the population. However, the sample can provide useful information for answering questions and hypotheses (Cresswel, 2012). to further support this sampling technique many studies were conducted using this specific technique Furthermore, Khalid & Richard (2004) also employed convenience sampling in their study.

### **3.4 Instrument and Procedures of Data Collection**

This research used data from a self-administered questionnaire using structured questions in order to achieve the objectives of this study; data were collected from the customers through questionnaire. The rationale for using questionnaire was for the fact that it allows researchers to collect reliable and reasonably valid data relatively in a simple, cheap, and in a short space of time (Best & Kahn, 2003).

Ng (2006) in his study, survey respondents were asked to rank attributes on a five-point Likert scale, with one indicating not significant and five very significant. Similarly, Ruto and

Datche (2015) used a likert scale measurement in their survey to evaluate customers' perceptions on different port characteristics.

Therefore; in this study, in accordance to Ng (2006) similar attributes which relates to dry port and ranking scales have been used to investigate the opinions of Semera dry port customers. Satisfaction was measured through a psychometric 5-point Likert scale where 1 is for strongly disagreed and 5 is for strongly agreed.

To collect the necessary data, the researcher followed the following major procedures.

- Designed the sample techniques
- Determined and selected the sample size
- Developed the questionnaire and interview guide questions
- Distributed the questionnaire for the selected respondents
- Conducted interview with the selected interviewees
- Collected the distributed questionnaire from the respondents

Due to time and budget constraints the sample size was based on the availability and willingness of customers when the data was collected physically at Semera dry port premise. Accordingly, questionnaire was distributed to 115 Semera dry port customers who are willing to participate on the survey. Out of the 115 questionnaires 94 of it was filled completely and returned which means there were 82% response rate furthermore, secondary data from different publications was used.

### **3.5. Reliability and Validity**

The purpose of this stage is to describe on the reliability of the measuring tools employed in this research. This is important because reliability shows whether or not an instrument's measures are free from errors, thus yielding reliable outcomes. The most common technique used in the literature to assess the scale's reliability and stability is use of the Chronbach Alpha Statistics Churchill, 1979; Peter, 1979; Pallant (cited in Desebel 2014) which identifies to what extent items hang together as one set. Low Chronbach alpha values mean the items do not capture the same construct, but high values of Chronbach Alpha indicates the items very well measure and reflect the construct.

Ideally, Chronbach Alpha should be over 0.70 to produce a reliable scale and any scale with Cronbach Alpha less than this standard should be eliminated Sekaran (2005). As indicated in table 1, Cronbach's alpha test indicated that the instrument is reliable as 0.726 value which is in the acceptable range.

Table 1: Reliability Statistics

Cronbach's Alpha	Number of Items
0.726	22

### 3.6. Ethical Consideration

Since the researcher used the data from customers which was collected through questionnaire, permission was obtained from the Semera dry port managers, In order to make customers free from any doubt on the information provide, they were instructed not to write their names on the questionnaire and assured of that the responses would be used only for academic purpose and kept confidential. In addition to these, instructions about the purpose of the research have given to them in order to motivate to fill the questionnaires All sources of information that are used by the researcher are acknowledged. The data gathered in process of the research was kept confidential and would not be used for any personal interest and the whole process of the research was controlled to be within acceptable professional ethics.

## **CHAPTER FOUR**

### **DATA ANALYSIS, RESULTS AND DISCUSSIONS**

#### **4. INTRODUCTION**

This chapter reveals the results and discussions of the research. The data collected through the means of questionnaires are analyzed and interpreted using the SPSS Version 20 software. Detailed analysis of the results derived from this analysis is presented in this chapter. The researcher spent five working days in Semera dry port in the distribution and collection of the questionnaires. Questionnaires were distributed among customers of companies basically importers of containers, freight forwarders, custom clearing agents and the like. Therefore questionnaires are distributed for 130 customers selected as sample, of this 115 were returned but 20 of them were rejected as a result of missing data and 16 not returned questionnaires at time of collections. So that, 94 questionnaires (72%) complete response were returned from the respondents.

So First, the descriptive statistics of the research population is presented. Second, sample t-test is conducted to measure service quality level based on the five dimensions. Third, descriptive statistics used to determine which dimensions are important in dry port service delivery in this context.

#### **4.1 Data Sample profile**

The demographic characteristics include: gender, age, level of education, and how many customer's import containers served the dry port. This aspect of the analysis deals with the personal data on the respondents of the questionnaires given to them. These data, specially customer's import containers served in dry port, used in the study to know how much the customers have a relationship with semera dry port, with respect to using dry port services and what type of customer are they.

**Table 2:** Distribution Of Demographic Variables

		<b>Frequency</b>	<b>Percent</b>
<b>Gender</b>	Male	78	83
	Female	16	17
	<b>Total</b>	<b>94</b>	<b>100</b>
<b>Age</b>	18-25	23	24
	26-35	48	51
	36-45	15	16
	46-55	6	6
	above 55	2	2
	<b>Total</b>	<b>94</b>	<b>100</b>
<b>Education</b>	equal and less of secondary school	24	26
	Completion of secondary school	11	12
	Diploma	35	37
	First degree	22	23
	Master and Above	2	2
	<b>Total</b>	<b>94</b>	<b>100</b>
<b>Number of Container service given for customer by MDP</b>	1-2 containers served	5	5
	3-9 containers served	9	10
	10-19 containers served	8	9
	20-29 containers served	7	7
	above 30 containers served	65	69
	<b>Total</b>	<b>94</b>	<b>100</b>

As profile data of respondents are demonstrated in table 2, males were 83% while females were 17% this indicated that customers are more dominantly by males. As far as age of respondents is concerned, 24% of the respondents are in the range of 18 - 25 years, 51% of the respondents are in the range of 26 - 35 years, 16% are in the range of 36 - 45 years, 6% are in the range of 46 - 55 and 2% are above 55 years.

The majority respondents' age is between 36 and 45 years which portion is 51%. With regard to educational level of respondents, high school and below are 26% ; certificate holders that means completion of secondary high school represented 12% of the customers, diploma holders represented 37% of the customers, and first degree holders represented 23%. Finally, masters or second degree holders and above represented 2% of the customers.

The other main variable that the respondents were asked were the number of import containers served within a year in the Dry Port. For this question majority 69% of the respondents answered they had gotten more than thirty import containers service , 7% of the respondents answered the category twenty to twenty nine containers service, 8% of the respondents answered the category ten to nineteen containers service, 9% of the respondents answered the category three to nineteen containers service and 5% answered the category one to two containers service.

## **4.2 Service Quality Analysis and Customers' Satisfaction**

According to service quality measurement scale demonstrated in the previous sections, the researcher further analyzed the differences in perceived quality between customers. Here, respondents were asked to separately evaluate each service attribute, according to the gap between their perception and expectations, using a five point likert scale: 'strongly agree(SA)', 'agree(A)', 'equal to expectation or neutral(N)', 'disagree(D)', and 'strongly disagree(SD)', therefore Five different scores were assigned: 5, 4, 3, 2, 1, to represent this five-point scale.

The researcher used one-sample t-test for the data analysis. Mainly one-sample t-test procedure tests whether the mean of a single variable differs from a specified constant. This test assumes that the data are normally distributed; however, due to the very character of this test is that it is fairly robust to depart from normality. as the sample size in this study was 94 and based on 'Central Limit Theorem' which allowed presuming the data were normally distributed approximately. A 95% confidence interval for the difference between the mean and the hypothesized test value was supposed. So the hypothesized test value in this study is 3 and it can split customers into satisfied and unsatisfied customers and the null and alternative hypotheses can be specified as below.

So we assumed Null hypothesis  $H_0: \mu = 3$ ; Alternative hypothesis  $H_a: \mu \neq 3$

As noted earlier, the study specifies the level of sampling error (0.05) and thus the two-tailed critical value is  $\pm 1.96$ .

**One-Sample Test**

		Test Value = 3					
		T	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
Dimensions						Lower	Upper
TAN1	There are modern and sufficient equipment's	8.970	93	.000	.798	.62	.97
TAN2	work properly and efficiently	12.277	93	.000	1.000	.84	1.16
TAN3	Layout and storage areas convenient	11.486	93	.000	.862	.71	1.01
REL1	port provides its service based on what it has	-4.223	93	.000	-.372	-.55	-.20
REL2	I get correct service from the dry port the very first time	-1.655	93	.101	-.117	-.26	.02
REL3	I always do not spend much time in getting service from the dry port	.854	93	.395	.074	-.10	.25
REL4	I always feel safe in my transaction of dry port	-.332	93	.741	-.032	-.22	.16
RES1	The dry port consistently performing the service correctly	-2.272	93	.025	-.245	-.46	-.03
RES2	The behavior of the employees gives me trust and confidence	18.840	93	.000	.904	.81	1.00
RES3	The employees of the dry port always informs me when my orders are performed	4.754	93	.000	.447	.26	.63
RES4	The employees are always ready to respond to my requests and willing to help me	-3.003	93	.003	-.383	-.64	-.13
RES5	The dry port employees are consistently courteous towards me	1.413	93	.161	.096	-.04	.23

RES6	The employees understand my specific needs	-1.059	93	.293	-.138	-.40	.12
ASS1	employees have a neat and professional	-.557	93	.579	-.096	-.44	.25
ASS2	The employees provide error free records/documentation processes	7.526	93	.000	.553	.41	.70
ASS3	The dry port has competent employees who always give me the right answer for my question	.000	93	1.000	.000	-.19	.19
ASS4	The employees show their interest in accelerating the service that I want	4.049	93	.000	.383	.20	.57
EMP1	When I face a problem, the dry port employees show a sincere interest in solving it.	10.063	93	.000	.596	.48	.71
EMP2	The dry port employees give personal/individual attention to me & for other customers	5.618	93	.000	.585	.38	.79
EMP3	The operating hours of the dry port are convenient to me and for other customers	16.610	93	.000	1.160	1.02	1.30
EMP4	Employees have my best interest at their heart and serve me accordingly	23.709	93	.000	1.511	1.38	1.64

As depicted in Table 3, and from the data of customers, it can be seen that for the perceptions of service quality attributes which were better than expected have positive t values and service scores while for those attributes which were worse than expected have negative t- values and service scores. The factors which had t-values greater than 1.96 were significant in positive direction and the factors with t-values less than -1.96 were significant in negative direction which implies that, in both cases, their p-values approach to zero and their respective mean difference values also largely deviate from the test value (3) as their t-values far from the critical value in both direction. In other words, in both directions the null hypothesis can be rejected.

On the contrary, those attributes whose calculated t-value lies in between 1.96 and - 1.96 were statistically insignificant in both directions. That means their mean value do not differ from the test value and thus we cannot reject the null hypothesis for these attributes, which includes REL2,REL3 ,REL4,RES5,RES6,ASS1 and ASS3.So Accordingly, we can say that in these attributes Semera dry port is performing a service level that is more or less equal to what customers expect. Thus, needs to strive more to provide a service level that exceeds the expectation of customers aswe continue to analyze those attributes such as TAN1,TAN2, TAN3, RES2, RES3, ASS2, ASS4, EMP1, EMP2 EMP3and EMP4 we reject the null hypothesis as their calculated t-values is larger than the critical value (1.96). In other words, their mean differences were positive and their means were greater than(different from) the test value (3). Therefore, from the perspective of these attributes the dry port has scored a service level that exceeds expectation of customers.

However, in the attributes such as REL1,RES1,RES4;in this cases we reject the null hypothesis as their calculated t-values were lesser than the critical value in absolute terms which implies that the mean differences had negative sign and the means of each were less than (different from) the test value. Therefore, we can say that in these attributes the dry port has scored a service level that is below what customers' expect.

As a conclusion We can take notice on the above that the top three list record of performance of semera dry port with respect providing service based up on what it has promised (REL1),dry ports consistency in performing the service correctly(RES1) and employees readiness to respond to customer requests and their willingness to help(RES4) ,These are major items in which the dry port managers have to give due attention to further satisfy customers.

### **4.3 Importance of Dimensions**

In order to compare dimensions with respect to semera dry port that is via Tangibles, Reliability, Responsiveness, Assurance, and Empathy, Customers were asked to determine service quality dimensions to which they feel compliant and consider very important than the prevailing ones. So as to identify the significance dimensions, a ranking method with mean differences of dimensions has been used in line with the questioners.

TABLE 4: Ranking of Dimensions of SERVQUAL in Semera Dry Port

Dimension	Ranking (in ascending order)	Mean Difference of Dimension
Tangibles	1	2.66
Assurance	2	0.84
Responsiveness	3	0.681
Reliability	4	-0.447
Empathy	5	-1.489

As result shown in the table 4, ‘tangibility’ dimension is the most important dimensions among five dimensions with respect to semera dry port taking into customer’s point of view.as it is the most Significant with a very high satisfaction level of the five dimensions with the given value. Thus, in order to satisfy customers management should give due attention to tangibility issues then responsiveness shall follow .that is with relatively high satisfaction level and with much more higher significance level than assurance, thirdly assurance shall be in place with a relatively high mean dimension and lower significance level, after this reliability and empathy shall follow with relatively lower significance and mean dimensions.

#### **4.4 Satisfaction of Customers as per perceived services**

In general twenty one items considered in measuring satisfaction of service delivery in semera dry port. Tangibles attribute had got first priority in especially in equipment’s working properly and efficiently and also on the lay out and storage areas convenience by this points and more it was most important aspect and gained the first highest mean difference in the performance from the customers’ point of view. With this short time there has been invested a large amount of budget in semera dry port for infrastructure expansion works such as construction of large container terminals.

Because of this, carrying capacity of containers in dry port has been improved year to year. In addition to this, the dry port had got new port machineries and up to date loading and unloading equipment, machineries and related facilities and because of these customers pointed out their satisfaction.

In accordance to this we can see the mean deference of equipment's working properly attribute had got at first position. On the other hand performance of dry port with regard to modern and sufficient equipment's has got relatively lesser mean factor from table 2; Customers had showed their grievance since there are much more up to date equipment's out there in other alike terminals.

The second most important dimension from the customers point of view was assurance (employees provide error free records/documentation processes) Even though assurance is very important from customers point of view, all the four attributes of this category haven't got positive mean differences. Particularly with regard to employees being neat and professional has got negative mean difference which indicates that even though customers appreciate the importance of this dimension; they were very dissatisfied by Semera dry port employee's professionalism.

The third level important feature category was responsiveness (willingness to help customers and provide prompt service) based on customers attitude. Among six items in this category 'Behavior of the employee gives me trust and confidence" has got mean difference of first higher level and also 'informing customer when orders are performed' had got the second mean difference among all attributes; so that customers express their satisfaction not only on modern machineries but also their operators who manages the machineries and equipment's of Semera dry port. Likewise mean difference of 'Semera dry port's stuffs are honest and trustee to assist the customers' item is in good position. We can see from customers point view in table 2, they appreciated the performance of semera dry port with regard to these items. On the other side of point of view of customers, among six items in this 'responsiveness' dimension 'listening the specific needs of customers' was not given attention since it has got the six least mean difference; Similarly with respect to 'responding to customers request and willing to help' had got the least consideration in Semera dry port as per customers' feelings.

The fourth category as per customer point view with regard to importance is reliability (Semera D/P/ ability to perform service accurately). In this category four items were provided in questionnaires in order to gain customer' suggestion. As result of the customers' expectation with respect to 'providing service at appointed time without delay' scored the least of mean factor among all items.

As per customers' opinion, the fifth and the last position category among five dimensions was empathy (the caring individual attention the SEMERA DRY PORT provides its customers). In this category 'employees has best interest in serving their customers' and 'Working time of SEMERA DRY PORT is appropriate for customers' are among the least items and had got relatively large negative mean differences. From this point we could understand that SEMERA DRY PORT should have appropriate mechanisms to keep up the loyal customers.

#### **4.5 Describing overall Results**

In the questionnaire, differences in customers' perception and expectation have been evaluated in connection with semera dry port, including the five dimensions of services defined by SERVQUAL model with 95% confidence interval. According to the services that are offered by Semera dry port, the researcher measured customer satisfaction among the customers of port service using the five dimensions of SERVQUAL model. All 25 attributes have been tested for finding out whether the customers are satisfied or not. With these findings research objectives have been addressed and answered.

Among twenty one items tested in customer's point of view, customers were satisfied in eighteen attributes that is in seven items customers meet with their expectation and in eleven items customers have better and much better expected. However, in three attributes out of 21 attributes, customers pointed out that they were experienced worse and much worse than expected. It means customers felt dissatisfaction.

## CHAPTER FIVE

### 5.1 SUMMARY, CONCLUSION AND RECOMMENDATIONS

This research has been undertaken to assess the customer perceptions of service quality and their satisfaction on Semeradry port using a measurement model SERQUAL. In light of this, the summary of findings of this study will be summarized in brief. Conclusions drawn from the findings of this study are presented. Recommendations based on the conclusions of the study presented at end of this chapter.

#### 5.1 Summary of the findings

The following findings are derived from the analysis and interpretations made in the previous chapter.

- The demographic characteristics of respondents reveal that (69%) of the respondents were who have gotten above 30 containers service in semera dry port.
- Among five dimensions of measurement 'Tangibles' category is chosen as priority importance and 'Reliability' is the second by having the larger mean value by choice of customers of dry port. The rest 'Responsiveness' 'Assurance' and 'Empathy' ranking third, fourth and fifth respectively.
- Only two of the five dimensions of measurement has scored a negative group mean difference: reliability with a group mean difference of -0.447, 'empathy' with a mean value of - 1.489, were the other three tangibility, assurance and responsiveness has scored a mean difference of 2.66 ,0.84 and 0.681 respectively.
- From these five categories 25 items of measurement provided for customers so that among 25 items, in 11 items customers got the service better and better than they expected and in 07 items customers got the service equal to their expectation, but in 03 items they got the service worse and much worse than they expected.
- The top three best record performance of the dry port with respect of customer service in sequence are EMP4(employees have the best interest at heart and serve accordingly), EMP3(operation hours are continent ) and TAN2(equipment's work properly and efficiently) and on the other hand the least three performance of the dry port with respect of customer service in sequence are REL1(employees readiness to respond to my requests and willingness to help), RES1(employees understand specific needs) and RES4(employees are neat and professional).

- In Tangibles dimension, with respect to fulfilling infrastructure and container service and storage areas and equipped by modern and up to date machineries and equipment facilities, Semera dry port has got remarkable results. However, issues of responsiveness have scored a negative mean difference.
- Semera dry port employees was not keeping customer informed about their cargo flow and not providing prompt service as expected by customer. Besides to these employees are not always willing to help customers, in alternative ways of handling ways of cargo and they did not respond to feedback and customers' specific needs as customers expected.
- Semera dry port has got good looking as per customers' attitudes with regard to knowledge and competence of service providers and the ability to convey trust and confidence.
- Semera dry port had record less expectation with regard to giving personalized attention to customers.
- The SERVQUAL model provided a satisfactory level of overall reliability (0.726) meaning all items were cohesive in forming dimensions.

## 5.2 Conclusion

Based on analysis of the data and findings the following conclusions are drawn:

- From the analysis carried out, it was found that negative mean difference scores of the two dimensions as a group ( Reliability and Empathy) which indicates that the dry port are not able to meet customers' expectation or the customers are not satisfied with the services offered. In the overall, service quality is low as perceived by customers and hence no customer satisfaction.
- Even though the most significant dimension is 'Physical', and the worst dimension with respect to dissatisfaction of customers among the five dimensions is issue of empathy . This implies that employees urgently need to develop skill of understanding specific needs and professional out looks however currently situation in this regard are not comfortable to customers.
- Physical appearance with respect to fulfilling infrastructure and container service and storage areas and equipped by modern and up to date machineries and equipment facilities are as per customers' expectations. These indicate that customers are well satisfied with these services.
- Customers are not satisfied with Reliability dimension indicated with a mean difference of (-0.447). This implies that the dry port is not providing the service as promised time without a delay; besides to this, the service provided by semera dry port is not accurate and without mistake, if mistakes made it would not be solved timely.

- Keeping customer informed about their cargo flow and provide prompt service which is included in employees readiness to respond and willingness to help are not met as customer expected. Besides to these, employees willing to help customers in alternative ways of handling ways of cargo; and respond to feedback and customers' specific needs are not as customer expectation. These imply that customers were not satisfied with these services.
- With regard to knowledge and competence of service providers the dry port has got good result as per customers' attitudes. This indicates that because employees are skillful and knowledgeable; as the same time, operators are effective and efficient create confidence in customers and well satisfied with them.
- If the administration of the dry port understand customer feeling and provide individualized attention to their customer or increase the empathy they can also improve the level of their service quality. However, the dry port had a problem in giving individualized attention and they don't have employees who could give personalized attention.

### **5.3 Recommendation**

- So as to solve the problems that were identified by the study, the following recommendations were forwarded
- With respect to physical feature, Semera dry port has been built and expanding infrastructures and equipping modern machineries this is has impact on service deliver in dry port service. However, since undue delay of container terminals construction work result in negative consequences on easy movement trucks and this in turn made dissatisfaction on customers. Thus the dry port should design the way constructions completed early and providing appropriate services.
- Hence, delivering prompt and timely service as per promise for the customer adds the satisfaction level of our customers, which in turn contributes to the profitability of an organization; so in line with that semera dry port should design one widow shop service and should supported by information and communication technology to provide prompt and accurate service as promised.
- Giving attention for customers' needs and their feedbacks about service delivery contributes for the increment of loyal customers who are the blood vessels of the organizations. Hence, the employees of should pay due attention to their customers' specific needs and feedbacks, by appearing being polite and cooperative to solve customers' problem which should be needs continuous follow up from the management.
- Good working environment and incentive schemes and well organized office arrangement facilitates encourages the employee and create satisfied stuffs which in turn encourages to provide service as per customers wants. Thus the dry ports manager should give attention to not only material beings but also human elements and also are a great role in delivery services and satisfying the customers.

- Furthermore, to serve the customers well, providing timely training and development for employees plays a great role. Thus, the manager should give training and facilitating foreign port experience and as well as aware the aims of the organization to staff so that enable them in serving the customers well and provide them with relevant and timely information.
- Dry port service is very demanding service as it has great role in reducing logistics cost and time for import and export cargo of the country, so Semera dry port have to improve performance on all the dimensions of service quality in order to increase customer satisfaction and this enable maintain level of competitiveness.
- In general, delivering a quality service for customers has a tremendous effect on customers' satisfaction that in turn determines the existence and success of Semera dry port. So, the dry port should attempt to maintain consistent service quality better and much better than customers' expectation by assessing all the service quality dimensions regularly.

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## **APPENDIX A**

### **Questionnaire**

#### **Addis Ababa University Faculty of Business and Economics School of Commerce**

**Dear Customer,**

**This questionnaire is designed to gather information on “Assessment of Customer Service Quality in Semera Dry Port”. The purpose of the study is to fulfill a thesis requirement for the Masters of Logistics and supplies chain management. The information that you provide will be used only for the purpose of the study and will be kept strictly confidential. You do not need to write your name.**

**Finally, I would like to thank you for your cooperation and sparing your valuable time for my request.**

**Please respond on the following questions by circling on choices given.**

#### **Part I**

1. Gender      a) Male                      b) Female
2. Age group    a) 18-25 years      b) 26-35      c) 36-46      d) 46-55    e) 55 and above
3. Level of Education  
a) Secondary school and below      b) Certificate of Completion High school  
c) Diploma                      d) First degree) Second Degree and above
4. Number of Containerized goods imported by you and served in Semera Dry Port within a year?  
a)1-2              b) 3-9              c) 10-19              d)20-29              e)More than 30

#### **Part II**

**In your opinion, how does the service quality of Semera Dry Port meet your expectations?  
Please give your answer by circling the number 1 – 5;**

**“1” means you Strongly Disagree (SD),**

**“2” means you Disagree (D)**

**“3” means you are Neutral (N),**

**“4” means you Agree (A) and**

**“5” means you Strongly Agree (SA).**

Content of Questionnaire Items		Measurement (assessment) Scales				
Items	Contents	SD(1)	D(2)	N(3)	A(4)	SA(5)
1	There are modern and sufficient equipment's in the dry port	1	2	3	4	5
2	The equipment at the dry port is in good condition (work properly and efficiently) all the time	1	2	3	4	5
3	The employees have a neat and professional appearance	1	2	3	4	5
4	The dry port layout and storage areas convenient and enough for containerized as well as bulk cargos	1	2	3	4	5
5	The port provides its service based on what it has promised (e.g. in terms of time, operational standard)	1	2	3	4	5
6	When I face a problem, the dry port employees show a sincere interest in solving it.	1	2	3	4	5
7	I get correct service from the dry port the very first time	1	2	3	4	5
8	The dry port consistently performing the service correctly	1	2	3	4	5
9	The employees provide error-free records/documentation processes	1	2	3	4	5
10	I always do not spend much time in getting service from the dry port	1	2	3	4	5
11	The employees of the dry port always informs me when my orders are performed	1	2	3	4	5
12	The employees are always ready to respond to my requests and willing to help me.	1	2	3	4	5

13	The behavior of the employees gives me trust and confidence	1	2	3	4	5
14	I always feel safe in my transaction of dry port	1	2	3	4	5
15	The dry port employees are consistently courteous towards me	1	2	3	4	5
16	The dry port has competent employees who always give me the right answer for my question	1	2	3	4	5
17	The dry port employees give personal/individual attention to me & for other customers	1	2	3	4	5
18	The operating hours of the dry port are convenient to me and for other customers	1	2	3	4	5
19	Employees have my best interest at their heart and serve me accordingly	1	2	3	4	5
20	The employees understand my specific needs	1	2	3	4	5
21	The employees show their interest in accelerating the service that I want	1	2	3	4	5

**Part III**

**Open Ended Questions:**

**1. What are the strength of Semera dry port and terminals?**

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**2. What is the compliance in the service delivery quality of Semera Ports and terminals?**

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**3. What are your suggestions for future improvement of the port and terminals service delivery?**

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**4. If you have additional suggestion please explains here?**

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13	የ ሰ መራ ደ/ጠ/ ሠራተኞችደባደበ መስሪያ ቤቱ ላይ ከ ፍተኛነት ምን ትኩረት መተማመን እንዲኖረኝ አድርጎኛል።	1	2	3	4	5
14	ከ ሰ መራ ደ/ጠ/ ጋር በ ማደርገው የ ግድብ ለ ስራ ምስክር መመዘኛ ስህተት።	1	2	3	4	5
15	የ ሰ መራ ደ/ጠ/ ሠራተኞች በ ትዕይንት ላይ የ ማደራጀት ስህተት ማድረግ።	1	2	3	4	5
16	ሰ መራ ደ/ጠ/ ብቃት ያላቸው የ ትኛው ምሥጢር ቁጥጥር ከ ሰ መራ ሰ የ ማሰብ ሠራተኞች ላይ ሆኖ።	1	2	3	4	5
17	ሰ መራ ደ/ጠ/ ሰ ለ ስራ ምደባ በ ማድረግ ከ ሰ መራ ደ/ጠ/ ላይ።	1	2	3	4	5
18	የ ሰ መራ ደ/ጠ/ ስ ገ ስ ግ ስራ ተመሳሳይ ማረጋገጫ ስራ ላይ የ ማድረግ ስህተት።	1	2	3	4	5
19	የ ሰ መራ ደ/ጠ/ ሠራተኞች ማረጋገጫ ስራ ላይ የ ማድረግ ስህተት ማድረግ።	1	2	3	4	5
20	የ ሰ መራ ደ/ጠ/ ሠራተኞች ማረጋገጫ ስራ ላይ የ ማድረግ ስህተት ማድረግ።	1	2	3	4	5
21	የ ሰ መራ ደ/ጠ/ ሠራተኞች ማረጋገጫ ስራ ላይ የ ማድረግ ስህተት ማድረግ።	1	2	3	4	5

## ክ ፍ ሰ ሦ ስ ት

### በ ግ ስ የ ማሰብ ስራ ላይ የ ማድረግ ስህተት

1. የ ሰ መራ ደ/ጠ/ ስራ ላይ የ ማድረግ ስህተት ምን ምን ዓይነት ስህተት ነው?

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2. በ ሰ መራ ደ/ጠ/ ስራ ላይ የ ማድረግ ስህተት ምን ምን ዓይነት ስህተት ነው? ማድረግ ስህተት ምን ምን ዓይነት ስህተት ነው?

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3. ሰ መራ ደ/ጠ/ ስራ ላይ የ ማድረግ ስህተት ምን ምን ዓይነት ስህተት ነው? ማድረግ ስህተት ምን ምን ዓይነት ስህተት ነው?

ትሀሳብ ካሰዎት?

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4. ተጨማሪ በሰጠው ደረጃ ቀጠላ ብላጽ ለደግሞት ግንኙነት ተያይዞ የተደገፈው?

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**APPENDIX B**

**Descriptive of Statistics for dimensions of service Quality**

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
There are modern and sufficient equipment's	94	3.80	.862	.089
work properly and efficiently	94	4.00	.790	.081
ayout and storage areas convenient	94	3.86	.727	.075
port provides its service based on what it has	94	2.63	.855	.088
I get correct service from the dry port the very first time	94	2.88	.686	.071
I always do not spend much time in getting service from the dry port	94	3.07	.845	.087
I always feel safe in my transaction of dry port	94	2.97	.933	.096
The dry port consistently performing the service correctly	94	2.76	1.044	.108

The behavior of the employees gives me trust and confidence	94	3.90	.465	.048
The employees of the dry port always informs me when my orders are performed	94	3.45	.911	.094
The employees are always ready to respond to my requests and willing to help me	94	2.62	1.237	.128
The dry port employees are consistently courteous towards me	94	3.10	.657	.068
The employees understand my specific needs	94	2.86	1.267	.131
employees have a neat and professional	94	2.90	1.666	.172
The employees provide error free records/documentation processes	94	3.55	.713	.074
The dry port has competent employees who always give me the right answer for my question	94	3.00	.927	.096
The employees show their interest in accelerating the service that I want	94	3.38	.917	.095
When I face a problem, the dry port employees show a sincere interest in solving it.	94	3.60	.574	.059
The dry port employees give personal/individual attention to me & for other customers	94	3.59	1.010	.104
The operating hours of the dry port are convenient to me and for other customers	94	4.16	.677	.070
Employees have my best interest at their heart and serve me accordingly	94	4.51	.618	.064

