



**PORT SERVICE QUALITY FROM
CLIENTS PERSPECTIVE**

Empirical Study on Tripoli port in Libya

2020

PhD. THESIS

DEPARTMENT OF BUSINESS ADMINISTRATION

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PhD. Thesis**

KARABUK

June 2020

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THESIS APPROVAL PAGE

I certify that in my opinion the thesis submitted by Salem Ali Eshtewee “ **PORT SERVICE QUALITY FROM CLIENTS PERSPECTIVE Empirical Study on Tripoli port in Libya**” is fully adequate in scope and in quality as a thesis for the degree of PhD.

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DECLARATION

I hereby declare that this thesis is the result of my own work and all information included has been obtained and expounded in accordance with the academic rules and ethical policy specified by the institute. Besides, I declare that all the statements, results, materials, not original to this thesis have been cited and referenced literally.

Without being bound by a particular time, I accept all moral and legal consequences of any detection contrary to the aforementioned statement.

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Signature :

FOREWORD

The basis of this research stems from the extent of my desire to find a study that would be a motivation for other studies to understand the characteristics and dimensions of service quality in ports and the role that play in the development of ports, especially since this study is the first of its kind on Libyan ports, which prompted me to contribute by this study to determine the quality of the services provided From Tripoli port from the clients' perspective and trying to find a model with a conceptual and statistical significance that can be used as an evaluation tool to be used when making decisions.

I could not achieve success and show this work to the fullest if I did not assist, support and direct a group of distinguished professors.

First, I would like to thank my supervisor Prof. Dr. Erdugan Ozturk for his efforts and valuable contribution, which gave me visions and the right direction to complete the research and write this thesis. He was not only a supervisor. He treated me as a brother and was a wonderful example of humility and respect

I would also like to thank the members of the thesis committee Assoc. Prof. Hasan Alp ÖZEL and Assoc. Prof. Neşe YILDIZ for their support and continuous guidance throughout the period of writing this thesis.

I would also like to express my thanks and gratitude to my parents, who have never ceased to support and encourage me Through their advice and guidance since my birth.

I would also like to express my sincere thanks and gratitude to my wife and children for their support to me and their long patience to endure hardships and troubles throughout the study period.

Salem Ali ESHTEWEE

ABSTRACT

The maritime transport sector contributed effectively to the growth and development of world trade. As it works to transport about 80% of the total international trade, ports are considered the backbone of seaborne trade, depending on the port being the link between land and water. The effective role of ports is evidenced by the integrated transport chain from the producer to the consumer in providing a secure and rapid economic link between water transport and other mean of transportation and vice versa.

Globalization, technological development and competition posed major challenges for port managers and operators, which obliged them to adapt to the conditions and changes of the port services market, which represented in the port environment, management, shipping and logistics industry.

Growth in services has accelerated in the last ten years of this century, having had the greatest impact on the economic architecture worldwide. In addition, The results of research conducted on the term services quality and its dimensions in terms of concept and application have contributed to improving investment, reducing prices, achieving profitability and customer satisfaction.

On the other hand, despite numerous studies in the field of port services and maritime transport quality, they are still few and not sufficient. In order To understand and fulfil the desires and requirements of port clients (shipping lines and cargo owners), The port management and operator should focus on determining the type of service and its relative importance in terms of affecting customer satisfaction and the ability to determine the level of satisfaction, which leads to a deep understanding of the customer and thus avoid mistakes and improve the rate of speed in providing services. Conversely, the low level of port services and their unreliability leads to a decrease in customer trust and loyalty to the corporation and thus a lower level of satisfaction with the service provided.

This study came to promote the concept of PSQ and its impact on customer satisfaction in the research sample (Tripoli Port/ Libya). After reviewing the previous

studies, a conceptual and improved model of service quality ROPMIS consisting of six dimensions of service was proposed. the Literature Review, Surveys, and interviews were used as tools to collect data. The sample size of the analysis was 272 respondents out of 350. The reliability and validity of the model were tested and found to be measurable.

Through the use of statistical program SPSS. 24, the results showed a statistically significant relationship between the dimensions of the elements of service quality and customer satisfaction. The results also showed that the PSQ related to management and resources is one of the most important statistical indicators for customer satisfaction in Tripoli port.

This study came with a set of recommendations that may contribute to directing the management of Tripoli port to raise the level of quality of its services to achieve the desire and satisfaction of customers, which of course will help increase the demand for services in the future. In addition to special recommendations for upcoming research, especially on local ports.

Key Worlds: Quality, Service, Satisfaction, Port, Customer, Dimension.

ÖZ

Deniz taşımacılığı sektörü, dünya ticaretinin büyümesine ve gelişmesine etkili bir şekilde katkıda bulunmuştur. Toplam uluslararası ticaretin yaklaşık% 80'ini taşımaya çalışırken, limanlar kara ve su arasındaki bağlantıya bağlı olarak deniz ticaretinin bel kemiği olarak kabul edilir. Limanların etkin rolü, su taşımacılığı ile diğer ulaşım araçları arasında güvenli ve hızlı bir ekonomik bağlantı sağlanmasında üreticiden tüketiciye entegre ulaşım zinciri tarafından kanıtlanmaktadır.

Küreselleşme, teknolojik gelişme ve rekabet, liman yöneticileri ve işletmecileri için, liman ortamı, yönetim, nakliye ve lojistik endüstrisinde temsil edilen liman hizmetleri pazarının koşullarına ve değişikliklerine uymalarını zorunlu kılan büyük zorluklar yarattı.

Hizmetlerde büyüme, dünya ekonomisi üzerinde en büyük etkiye sahip olan bu yüzyılın son on yılında hızlanmıştır. Ayrıca hizmet kalitesi terimi ve kavram ve uygulama açısından boyutları üzerine yapılan araştırma sonuçları yatırımların iyileştirilmesine, fiyatların düşürülmesine, kârlılığın ve müşteri memnuniyetinin sağlanmasına katkıda bulunmuştur.

Öte yandan, liman hizmetleri ve deniz taşımacılığı kalitesi alanında yapılan çok sayıda çalışmaya rağmen, bunlar hala azdır ve yeterli değildir. Liman müşterilerinin (nakliye hatları ve kargo sahipleri) isteklerini ve gereksinimlerini anlamak ve yerine getirmek için, liman yönetimi ve işletmecisi hizmet türünü ve müşteri memnuniyetini etkileme açısından göreceli önemini ve Memnuniyet düzeyi, müşteriye derinlemesine anlamaya ve böylece hatalardan kaçınmaya ve hizmet sunumundaki hız oranını artırmaya neden olur. Buna karşılık, liman hizmetlerinin düşük seviyesi ve güvenilirlikleri, müşteriye duyulan güvenin ve şirkete olan bağlılığın azalmasına ve dolayısıyla verilen hizmetten daha düşük bir memnuniyet seviyesine yol açmaktadır.

Bu çalışma, araştırma örneğinde (Tripoli Limanı / Libya) PSQ kavramını ve müşteri memnuniyeti üzerindeki etkisini teşvik etmeye başlamıştır. Önceki çalışmalar incelendikten sonra, altı hizmet boyutundan oluşan kavramsal ve geliştirilmiş bir hizmet

kalitesi modeli ROPMIS önerilmiştir. Veri toplama aracı olarak Literatür Taraması, Anketler ve mülakatlar kullanılmıştır. Analizin örneklem büyüklüğü 350 kişiden 272'si idi. Modelin güvenilirliği ve geçerliliği test edilmiş ve ölçülebilir bulunmuştur.

SPSS .24 istatistik programı kullanılarak, sonuçlar hizmet kalitesi unsurlarının boyutları ile müşteri memnuniyeti arasında istatistiksel olarak anlamlı bir ilişki olduğunu göstermiştir. Sonuçlar ayrıca, yönetim ve kaynaklarla ilgili PSQ'nun Trablus limanındaki müşteri memnuniyeti için en önemli istatistiksel göstergelerden biri olduğunu göstermiştir.

Bu çalışma, elbette gelecekte hizmet talebini artırmaya yardımcı olacak, müşterilerinin arzusunu ve memnuniyetini sağlamak için hizmetlerin kalitesini yükseltmek için Trablus limanının yönetiminin yönlendirilmesine katkıda bulunabilecek bir dizi öneri ile geldi. Özellikle yerel limanlarda yapılacak araştırmalar için özel önerilere ek olarak.

Anahtar Dünyalar: Kalite, Hizmet, Memnuniyet, Liman, Müşteri, Boyut.

ARCHIVE RECORD INFORMATION

Title of the Thesis	Port Service Quality From Clients Perspective Empirical Study On Tripoli Port In Libya.
Author of the Thesis	Salem Ali ESHTEWEE
Supervisor of the Thesis	Prof. Dr. Erdogan OZTURK
Status of the Thesis	Doctorate
Date of the Thesis	10.06.2020
Field of the Thesis	Business Administration
Place of the Thesis	KBÜ/LEE
Total Page Number	112
Keywords	Quality, Service, Satisfaction, Port, Customer, Dimension.

ARŞİV KAYIT BİLGİLERİ

Tezin Adı	Müşterilerden Port Hizmet Kalitesi Perspektif Libya'daki Tripoli Limanında Ampirik Çalışma.
Tezin Yazarı	Salem Ali ESHTEWEE
Tezin Danışmanı	Prof. Dr. Erdogan OZTURK
Tezin Derecesi	Doktora
Tezin Tarihi	10.06.2020
Tezin Alanı	İşletme
Tezin Yeri	KBÜ/LEE
Tezin Sayfa Sayısı	112
Anahtar Kelimeler	Kalite, Hizmet, Memnuniyet, Liman, Müşteri, Boyut.

ABBREVIATIONS

CFA	: Chartered Financial Analyst.
CSR	: Corporate Social Responsibility.
EDI	: Electronic Data Interchange.
EFA	: Exploration Factor Analysis.
FTZ	: Free Trade Zone.
GMDSS	: Global Maritime Distress and Safety System.
ILO	: International Labour Organization.
IMO	: International Maritime Organization.
ISO	: International Organization for Standardization.
ISPS	: International Ship and Port Facility Security code.
IT	: Information Technology.
KMO	: Kaiser-Meyer-Olkin.
PCA	: Principal Component Analysis.
PRS	: Port Radio Station.
PSQ	: Port service quality.
SEM	: Structural Equation Model.
SPSS	: Statistical Package for the Social Sciences.
UNCTAD	: United Nations Conference on Trade and Development.

INTRODUCTION AND BACKGROUND

INTRODUCTION

The services sector is one of the most important economic sectors in the world compared to other sectors, where the growth of this sector accelerated, especially after the transformation that the global economy witnessed in the mid-twentieth century from the economics of the industry to the services economy. In 2008, the size of the sector increased to two-thirds of global GDP, in addition to became the main source of employment in the economy (Lovelock, 2011).

Concept of service simply means the exchange of a valuable benefit between two parties under specific restrictions and conditions. Services have evolved to cope with changes in production levels, technological and environmental development and consumer behaviour trends as well as competition in the markets. all these pressures created great challenges for service institutions, which imposed on them the pursuit of a policy of service quality.

Since 1970, expansion expanded international trade by the sea at an average annual rate of 3%, amounting to about 9.2 billion tons in 2012. During 2017, annual cargo traffic across global container terminals reached 800 million units, equivalent to 20 feet, an increase an estimated 186 million units are dealt with today this increased growth and increases in volume trade issues related to size in terms of design, ship technology, port infrastructure development, market structure and competition between ports through the quality of service provided to transport companies and cargo owners (UNCTAD, 2014). port' role is highlighted in that it is a distinguished service centre in terms of elements of the marketing mix that play a special role in the performance of ports and maritime transport.

The recent trends of port globalization impose the need to adapt to the variables of the port services market. The port's function has changed from a traditional port that deals with ships and goods routinely and daily to a larger group of jobs and a diversity of services with added value. Consequently, there are challenges that the condition and reality of ports today pose to port managers and operators as a result of changes in the structure and environment of the port, modern management methods and the creation of

logistics services. The general trend in modern markets always indicates an increase in the volume of services trade if compared to the product's market, which gives more flexibility to supply and demand for services.

Ports have gone through many stages during their development stages until they are what they are now. This development came as a result of many variables such as the size and growth of global trade, shipping, marketing and technology. The ports of the first generation were essentially linked to the sea and land transport, while a change occurred to the ports of the second generation in the period from 1960 to 1980, where the concept of port authority appeared and the port had other activities such as packaging, marking and the emergence of what is known as freight forwarders. As for the third generation ports, it was characterized by the rapid modernization of the container system, the emergence of a multimodal system, and port managers and operators became more focused on efficiency. In addition, the fourth generation ports appeared after the year 2000, which was characterized by specialized handling of goods and the emergence of logistics services.

Depending on the fact that ports are the link between the maritime transport means and the various other means of transportation, the port's role in the framework of the integrated transport chain from the product to the consumer is to provide a safe and rapid economic link between water transport and other means of transportation and vice versa. The level of transport services that the port can provide depends on the quality and size of the facilities it provides, which affect the efficiency of the port's performance and its capabilities such as geographical location, diversity of services, the level of service pricing, the extent of management efficiency, the provision of labour, and means of linking to the regions of the back. So one of the basic requirements for the success of managing and operating ports at the present time is knowing the strengths and weaknesses through continuous evaluation of services quality provided, This pushes the administration to develop the port in line with the changes in the economic and technological environment and adopt effective strategies in marketing services and the application of effective management standards that contribute to achieving customer demand and reaching their expectations level.

The ports' role has changed from handling and providing services for traditional goods and ships to value-added services that helped the ports build a sustainable

competitive advantage. Therefore, the port administration seeks to provide excellent services to its clients. The primary goal of port managers is to reduce costs and provide the best services through the available means and assess performance in proportion to the changes that affect port productivity. The evaluation of the quality of services is carried out according to two perspectives: The first according to the perspective of the port operator, which focuses mainly on the prices of services and costs. The second is evaluation of services from the customer's point of view, which is related to the level of satisfaction with the service provided.

Research and studies have contributed to the quality of service to improve investment, reduce prices, and achieve profitability and user satisfaction. Although many studies in the field of PSQ, still a few. The term PSQ is a very complex and abstract concept due to its properties (intangibles, heterogeneity, inability to produce and consume). In order to reach the service requirements of the consumer or the points of the buyer, you must know the most important services that the port provides to its customers and its efficiency in determining the level of service quality and its impact on customer satisfaction, which in turn will give the port market size and competitiveness.

A deep understanding of the service quality enables the service organization to recognize customer perceptions and expectations about the service provided. Given the multiplicity of port functions and the diversity of its services and clients, the quality of service has a significant impact in improving and activating the port's role in international trade and maritime transport, and therefore the quality of port services contributes effectively to facilitating global trade movement and reducing the costs of maritime transport that affects the price of goods for the consumer.

According to the modern economic concept, service and quality have become interlinked and complementary to each other due to the benefits they bring to the service establishment and its customers, which has made many experts and researchers to work on defining the basic dimensions of service quality and finding models (SERVQUAL, SERVPERF, ROPMIS) through which these dimensions can be measured and analysed and knowledge Its relative importance of its impact on customer satisfaction in order for the service provider to know the strengths and weaknesses and thus provide better services to its customers.

In view of existence of free trade and the lifting of restrictions that hinder the movement of global trade and the freedom of the flow of goods with the increase in the volume of commercial services institutions, which contributed to increasing the movement and activity of ports and thus increasing the demand for their services necessary to activate the commercial movement and operations they need for ships and goods. In addition, the activity of the service organization and its survival in the market depends on the level of effective performance and the ability to grow and develop, which helps it in maintaining its existing customers and attracting new customers, by providing services at a level that achieves loyalty and customer satisfaction.

This study considered as the first of its kind on the Libyan ports, and because the port sector in Libya is one of the main resources in promoting economic and social development, therefore the port of Tripoli was chosen as a sample for this study because it is the largest port along the Libyan coast and has an excellent geographical location and the capacity of six million tons per year.

Taking into consideration what was mentioned, this study came to highlight the services quality provided by Tripoli port from the customer's viewpoint. The problem of the study revolves around the level of services quality provided by the port under study. Despite the advantages enjoyed by Tripoli port, which was mentioned previously, there are reluctance from many shipping lines and cargo owners to choose the Tripoli port as one of the preferred ports, due to many reasons, the most important of which is the low level of services quality provided by the port as shown Through the discussion conducted by the researcher that the standards applied to the service quality do not reach the level of customer expectations

The current research hypotheses came to confirm the relationship between factors related to PSQ and customer satisfaction, and to find the impact of these factors on customer satisfaction, what is the level of customer evaluation of the services quality provided and the level of general satisfaction with these services.

Regarding the objectives of this study, it aims to provide a conceptual framework that helps port management and authority to understand the aspects of service and quality indicators, in addition to focusing on the perceived service quality and customer satisfaction and highlighting the importance of service as a key factor in a competitive advantage in a volatile and highly sensitive marketing environment. This will assist in

reaching some conclusions and suggestions that will contribute to developing the services quality in Tripoli port and the rest of the Libyan ports.

As for the methodology used in this study, it relied on the descriptive and analytical approach, so that the theoretical background of the topic is described through the available data and information, as well as collecting data and information on the research sample to interpret the assumptions and extract the results. The research method used in this study was based on a review of the literature and the managed questionnaire, and interview.

The results of this study came in support of (8) hypotheses of the study and did not support (5) hypotheses, and (3) hypotheses were rejected. The results indicate that the PSQ related to management and resources is one of the most important statistical indicators for customer satisfaction in Tripoli port, and it indicates a statistically significant increase in the levels of customer satisfaction. In addition, this study will be useful for the directors and operators of Tripoli Port, where they understand the aspects and dimensions of the quality of services in the ports, which enable them to improve the service quality and maintain the existing port customers and attract new clients. In addition to some recommendations that may encourage the port management and authority to raise the level of service quality and other recommendations for future studies.

Research Problem

Despite the privileged location of the Tripoli port on the southern coast of the Mediterranean, it contributes only a small percentage of the volume of goods transported by sea. This is due to many reasons, the most important of which is the low quality of port services. It was found through research and interviews conducted by the researcher that the level of standards applied to the quality of service is not at the level of customer expectations, which led to the reluctance of many shipping companies and owners of freight and shipping lines to use the Tripoli port to transport their goods. Therefore, this study aims to find a model that simulates the reality of the services of Tripoli Port from the viewpoint of users.

The research question

Through a field study in the Tripoli port, we will try to answer the following questions:

-

- 1- What is the relationship between Factors-related PSQ and customer satisfaction?
- 2- What is the influence of Factors-related PSQ on customer satisfaction?
- 3- What is customers' evaluation of the quality of services provided by Tripoli port?
- 4- What is customers' evaluation of satisfaction with services provided by Tripoli port?

Research objectives

The objectives of this study as flows:

- 1- Provide a conceptual framework to define the concepts of service and quality indicators and models of assessment and ways to improve them.
- 2- Analysis The relationship between the perceived service quality and customer satisfaction.
- 3- Emphasis on the importance of the quality of service provided as a source of competitive advantage in the framework of openness to the global market.
- 4- To reach some conclusions and suggestions, which could contribute to the development of services quality in the Libyan ports.

Hypotheses

Through research questions, the dimensions of service quality and their attributes referred to in the approved model for this study, hypotheses were formulated as follows:

H1- There is significant relationship between Resources-related PSQ and customer satisfaction.

H2- There is significant relationship between Outcomes-related PSQ and customer satisfaction.

H3- There is significant relationship between Process-related PSQ and customer satisfaction.

H4- There is significant relationship between Management-related PSQ and Customer satisfaction.

H5- There is significant relationship between Image-related PSQ and Customer satisfaction.

H6- Resources-related PSQ positively influences customer satisfaction.

H7- Outcomes-related PSQ positively influences customer satisfaction.

H8- Process-related PSQ positively influences customer satisfaction.

H9- Management-related PSQ positively influences customer satisfaction.

H10- Image-related PSQ positively influences Customer satisfaction.

H11- Customers evaluation of the Resources-related PSQ is significantly above the mid-point of points, five scale.

H12- Customers evaluation of the Outcomes-related PSQ is significantly above the mid-point of a points five scale.

H13- Customers evaluation of the Process-related PSQ is significantly above the mid-point of a points five scale.

H14- Customers evaluation of the Management-related PSQ is significantly above the mid-point of a points five scale.

H15- Customers evaluation of the Image-related PSQ is significantly above the mid-point of a points five scale.

H16- Customers' satisfaction with services is significantly above the mid-point of a points five scale.

Research Significance

The port sector in Libya represents an essential part of its national economy in terms of its contribution to support economic development by reducing the prices of imported

and exported goods and providing places for employment in addition to supporting the state treasury in foreign currency, but the researchers' interest in this field is still weak. On the scientific level, this research seeks to find a model through which to determine the most important dimensions of the services quality of Tripoli port in order to assess the level of services and customer satisfaction. This will contribute to assisting the port administration and authority in speeding decision-making and identifying strengths and weaknesses in order to develop port facilities and improve services. As for the academic aspect, the research will contribute to adding some knowledge and raising some issues related to the ports of developing countries, and test criteria will be used and linked to the quality dimensions.

Research Methodology

This study will be relying on the descriptive and analytical approach that suits the nature of the subject where it will use the data and information available to describe the theoretical background of the topic, and then collection special data on Tripoli port (sample) to classify and interpret the aim of testing hypotheses and draw conclusions. The study methods used in this dissertation especially include literature evaluate, structured interviews, and administered questionnaires.

Scope and Limitations of the Study

The scope of the study is limited to the clients of Tripoli port in Libya, represented by (carriers, manufacturers, export and import companies and others).

Although this study contributed to enriching knowledge in the field of port services. However, there are some restrictions when applying this model, especially for local ports. Among these restrictions are the following:

- The first limitation / generalizing the results of the study. This study focused on finding the relationship between the quality of service and customer satisfaction in the port of Tripoli, and thus its external validity is limited and researchers can benefit from its results in future studies for other local ports.
- The second limitation / poor experience of freight agents, who often represent shipping lines and cargo owners and their lack of awareness of many concepts related to aspects of service and quality of services.

- The third limitation / the presence of a limited number of experts regarding the quality of services, especially as this study is the first of its kind on Libyan ports. This is due to the political causes and unrest prevailing in the country for nine continuous years.

Research Structure

This research divided in to five chapters:

introduction and background contains general introduction, research problem, research question, research objectives, hypotheses, research methodology and research structure.

Chapter one: theoretical study

This chapter divided in to five sections. The first one will be discussing port definition and functions. The second will investigate the operational perspective of the port. While the third section describe the dimension of service quality. Whereas the forth section will give an explanation about gap model of service quality. In addition, the last one will talk about the port sector in Libya and Tripoli port.

Chapter two: port service quality literature review

This chapter reviews the literature in the field of the concept of dimensions of service quality in the port and methods of measuring them.

Chapter three: research methodology

This chapter identifies the research scope, philosophy, approach and strategy, on which the theoretical framework formulated and the methods, models and techniques used in creating it are discussed.

Chapter four: analysis and findings

In this chapter, the results of the analysis are presented according to the methodology used.

Chapter five: conclusion and recommendations

Through this chapter, research findings, limitations, and recommendations are presented for further research.

CHAPTER 1

THE THEORETICAL STUDY

1.1. Introduction

The growth of the global economy is increasingly dependent on international trade. Many factors have contributed to the growing volume of international trade, including globalization, liberalization, the advent of the shipping logistics sector and trade agreements.

Ports play an important role in stimulating economic and international trade. It's a part of the logistics chain that related to other transportation modes and supply chain elements and offers different types of services for ships, cargos, and individuals. Therefor its catalyst of growth to industries and business. At the end of the last century, many seaports gained additional jobs along with the movement of goods, especially after the emergence of the economic blocs and the resulting economies of scale, the benefits of resettlement and the expansion of the population, making the ports excellent locations for many industrial activities that created permanent links between trade, transport, and industry.

Ports activity mainly supported the diversity, increase, and growth of international trade, which makes the need for port services that stem from the demand for shipping services and materials. This makes the port under pressure of competition with the regional and international ports. Where the role of service quality comes provided that contributes to the acquisition of port a competitive advantage of being able to get a bigger share of marketing from international trade service. Moreover, the shipping industry is developing rapidly in line with the economic environment variables, so the growth of international trade and increased demand for maritime transport accelerated the globalization of ports in the direction of adapting with the variables of the port services market.

In this chapter, we will review the theoretical aspect in which we will discuss the definition of the port and its functions and development over time and how the role of port change from traditional services to value- added. Then we move to the system of

management and ownership in ports. Then comes the definition of quality and its application in port to move beyond the dimensions of quality of services and the gap model. Then we give a brief overview of the research sample (Tripoli Port).

1.2. Port Definition and Functions

1.2.1. Port definition

Historically the word port derived from the Latin word (porta) which means entrance or gate. The port is a window through which the state looks at trade relations with the outside world and enables it to consolidate its economic relations with it. In addition, the area provides all transport services to vessels, land, and passengers in a coordinated manner.

Given the importance of ports and their multiple functions and the historical changes that have undergone their development, researchers have identified them from different angles. Flere (1967, p.3) stated that ports exist to provide terminal facilities and required services for ships, transfer facilities, services seaborne materials and /or travellers. This indicates that the process of moving cargo from ships to land or from ship to another ship is one of the essential functions of the port. Also Vleugels (1969, p.240) stated that port is a set of several arrangements aimed to link land transportation with water transportation. Moreover, Taylor (1974, P.3) defined a port as a place to which ships moor to load and discharge cargoes and it is regarded as a transfer point between land and sea. It is the general concept of the port function in a simplified manner, but the author added that the port is only a competitive industry operating within a commercial and financial environment. Whereas in the definition suggested by Branch (1986, p.10) in which the author refers to relationship of the port to hinterland and distribution function stated that a seaport has been defined as. a terminal and a geographical area where ships are loaded with and/or unloaded of cargoes, and comprises the necessary places where ships can wait for their turn upon request regardless of the distance from that area. Usually, it is correlated with other types of transport and thus provides other connection services. Actually, the loading and unloading of ships is a process that stems from the nature of the port commercial function.

At the end of last century, many seaports gained additional job along with movement of goods, especially after the emergence of the economic blocs and the resulting economies of scale, the benefits of resettlement and the expansion of population, making ports excellent locations for many industrial activities that created permanent links between trade, transport, and industry. Stopford (1997, p29) sees the port as an area within which ships are brought beside land to load and unload cargoes, it is mainly a sheltered deep-water area similar to a bay or river mouth. The author has given an understanding of the port through three main dimensions as an appropriate point, as a port authority that responsible for managing and providing the necessary services to ships, and as a station within specific type of cargo.

Whereas Jonsson and Shneerson (1982), they defined port by distinguishing between a series of successive operations between the ship and quays such as ship approach, mooring, ship unloading, storage, transport, hinterland loading transport, hinterland mode loading, departure hinterland mode. Alderton (1999, p.2) gave a port definition from the perspective of operations, job/geographic and legal terms. The author stated that the port is an area, which includes facilities for mooring ships and is equipped with transfer facilities of goods from ships to land or ship to ship.

Notteeboom (2000) emphasizes the role of seaport in an integrated logistics system. The author defined seaport as a logistic and industrial centre of an outspokenly maritime nature that has a substantial role in the entire transportation system and is characterized by a spatial and functional collection of activities that are involved by somehow in “seamless” transport and information processes in production chains.

1.2.2. Port Functions

1.2.2.1. Evolution of Port functions

If we took a quick look at the evolution of management science over time, which was mentioned by (Robbins et. al,2015, p. 54), the period of 1950s was characterized by the concentration of management on production and quantity, During the 1960s, the concept of marketing became a major concern for marketing as one of the most important catalysts of production. The era of senior researchers in the field of marketing until the beginning of the seventies began to focus on management strategies and the concept of strategic planning. During the 1980s, new concepts emerged in management

such as quality, ISO 9000, 9002 and the importance of quality in competitiveness in markets. The period from 1990 to the present day is characterized by the concentration of researchers and writers in management science on how to give value to the client ie in the sense that the company through its products and services always work to find value added to the product or service to satisfy their customers and achieve their desires and gain a competitive advantage in the market.

Ports have evolved according to many variables such as the size and growth of international trade, shipping, marketing, technology, etc. According to the modern concept, the ports have undergone three phases of development which have been defined by different policies and strategies such as port activity, expansion level and integration of port services with other activities. Table 1.1. shows the stages of development of the ports, according to the UNCTAD.

Table 1.1. The stages of development of the ports.

	First Generation	Second Generation	Third Generation	Fourth Generation
Start Period	Before 1960	After 1960	After 1980	After 2000
Principal Cargo	Conventional Cargo	Conventional and Bulk Cargo	Bulk and Unit Cargo Containerization	Specialization in specific type of cargo like container handling ports
The port development position and Development Strategy	Conservative junction point of sea and inland transportation	Expansion transportation and production centre	Industrial Principle international trade base chain connecting transportation system	Itself converting into the industry
Activity Scope	(1) Cargo handling, storage, navigation assistance	(1) + (2) Cargo Type change (Distribution processing) ship related industry-enlargement of port region	(1) + (2) (3) Cargo Information, Cargo distribution, logistics activity Formation of terminal and distribution centre	(1) + (2)+(3) (4) Developed as Regional distribution and logistic centre e. g. Port of Rotterdam (5) Consultancy services on Port Projects e.g. APEC
Structure Formation and specifics	• Every Body act individually in the port • Port and its user maintain informal relation	Relation between port and its user become more close • Emergence of slight correction among port activities	• Formation of port cooperation system • Trade and Transportation chain concentration in the port • Relation between port and self	• Port Corporatization from port Authority • Changes from Monopoly market to Oligopoly market structure

		• Negative cooperation relation between Port and Self - governing community	governing community become more close • Extension of the port structure	internally and externally
Character of the productivity	• Invention of cargo distribution • Individual supply of the simple services	• processing • Cargo Complex Services • Increase of the value added	• The flow of cargo and information • Distribution of cargo and information • Combination of diversified services and distribution • Value Added	Trade off between Economies of scale and economies of scope
Core factor	Labour/Capital	Capital	Technical-Know How	Information Sharing

Source: (UNCTAD, 2002)

First Generation Ports

Ports did not play a significant role until the year of 1960, as their main function was to link the sea with the land transport. The main activity within the port was the handling and storage of goods. The prevailing thinking at that time was the development and exploitation of port facilities only and neglected the aspects of transport technology, which negatively affected people and institutions related to this industry.

Second-Generation Ports

The second-generation have been built in the period 1960-1980. This generation consists of government and port authorities. Thus, the services providers understood each other with cooperation because the interest is common, as well as many activities in ports such as packaging, labelling of physical distribution, many enterprises inside ports and remote areas compared to the first-generation ports. Another feature of the second generation is the emergence of so-called Shipping Agents, which has made cargo owners have a tougher relationship. It is noticeable in this generation of ports that it cares about the needs of customers while neglecting the side of maintaining a long-term relationship with customers.

Third generation ports

This generation began in 1980, characterized by the rapid modernization of the containerization system, the emergence of the multimodal transport system and the

linking of production activities to the international transport network and the expansion of previous services to include logistics and distribution services, as well as environmental protection, Ports, and increased connectivity with the environment surrounding the port compared to the past. One of the characteristics of this generation is that port authority and operators are more focused on efficiency rather than Effectiveness, and more accurately analyse customer needs in detail with the input of marketing programs in all port activities.

Fourth Generation Ports

This generation of ports emerged from the year 2000, which characterized by specialized handling of a specific type of cargo such as containers through development and transformation, in addition to the emergence of logistics centres' and consultancy services related to the ports projects APEC. Alderton (2008, p23) suggested many of the functions, which accomplished through the port as follows:

- 1- landlord for privately owned entities that offer various services.
- 2- Regulation of economical activities and operations.
- 3- Planing for future operations and major investments.
- 4- Operating the maritime services and facilities.
- 5- Marketing and promotion of port services and economical developments.
- 6- Cargoes handling and storage.
- 7- Provision of auxiliary activities.

1.2.2.2. Changing Role Of Ports- From Traditional Services to Value-Added Logistics Services

Success of the ports today stems from the advantage of productivity in the service of traditional cargo handling and value-added services. The advantage of productivity derived mainly from economies of scale. This means that the most productive ports have the same technologies and equipment that enable them to deal with the quantities and sizes of large goods, which leads to a significant reduction in unit costs through effective management.

On the other hand, shippers and carriers, when selected for the port, not only depend on the quality of the handling services, but also on the ability of the port to provide superior benefits over the competitors. This makes the port seek to achieve

differentiation in value which is the target of customers. During the 1970s, the service package offered to customers was almost identical, as was the convergence of service delivery technology and management and operation methods, which did not provide an opportunity for competition between ports. During the 1980s, many variables emerged, so customers were looking for a variety of value-added services and services that made many ports capable of building sustainable competitive advantage. As a result, the ports seek to provide excellent services, which poses a major challenge to the port administration.

According to the World Bank report 2007, introducing of new services improves economic performance and attracts valuable customers, which results in an improved competitive position of the port. Many activities can be classified as value-added logistics and value-added facilities as illustrated in figure1.1.

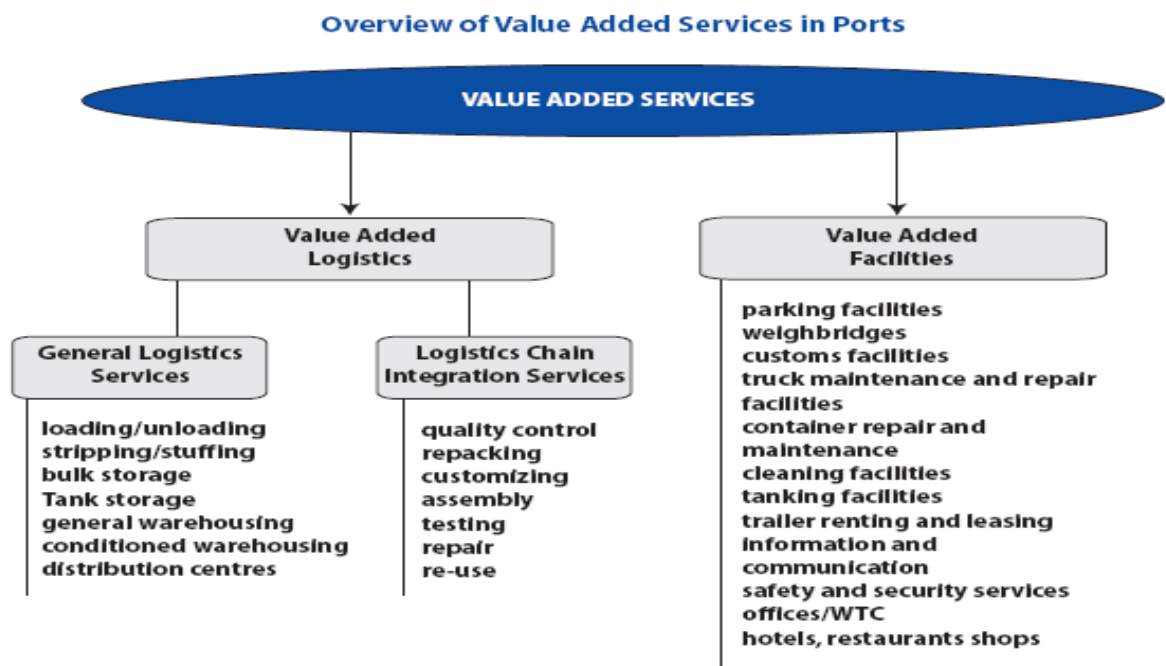


Figure 1.1. Overview of value added services in ports.

Source: (Port Reform Tool Ket 2ed World Bank 2007, p91)

1.3. Operational Perspective of the Port

Reducing costs and the five rights pillars (the right place, the right quantity, the right time, the right quality, and the right cost) represents the vital objectives for most of port managers. The operation of the port depends on the exported and imported goods and products that are stored and recharged by using port equipment in successive

operations such as loading, unloading, transportation, storage, and so on. The admittance and egression of ships to and from any port represent the input and output figures of the port (K. Dahal et al, 2003; S. Bassan, 2007). Port authorities take great care in analysing the performance of their ports due to the variations and changes that affect the port productivity.

According to Amr Arisha & Amr Mahfouz (2009), who stressed that the normative objectives related to the management of port operations are mainly:

- Obtain efficient use.
- Improved resource scheduling.
- Reduce the cost of maintenance and operation.
- Maximize final productivity.

Performance indicators primarily used to assess these objectives. Therefore, high-performance rates are a clear indication of the success of the management and operation of port facilities in providing the best services to port users.

1.3.1. Port Service Quality Concept -Theoretical Determinants

According to the definition by (Kolanovic et. al, 2011), the quality of service can be defined from two sides: institutional and client. According to the organization's view of service, the price is the basic condition, while the customer-based side depends on a number of attributes (dimensions are considered as the most vital standards of service quality that are measurable through a number of attributes).

Analysis and evaluation process of the quality of services by the client, which related to the satisfaction level with the services provided (perceived quality) in reference to the expected quality. While from the customer-based side (customer or buyer), the quality reflects the level achieved from the value corresponding to the use of the products or services. Other aspects can be taken into consideration for the quality of port services:

- Technical and technological aspects: shows the level of development of infrastructure and metadata, the quality of the shipping corridor at the entrance and exit of the port, the means of handling in terms of quantity and quality and suitability for the

operations of loading, unloading and storage, organization of internal transport operations, application of information and communication technology, Multi-media and back-up areas.

- From the administrative and regulatory side of the ports, which is the most responsible in coordinating the operations of the port with the other parties and the integration of ports and investments and the quality management system and enhance them in accordance with the requirements of customers.

- On the part of customers, with regard to the reliability of services, speed of delivery, abundance, flexibility, frequency, competitiveness, safety and relations with the management of ports. Achieving a desirable level of quality of services is an attractive factor for new customers, confirming existing customer loyalty, achieving the stakeholders' objectives in the transport and logistics chain, enhancing investment and building a close relationship with all customers.

1.3.2. Port Stakeholder's System and Quality of Services

The port is actually a complex structure composed of a huge number of stakeholders in the internal and external port community who participate in providing services measured according to specific criteria or objectives. The concept of stakeholders is a key term in port management strategies, meaning stakeholders, group or any individual with an interest within the port or might be affected by port operations. Economically and technically, the port is the place in which stakeholders meet and act according to their interests.

The port as a system has a specific structure for stakeholders to suit market conditions and requirements. Of the stakeholder groups that may be analysed are:

According to (MTM, 2005) port as an economic institution linked to a set of common interests of the parties. These stakeholders can have classified into four groups as shown in Figure 1.2.

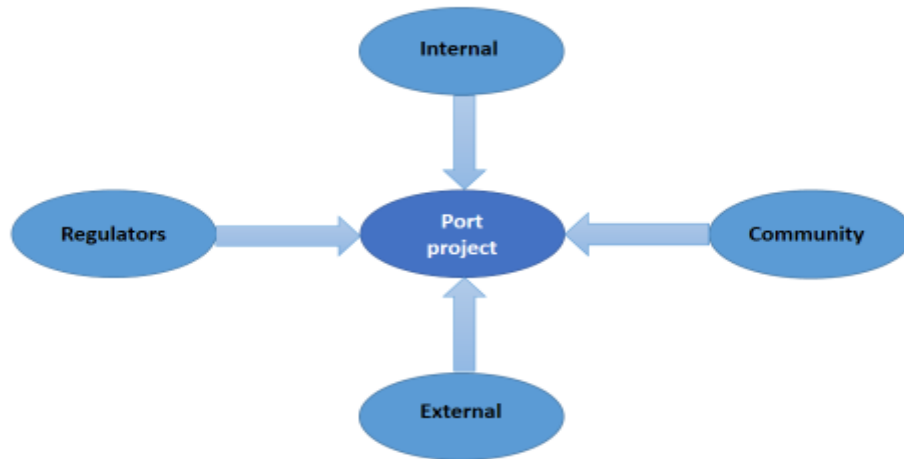


Figure 1.2. Port stakeholder system.

Source: (MTM Economics, 2005, p20)

-Internal stakeholders: members of the board of directors, shareholders, financiers, port managers / executives and port employees. Although each has its own targets, the main target of the group is to maximize profits in the case of private public ports and fully owned ports.

-External stakeholders: They are the influencers of the scheme and the system of work of the port, either by changing the services to operate the port or as a user of these services, among these services unloading of goods, linking between remote areas, navigation assistance. Users are the owners of goods and ships. The objective of this group depends on the models of port ownership, but the common goal is to achieve the highest level of efficiency and reduce risks. The shippers' / ship owners are the only target of high quality services at the lowest cost.

-Organizers: Regulators play an important role in all types of port ownership. When ports expanded, their role certainly becomes more efficient as control. The organizers can be a local government or central, a private body established for ports, the shipping sector and international organizations such as IMO, UNCTAD, the World Bank, these organizations aim to monitor and control monopolistic authorities and private port operators in the market, and to support and strengthen port vulnerabilities.

-Community: This group consists of the population of the ports, who may be affected by the operation of the ports, as well as the local population who support port

activities, especially in ports of public service and environmental and trade union groups.

1.3.3. Port Working System and Value Chain

Each port has assets and infrastructure that are organized and managed in several ways. Many features may affect port operation characteristics (such as ownership structure) according to the volume of services provided to port clients and value chain in line with the port operating system in the shipping sector. It is therefore difficult to find a uniform model for the port industry structure (OESD, 2011), which provided a model that helps to understand issues arising from industry, as well as the value chain in the maritime / port sector. The structural model shown in Figure 1.3 consists of four main components. Next:

1- Port authority- The owner of the port who owns the entire land on which the port and infrastructure are built (such as pavements and berths), as well as planning and licensing services. As well as its responsibility for the follow-up and implementation of treaties and conventions, emanating from international organizations related to port management and operation such as IMO – ILO.

2- Infrastructure- The main entity on which all port activities are based, the basic infrastructure (berths and maritime access channels) and the operational infrastructure (Cranes, buildings, etc.) that can be owned by the port owner or other entity.

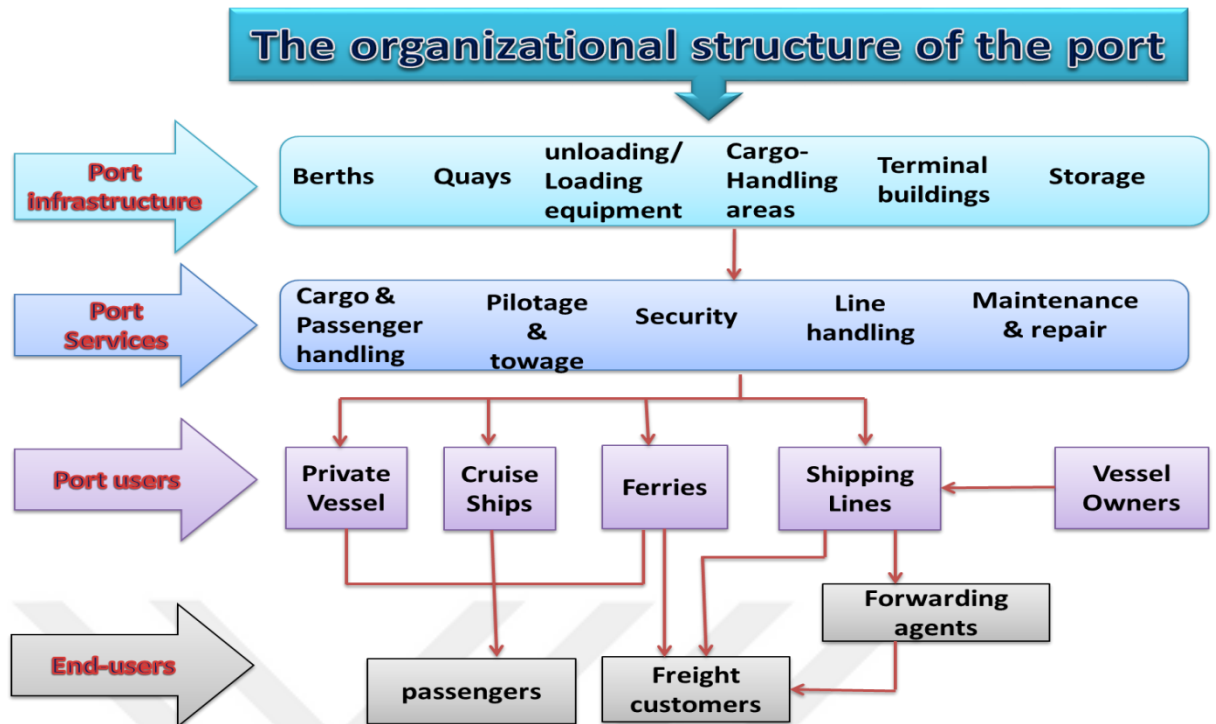


Figure 1.3. The structure of the port.

Sourec: (Policy Round Table, 2011, p22)

- *Berths*: According to the port structure, it consists of a large group of berths. Each berth specializes in handling a specific type of cargo and is divided into a group of other sub-berths.

- *Quays*: It represents the most important part of the port infrastructure, and it is the place designated for landing the ship, where there are many types of berths, such as the container berth, dry bulk cargo berth, general cargo berth, oil derivatives berth, and passenger berth.

- *Loading and unloading equipment*: each berth is supplied with a set of fixed and mobile cranes according to the type of berth for handling cargo from ship to berth and vice versa.

- *Terminal buildings*: It is considered one of the most important port facilities, and it is devoted to the side of administrative transactions in terms of managing customer requirements, as well as administrative procedures related to goods, ships and passengers.

- *Storage areas*: They represent covered warehouses and open spaces for storing goods, whether it is short-term storage or long-term storage in addition to the stores being allocated according to the type of goods such as container terminal, general cargo stores, refrigerated goods stores, car yard, and dangerous goods stores.

3- Port services- When operating the port it needs a range of intermediate services that may be provided by the port itself or by operators intermediaries. These services are:

- *Pilotage*: a service provided by the port guides for the purpose of directing ships during entry and exit from the port and at the time of berthing

- *Towage*: A kind of service that provided by tow boats for ships which do not have the ability to safe navigation or maneuver, especially when entering and leaving the port.

- *Cargo handling*: Services are provided for goods of all kinds where goods are transported from the pavement to the internal storage or storage areas outside the port and the assembly and processing of goods according to the schedules of shipment.

4- Port users- They are a large group of customers who take advantage of port services, including shippers, shipping lines, land transport companies.

- *Private ships*: Ships of medium and large size that can use port berths and can be owned by a private company or group of individuals.

- *Cruise ships*: their purpose is to carry passengers and provide many services to their clients, and it uses a dock and a passenger terminal in the port. It also works in either a regular shipping line or an irregular ship

- *Ferries*: They are similar to the passenger ships, in addition to carrying passengers and their cars, and sometimes some containers.

- *Shipping lines*: Ships are usually operated by their owners according to regular shipping lines, i.e. linked to specific schedules in which the port of shipment, port of discharge, trip time, and the number of weekly, monthly, or annual trips Unlike cruise ships that are not associated with a specific time schedule are specified.

5- End users - end-users or end Beneficiaries of port services such as passengers, freight forwarders, cargo owners, and consumers.

1.4. Quality Definition and Application in Port

Quality is a word that often resonates with different management levels and consumers and is the foundation of success in our time. The concept of quality means different things to different people or service provider or production or user of the service or production. Because of the diversity of services and the production, development and associated variables over time and repeated use by the user of the service or product, individuals have different experience on the concept of quality. Therefore, customers can have more flexibility in their choice of products or services and in which manner it can be received. In addition, quality-focused organizations will have competitive advantages over other domestic and international competitors (Cox & Dale, 2001).

Despite the multiplicity of academic studies, the term quality is still under discussion. (Holbrook, 1994) stated that the argument over the concept of quality seems to be a major obstacle to evident understanding. However, the use of concept of quality has considerably developed over time until it has used as a mechanism for judging value.

Despite the increasing interest in quality and its positive impact on market competitiveness, there are many problems of a substantive nature when defining the term quality. (Kasper et al, 1999) believes that the concept of quality is indefinite and that it is quite hard to give an inclusive and continuous definition of quality. (Pirsig, 1987) has reported that it is difficult to find an appropriate definition of quality as it is not independent, but it is possible with regard to perception. However, researchers and authors have not stopped trying to give some definitions of the term quality that would help decision-makers in building a strategy for the service industry. For example:

- 1- “Quality is fitness for use, that is, the extent to which the product successfully services the purpose of the user during usage” (Juran, 1974).
- 2- “Quality is conformance for requirements” (Crosby, 1983).
- 3- “Quality is product performance which results in customer satisfaction and freedom from product deficiencies, which prevents customer satisfaction” (Juran, 1985; Gitlow & Oppenheim, 1989).

- 4- The definition of ISO 9000 forwards that “Quality is the degree to which a set of inherent characteristics fulfil requirement”.

The Business Dictionary (2010) defines Quality Management as the entire activities of management that includes the determination and implementation of quality policies by some tools as planning and quality regulations (ISO 9000).

Although there are many definitions that describe quality accurately, there are, however, two main perspectives of quality. First is to determine the quality from the service provider point of view and the second is from the perspective of the user. Peter Drucker has stated that the essential propose is the creation of a client. This actually emphasizes the significance of the client. Additionally, ISO-8402 has defined quality as a kind of product or service that meets the required and implicit requirements. Therefore, it is of interest to quality purpose from user point of view rather than the service provider's perspective. However, the perspective of service providers who work continuously to improve quality must be understood.

The significance of applying the concept of quality in building the competitive markets has contributed in pushing the producers and service providers to adopt new policies and strategies in diversifying and developing their services and products, thus gaining a competitive advantage that allows them to continue in the market. In this context, (Horck, 2002, p5) shows that after the development and improvement of quality based on the satisfaction of customers and for the purpose of maintaining them, a variety of quality assurance systems must be found that will make the customer quite certain that the service providers keep an affective system that ensures the best possible practice, prevents errors and continuity of performance level.

On the other hand, the question of improvement and evaluation suggests a reciprocal relationship. (Groner, 1982) that the service provider already knows how the user evaluates the service provided, so the provider has a special methodology in influencing the evaluation of customers to serve his / her interest. In this regard (Ma, 2003) say that continued identification, assessment and anticipation of customers’ needs and wishes, whether foreseen or potential, are partly under the control of the new marketing concept.

Therefore, the quality must be measured continuously and accurately until we reach the level of improvement that is in line with the wishes and requirements of the client. The model shown in Fig 1.4 developed by UNCTAD, which shows the concept of the relationship between customers and service providers and the emphasis on customer satisfaction.

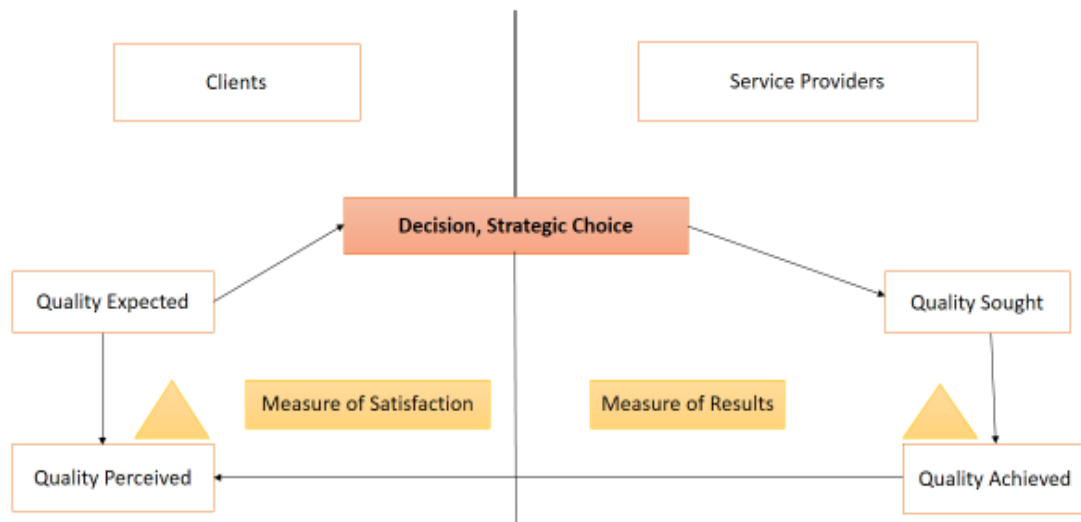


Figure 1.4. The Quality Loop.

Source: (UNCTAD, 1998)

According to this model, the organization or service provider will be able to build a clear image of customers and raise the level of customer demand. Therefore, the model confirms that the customer always works to compare the service provided and the service expected according to their experience. In the quality assessment and the gap between the two, we know the measure of satisfaction that brings us to the concept of quality. As a result, the organization always strives to enhance the service quality, which reduces the satisfaction gap. In addition, the service provider or decision maker must take into account the satisfaction scale when addressing the desired quality level.

However, according to the quality vision from the customer's perspective, need to use special criteria to evaluate the quality of service before entering into any business activity and use of the service. For example, dealing with high-efficiency shipping lines

in terms of vessel sizes and cargo is probably a riskiness when the characteristics of port service quality are not well known.

1.4.1. Port Quality

Port as a service institution that links producers and consumers, as mentioned earlier, it has a substantial role in the economy and trade in addition to the variety of users and the provided services. Willam and McGraw (2009) has reported that the first and most crucial objective of any operating system is to achieve a level of customer services that satisfies the customer. Hence, customer services is a crucial objective of any operation management process. The main function of a typical operating system is to specify the factors that may satisfy the customers in terms of time and cost. Therefore, essential objectives can be easily specified by identifying the ‘right thing at a right price at the right time’. Therefore, port operator always strives to provide services which satisfy customers needs. Lopez and Paul (1998) has stated that quality means providing services that meet customer expectations. These expectations depend on the experience of the customer and the nature of the provided services, and thus such expectations may contrast with the service quality. However, there are four dimensions of importance to port operators or service seekers which include security, efficiency, timeliness and sustainability of the environment. It mostly refers to punctuality (start and end time), technical experience, user serviceability and safety of ships and goods.

Thus, the quality of the port as indicated by (Francou, 2003, p. 25) is evident by distinguishing the performance of its services as well as the quantifiable elements that include physical indicators. One of the most accurate and effective indicators for assessing the service quality is the time component (the time by which the ship stays in the port) as indicated in (UNCTAD 1987, p. 10). Meaning that the shorter the time of the ship's remain in the port, which has to be computed from the moment of entry to the moment of departure, it indicates the efficiency of handling services, transport, storage, etc., which is reflected in the technical and technical efficiency of the port. Given the specificity, diversity and interconnection of port services, the measurement of port services requires tools and methods to be assessed.

1.4.2. Port Services

The port and port types vary according to port specialization and types of ships and cargo. The port management and operation plan is designed to suit the demand of external users, also referred to as external functions, which are classified in three main classes: ashore services, sea land interface services and port services to ships. (Horck, 2003) has considered the first two as quay operations, transfer operations, storage operations, receive and delivery operations. According to UNCTAD, which designed an integrated list of port services and facilities as shown in table 1.2.

Table 1.2. Port services.

Infrastructure	- Approach channel - Locks	- Breakwater - Berths
Superstructure	- Surfacing warehouses) - Workshops	- Storages (transit sheds, silos, - Offices
Equipment	- Fixed (ship to shore crane, conveyor belt, etc.) - Mobile (straddle carriers, forklifts, tractors, etc.)	
Service to ships	- Harbour master office (radio, VTS, etc.) - Navigational aids - Pilotage - Towage - Berthing and unberthing - Supplies - Waste reception and disposal - Security	
Service to cargo	- Handling - Delivery and reception - Security	- Storage - Cargo processing

Source: (UNCTAD, 1995)

1.4.3. Gap Model of Service Quality

Several sources in literature have reported that the second service quality model is the GAP quality model. This model has been introduced by (Parasuraman et al, 1985) in which the service quality is regarded as a function of the perception of consumer, i.e. how a consumer perceives a given service, and expectations have to be made clear prior to purchase of the service.

Initially, GAP model had based on ten fundamental service quality dimensions, referring to the essential influences of SERVQUAL service quality. The evolution of GAP service quality model has resulted in a reduced number of service quality dimensions to five instead of ten.

Furthermore, (Lovelock 2011, p 406) has identified six classes of gaps that may take place at different stages during the design process and delivery of a service performance, which are explained in figure 1.5 below: -

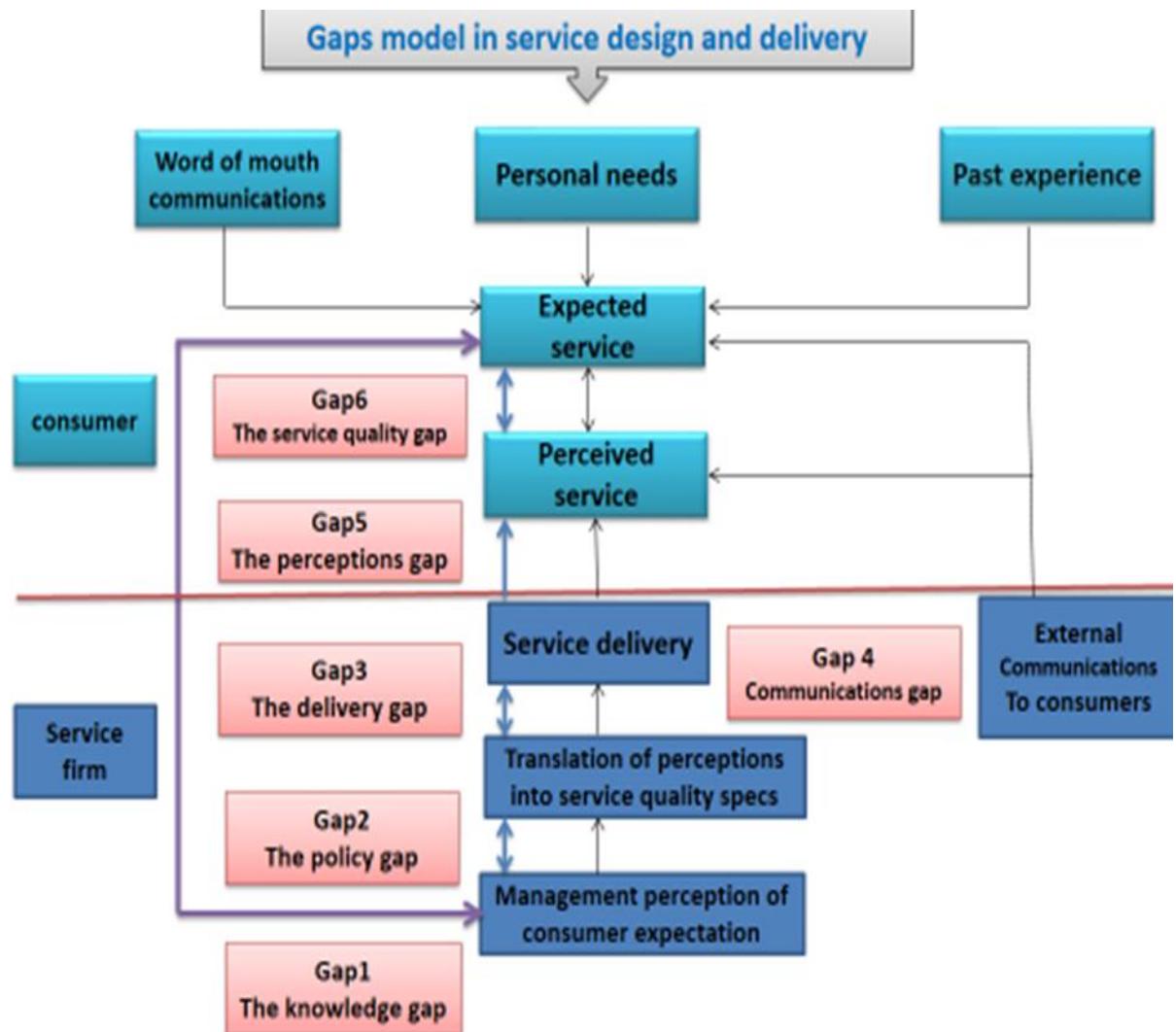


Figure 1.5. Gap Model Of Service Quality

Source: (Christopher Lovelock, 2011.p408)

Gap1---the knowledge gap is the difference between the thoughts of top management about customer expectations and the customer actual needs and expectations.

Gap2---the policy gap is referred to as the difference between management understanding of customer expectations and the standards of quality that instituted for services delivery. It is called the policy gap for the reason that the management has

decided not to provide what they believe customers expect. Cost and feasibility are the main reasons for adopting standards below customer expectation.

Gap3---the delivery gap is referred to as the difference between prior specified service delivery standards and the real performance of service operations and delivery team on these standards. Gap4---the communication gap is referred to as the difference between what companies communicate and what they actually deliver to the customer. This type of gap is actually created by two sub-gaps. First, the internal communications gap which is the difference between what companies advertise and the sales team believe are the product features, level of service quality and performance and the companies are actually capable to deliver. Second, the overpromise gap which is created by sales and advertising team assessed by the sales generate may result in undesirable overpromise.

Gap5---the perceptions gap is referred to as the difference between what is actual service delivered to customers and what service quality customers perceive they had received. This occurs due to customers' inability in evaluating the service quality precisely.

Gap6---the service quality gap is referred to as the difference between what a customer expects to receive and his perception of the services which been actually delivered.

In the GAP quality model, gaps 1, 5, and 6 are external gaps between customers and organizations, while gaps 2, 3, and 4 represent internal gaps that occur between several functions and departments within an organization.

1.5. Port Sector in Libya

The port sector in Libya is considered one of the basic infrastructure sectors, which plays a substantial role in promoting economic and national social development because this sector contributes to the development of the production and services sectors to a large extent. Raw materials, production materials, materials and consumer goods can not be delivered to productive projects or the market (consumer) at the lowest cost, unless the ports are characterized by high efficiency and good performance in addition to the transport sector of all kinds.

The Libyan economy depends primarily on exports of oil and gas and its products exported to foreign markets to obtain foreign exchange for the purchase of raw materials and industrial consumption imported from abroad and transported all through the sea through ports. Therefore, the Libyan economy and its development relies to a large degree on the ports sector in addition to Libya has not reached the stage of self-sufficiency.

Libya has a long sea front on the southern coast of the Mediterranean, starting from the head of Agadir west on the Tunisian border, until Ramle head east on the Egyptian border length of about 1900 km, which is equivalent to 9.3% of the total length of the Arab coasts of about 20400 km and 36% of lengths The Arabian coastline overlooking the Mediterranean Sea is about 5271 km. The strategic geographical location of Libya in the middle of the Mediterranean coast gives it great importance and an effective commercial center that can be developed and exploited to become a center for marine and commercial services. The importance of this sector has been established as an institution under the name of General Organization of Ports and Lighthouses.

1.5.1 Tripoli Port

1.5.1.1. The Historical Development of the Tripoli Port

As we mentioned earlier, the port of Tripoli is one of the oldest and most important Libyan ports along the coast. In a study by (Masood Abu Medina, 2000), he indicated that the history of the port's establishment dates back to the year 1518 BC, and it is one of the ancient ports in North Africa. Where the Phoenicians established it, which built the city of Tripoli, surrounded it with fences, called it (Oia), and worked to expand the port and make it among the castle that built close to the sea.

Tripoli port also prospered and its activity increased during the period of the Ottomans' presence in Libya during the period from 1556 to 1911 AD, where the port contributed to increasing the volume of trade exchanges between Tripoli and many Mediterranean countries and served as a transit port for many goods that come from Africa through southern Libya to reshipment it to Southern Europe and the Levant.

The importance of Tripoli port has increased during the period of the Italian occupation of Libya, where they relied on it in the process of the invasion, and many

adjustments were made to it, so they increased the number of berths, built many warehouses, and maintenance and repair workshops. The port witnessed major expansion and development of all infrastructure and superstructure during the 1970s and 1980s, especially as the port was playing a significant role in the country's economic growth.

1.5.1.2. Location and Importance

The port of Tripoli is considerably one of the biggest ports in Libya. It is located in the middle of the Jafara plain, one of the most important coastal plains in Libya, where most of the population is concentrated in the northeast of Tripoli between latitudes 32.55 and 13.13. The port distinguished by its characteristics that distinguish it from other Libyan ports, because this port is located in the capital of Libya which is the largest city in terms of population size, in addition to the increasing population and this is the reason for the great impact on the development and growth of the port. The port location affected by two main factors:

- The geographical factor related to the water area known as the waterfront.
- The economic factor, which relates to the urban part of the land and called the back area, between the waterfront and the back area, the port location determined as the middle between them. The importance of the site directly related to the production sites and consumption areas.

1.5.1.3. The Structural and Organizational Structure of Tripoli Port

1- Water area:

The water area of the port consists of two main parts: the outer water basin, which represents a large unexploited area at the present time, and it is an area for crossing ships through a safe passage into the port. As for the second section, it represents the internal water basin, which is the area of sidewalks and docks, and the movement of goods. The total area of the water surface, with its internal and external divisions, is about 5.9 million square meters, and the actual utilized area of the internal basin is only 1.8 million square meters. In addition, the port protected from the northern side by a wave's barrier with a length of about 4,500 meters and an eastern breakwater with a length of 2250 meters. These barriers work to protect the port from strong waves and currents, the

depths of the port often range between 10 to 12 meters, and the port has only one entrance from the northeast.

2- Berths:

The port contains about 30 berths of different lengths and areas, with a total berth length of 4047 meters and depths between 5.5 to 12 meters, and it is designated as follows: -

- General cargo berths.
- Container berths.
- Dry casting berths.
- Gas Berth.
- Passenger berth.

3- The storage capacity of the port:

Given that Tripoli Port specializes in receiving and shipping various types of goods with different characteristics, it has provided the port with open storage yards dedicated to containers, cars, and general cargo, in addition to a large group of covered warehouses and a high storage capacity, and also provided the port with a special yard for storing refrigerated containers and a special station for receiving live animals. Most of these warehouses are located in the northern part of the port. The port was also equipped with a silo to store grains with a capacity of 40 thousand tons, so the annual capacity is about 3.7 million tons with a single shift system, which can be raised to 6.7 million tons with the two shifts (Socialist Company for Ports Reports, 2019).

4- Port Handling:

Handling is the backbone of port movement and vitality. The handling and storage section is one of the largest sections in the port that carries cargo and unloading goods to and from ships via the docks available in the port by groups of workers and various types of handling equipment and loads. The flow of goods is either by direct delivery or to warehouses if the delivery period it will be longer or open to the yards if the delivery period is short-term and this depends on the quality of the goods. The capacity of the winches for loading ranges from 5 to 200 tons, in addition to large numbers of tractors and trailers that are used in the internal transportation of goods at the port.

1.5.2. The Services Provided By Tripoli Port

In general, there is no unified organizational structure for the ports, and therefore the sequence of port operations is almost the same in most ports of the world. In this context, many studies pointed to the port services ((Tawfiq, 1991; UNCTAD, 1995; Al-Swaify, 1996; Abdullah, 2000; & Badawi 2003)). Therefore, the sequence of port services in Tripoli was determined according to the sequence of operations and its relative importance in accordance with the organizational structure of the port

Moreover, Port traffic in general relies on ships and cargo, and the Tripoli Port, like other commercial ports, provides many services to the customers, which include cargo owners, shipping lines, importers and exporters. Consequently, the services in Tripoli port divided in to three main services as presented in figure 1.6.

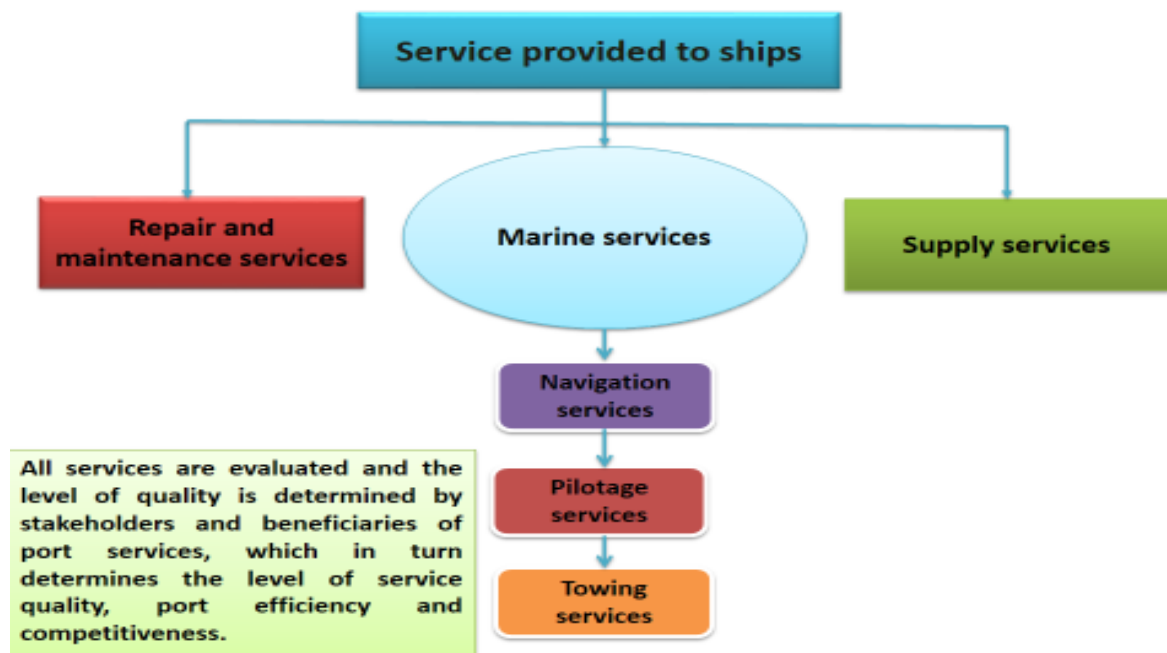


Figure 1.6 Service Provided to Ships.

Source: Researcher

1.5.2.1 Services Provided to Ships

Tripoli port receives daily many ships of different sizes and types, and these ships need many of the services provided by the port directly or through other companies operating from inside the port and these services are:

1.5.2.1.1. Marine Services

Most of this kind of services are provided by the port through the port operating company (the Socialist Ports Company) which represented in:

- Navigational services

This service provided directly to ships during entry and exit from the port, such as navigation lights for the port entrance, safe navigation lane and navigation buoys for directions, in addition to port radio services (PRS) and modern communication system services (GMDSS).

- Pilotage services

It is a service provided to ships during the entry and exit of ships to and from the port for the purpose of guiding ships to the safe navigational traffic line from the entrance to the port to the place of the ship's landing on the dock. This service requires highly experienced guides that reflect the level of service provided in terms of accuracy, confidence and speed that contribute to improving the port service quality, especially for shipping lines and ships owners.

- Towing services

It is a complement to the previous service, which is one of the important services, especially large ships that have difficulty manoeuvring during entry and exit to and from the port.

1.5.2.1.2. Supply Services

Most ships in all ports of the world need many materials, whether they are operating materials such as fuel, oils and spare parts, or supply materials such as water and supply goods. This service provided by the port with the help of specialized companies.

1.5.2.1.3. Maintenance and Repair Services

By virtue of the nature of the ships' work, they are subject to many technical faults and problems that may hinder their work or be a reason for stopping their work and as is known in the economics of maritime transport in relation to the management and operation of ships, time is equal to money, meaning that each hour of delay in the

port corresponds to additional costs and this It reduces profits. Consequently, this service is important for ships, as it gains the port an additional competitive feature over other ports. Despite its importance, the port of Tripoli does not provide such services except providing some light maintenance work for some types of ships.

1.5.2.2. The Services Provided For The Goods

We also mentioned previously that the operations of the port depend mainly on ships and goods, and therefore the goods supplied and exported need many services as illustrated in figure 1.7.



Figure 1.7. Service Provided To Ships

Source: researcher

1.5.2.2.1. Handling Services

Handling services are the backbone of port operations, on which the rest of the other services depend, and they considered one of the basic elements for determining the level of performance and productivity of any port. Such service requires modern handling equipment and skilled labour that contributes to accelerating the shipping and unloading of ships, especially since the safety and speed characteristics are among the important elements of the dimensions of service quality, which many researchers consider to be factors affecting customer satisfaction. In addition, (Murphy and others, 1987) most shipping lines and cargo owners when choosing the desired port take into account the quality of port handling services due to its importance in terms of speed (time equals money) and degree of safety (cargo safety). Consequently, the port's

handling equipment is considered as one of the most vital components of the port's infrastructure.

Through field visits and a personal interview with some of the directors of the administration at the Port of Tripoli, it became clear that the Port of Tripoli needs more attention to handling equipment, as the existing ones are either old and worn out or poor in productivity.

1.5.2.2.2. Storage Services

Tripoli Port has many storage facilities, which are open spaces and covered warehouses, as was previously mentioned in paragraph (2.5.1.3). Storage services considered complementary to the previous services and provided for goods, whether they supplied or exported. Storage operations divided into two parts:

- Short-term storage operations

This service provided directly by the port for goods that do not require long stay in the port, such as refrigerated goods, medicines and food commodities.

- Long-term storage operations

It is a service provided for goods that need long-term storage and that require a long period in port yards and warehouses such as transit cargo.

It is worth noting that one of the disadvantages of storage operations in the port of Tripoli is the lack of large yards for storing containers and the spread of containers at random, especially since most general cargo now comes in containers. In addition to some existing issues between the port administration and the customs authority regarding the responsibility of supervision and warehouse management in the port, these are common issues in the ports of developing countries, as indicated by the report of the Trade and Development Organization (UNCTAD, 2007).

1.5.2.2.3. Port Transportation Services

Transport services are complementary to cargo handling services. Once the goods are unloaded from the ship on the dock, they transported according to their destination directly to the port's yards and warehouses through internal transport operations or out of the port through external transport, that is, outside the port gate. This

service depends on the quality of the means of transport in terms of quantity and quality to avoid bottlenecks in the operations of the port operation.

1.5.3. The Most Important Obstacles To Services In Tripoli Port

Ports, especially in developing countries, are considered one of the pillars of economic development and a source of support for the public treasury in hard currency. Consequently, it contributes to the growth of trade and the increase in gross domestic product, and this is done through increasing the capacity and efficiency of the commercial port and making it more modern and organized in order to keep pace with the variables and patterns of international trade in terms of quantity and quality.

As the Tripoli port is among the ports located in developing countries, and according to UNCTAD, many obstacles make these ports less efficient, which negatively affects the quality of services for these ports. Among these are:

1. port efficiency relies on several variables, the most important of which is the infrastructure represented in the various port facilities such as administrative buildings - berths - cargo handling means - internal transportation - storage areas (covered / exposed) navigational aids, pilotage, towing and communication means. Whereas, the port operations of entering ships, handling and transporting goods are sequential and related to each other and consequently, any shortage or weakness in the elements of the infrastructure will negatively affect the port's efficiency and the service quality.

2. The multiplicity and diversity of authorities within the port and the lack of coordination between them are among the obstacles that restrict the movement of goods in the port and this leads to giving a bad image of the quality of port services in the eyes of its clients. According to the modern perspective, the low level of quality of services leads to increased costs, which is a basic criterion when choosing the port, especially for shipping lines and cargo owners.

3. The conflict between the supervising and operating authorities of the port regarding the dependency of the port's facilities and construction and methods of managing it, which may be an obstacle to development and modernization. According to a paper published by UNCTAD, the percent of world container throughput passed through government-owned ports was 19 % whereas the same figure for Northern

Europe was 6 % and for Africa 68 % (UNCTAD, 2007). The reason for the rapid development towards privately owned and operated ports has been the high costs for port modernization programs. In addition, the problems of operation and supervision in the ports of developing countries have an impact on the port's productivity.

4. The authorities responsible for managing and operating the port in Libya represented by the Ports Authority and the Socialist Ports Company do not pay attention to programs related to the port services quality.

5. The image and social responsibility is one of the modern dimensions of services quality and not applied in most ports of developing countries, which studies have proven to have a positive impact on customer satisfaction (Thai, 2015). Commitment to corporate social responsibility means adopting an ethical behaviour approach that makes business companies seek to increase profits and achieve other goals that benefit society and the environment (Tamer et al, 2014). moreover, most institutions today, especially those that follow the signatories of treaties and agreements issued by the United Nations organizations, in the field of port management, the International Maritime Organization of the Sea (IMO) has implemented the code for security and safety in ports (ISPS), which aims to achieve environmental and social goals.

Conclusion

There are many studies that have attempted to give a clear definition of the port with different points of view, taking into account the main function of the port in addition to the port's characteristics in terms of specialization, geographical location and the services provided.

The port function has changed over time to be in line with the variables of technical, technological and environmental development, as the port management and operation has gone through four stages through which the concept and pattern of management and operation have changed.

Through the definition of quality and its applications on the port, it is clear that there is a relationship between the level of improving the quality of services and customer satisfaction, the higher the level of quality, the more the port will be able to fill all gaps related to the quality of services SERVQUAL model.

The maritime transport sector in Libya plays an important role in the growth and development of the economy and the Tripoli port is considered one of the largest ports in Libya in terms of absorptive capacity and diversity of services in addition to the excellent geographical location.



CHAPTER 2

PORT SERVICE QUALITY LITERATURE REVIEW

2.1. Introduction

Today, goods and services markets characterized by global competition and quality plays an important and strategic role for the business of companies as well as for the national economy. The service quality is the crucial component of the competition of companies in the market, contributes to the achievement of higher profits, and ensure the continuation of the market effectively (Grigorousdis et. al, 2002, p. 601). Although researchers stress the strategic importance of quality of service, there is no common approach to defining quality and dimensions. Despite the fact that there are several well-known service paradigms SERVQUAL, however, by discussing the dimensions of these models it is found to be either too high or too low based on the particular content of the research study (Thai, 2007).

The recent trends in the world trade system, especially in terms of technological development, which imposed restrictions on ports to achieve the demand of users of the port with all its facilities to maintain competitive advantage. Ports also have to deal with competitive forces such as costs, quality of service, customer requirements and expectations to maintain market share and ensure continuity.

Thus, the quality of services has become a key element in influencing customers' choice of ports, especially the main ones (Ha, 2003). Therefore, port operators should find and implement port management strategies by understanding the key factors affecting the dimensions of quality of service.

In general, the literature review is a summary and explanation of the topic of research and extrapolation of all its aspects through academic books, articles and scientific research published which discussed and summarizing their results in this chapter. In addition to reviewing the literature and arranging it according to the dependent and independent study variables. The five related factors are processes, outcome, management, resources, Image and social responsibility.

In the current chapter, the hypotheses were established on the basis of each factor and was tested to deeply explore these factors through which knowledge of the level of customer satisfaction with the services provided by the Tripoli port of. This chapter also included most of the research related to the independent variable.

2.2. Concept of Service

The concept of service may differ from one person to another and from one institution to another, so the analysis of the meaning and its perception depends on the extent of compatibility between the institution providing the service and its customers who benefit from this service. In this context (Johnston & Clark, 2008), the concept of service is described as a common understanding of what the corporation does of the business, and therefore the concept of service depends on the organization's vision, service ideas, brand and its value, in addition to the corporation's idea, experience of the service and the results of the service.

Many researchers defined the concept of service in different ways. (Heskett, 1986) "As the way in which the organization wants to obtain its services by its customers, employees, shareholders and lenders," meaning the Show the business of the institution. (Collier, 1994) also defines it as the elements of the service pack or interest package, which is the value or benefit that the user of the service obtains. These definitions are mentioned in the marketing literature to know the aspects of the service and its components. For example, (Lovelock & Wright, 1999) indicates the use of (8Ps) for marketing, which is represented in the product of the service, process, location, material evidence, people, productivity and quality in addition to additional marketing elements such as price and promotion, these (8Ps) based on (7Ps) from (Booms & Bitner, 1981) that was developed from (4Ps) by (McCarthy, 1960).

According to (Edvardsson et al, 2000) who defined the concept of service as a detailed description of the customer to be satisfied, how to satisfy him, what to do for the customer and how to achieve that. Moreover, (Clark et al, 2000) they defined the concept of service as follows:

- 1- Operation of the Service: The manner in which the service provided.
- 2- Service experience: Meaning the experience of a client with direct service.

3- The result of the service: the benefits and results of the service to the customer.

4- The value of the service: the benefits of the customer.

The use of the concept of universal service will lead to a deeper understanding at different levels of management of what can be provided and how it is provided. In the same context (Jonston & Clark, 2008) emphasizes that the concept of service must be a common understanding, not only within the organization but also outside it. The following figure (2.1) shows two perspectives through which the concept of service can be developed.

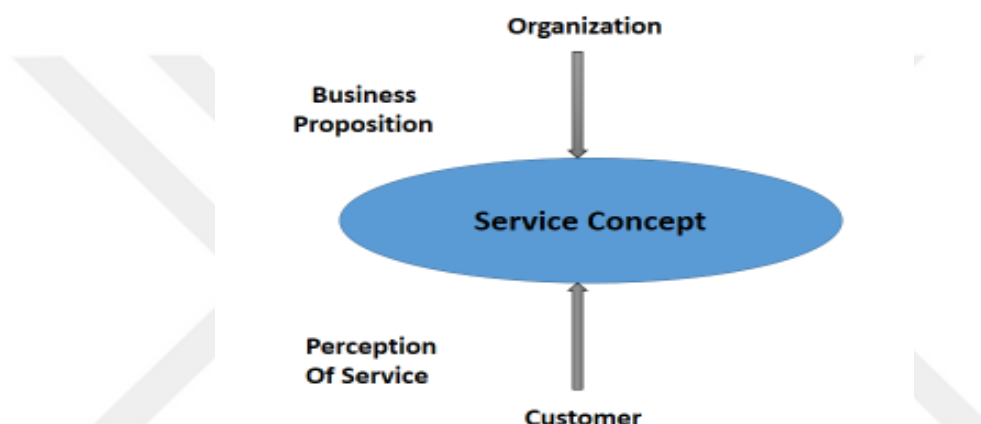


Figure 2.1. The service concept.

Source: Johnston, D, et al 2008, p26

According to the perspective of (Johnston D. et al, 2008) they believes that marketing depends mainly on the concept of service, which is part of it, and therefore, whenever the concept of service is clear to customers, it is easier for them to know what can be expected from the institution. (Gronroos C, 2001) Also indicates that the concept of service is the starting point in marketing, not the product.

2.3. Service Definition

Many of the researches that contributed to providing a definition that explains the meaning of service. Most of these definitions share some features such as tangibility and consumption. According to (Zethaml & Bitner, 2006) they defined service as "attitudes, processes and jobs". In addition, (Barich, H., & Kotler P, 1990), see the

service as “an act or activity, necessarily inconsistent and intangible, which one party proposes to another party that would lead to the ownership of any external object.”

Moreover, (Lovelock, 2011) believes that it is difficult to define services traditionally, and what makes matters more complicated is that the way in which services are established and provided to clients is difficult to understand due to the lack of tangible inputs and outputs. also it (Kotler Keller, 2012) defined it as "Service is the type of intangible economic activity that is not stored and does not result in ownership", that means the service is consumed at the point of sale and that services are an essential component of the economy.

There are those who define the service more precisely, (James A. Fitzsimons, 2014) detailing that "a service is an activity or a series of activities of a somewhat intangible nature that usually occurs but not necessarily, in the interaction between service employees and employees / or material or resources or goods and / Or systems of service providers that are provided as solutions to customer problems, and it corresponds to the definition set by (Gronroos C,2000) where the latter believes that the interactive approach between the service provider and the customer can be a relationship used as a basis for marketing.

In order for the institution to maintain its current customers who are the cause of achieving long-term profitability and ensure the continuation of this relationship in increasing customer loyalty to it through following a strategy of good knowledge of customer requests and behaviours and containing the customer and providing his needs through customer relationship management (CRM) especially that this will play an important and effective role in Influencing customer satisfaction.

In the same context, (Maricic B, 2005) believes that the primary goal of providing high-quality services will be a key factor in helping the organization to manage and also be a reason for increasing profitability and developing a long-term relationship (LTR) with its primary customers, which affects customer satisfaction in the long run and increases profitability that leads to the satisfaction of employees in the service establishment.

2.4. Service Quality Dimensions

Nowadays, Service quality plays a significant role and a considerable challenge to institutions in competitive markets. Today, organizations can achieve success only through the high service quality provided to customers. This has been confirmed by many researchers in the field of services quality such as (Parasuraman et. al, 1985). Superiority and success of companies and the continuation of their work is achieved by providing excellent services because this contributes to the increase of new customers and increase Scale business with existing customers, achieve price competition and reduce the percentage of error that requires greater performance when delivering services.

Quality of service studies have been characterized by a focus on services value and level of satisfaction issues in service marketing literature. The main objective of researchers was to deeply understand the issues of service quality, customer satisfaction and value and how they relate to each other to improve purchasing behavior.

Because of numerous studies (e.g., Garbarino and Johnson, 1999; Athanassopoulos, 2000; Chenet, Tynan, and Money, 1999; Clow and Beisel, 1995; Roest and Pieters, 1997; Spreng, Mackenzie, and Olshavsky, 1996; Zeithaml, Berry, and Parasuraman, 1996) have tried to model these interactions, a partial consensus has emerged by different authors (Cronin et. al., 2000). Due to the (Hallowell 1996, p.29), Literature on services management suggests that the level of customer satisfaction can be referred to the perception of the customer of the received value, which equals perceived service quality relative to its cost. Fornell & others (1996, p.9) have thought that perceived quality is the first factor that determines the level of customer satisfaction whereas perceived value is the second determinant. Lastly, according to (Athanassopoulos 2000, p. 192) Customer satisfaction is realized as being strongly linked with 'value' and conceptually depend on the merge of service quality attributes with other attributes such as price.

However, service management literature sources show that there is consensus that improvement of quality of services is highly linked to customer satisfaction (Ogwude et. al, 2007). Moore & others (1998) found that generally, customer satisfaction is a significant and essential factor for business success. The authors, known as Service Quality Teachers (Parasuraman, Zeithaml & Berry, 1985), have stated that

service quality represents the interrelation between the buyer's expectation for the provided services to them and the already delivered program. Therefore, they found that the quality of service is determined by knowing customer satisfaction. In other words, the extent of compatibility between customer expectation and his perception of service. On the other hand, due to the increased level of competition, service quality is recognized as an indicator of cost reduction, return on investment and market share; hence, it is considerably crucial to port success (Burch et. al 1995).

According to Ugboma et. al (2007) service providers, whether small or large companies are always working to offer their services in the form of unique and distinctive offers. The flexibility of service organization managers to cope with variations in the service economy can identify the level of success and prosperity of their organization.

Lehtinen & Lehtinen (1982) revealed two-dimensional and three-dimensional approach for assessing service quality, based on the interactive approach for the service delivery. While, the two-dimensional approach deals with the quality of service from the customer's perspective through the process quality and the output quality, the three-dimensional approach describes the quality of service as an interactive, physical and corporative quality. In the two – dimensional approach, the process quality as a concept depends on the factor that the services production and their usage can never be separately observed, because the customer has some contribution in the process of production. The interactive quality in the three – dimensional model is resulted from the interactions between the customer and the interactive elements. In addition, Parasuraman, Berry & Zeithaml (1985) have assessed five different dimensions that can define the quality of service: responsibility, intangibility, assurance, reliability and empathy. As noted by many authors (Cronin and Taylor 1994; Teas, 1994) to determine the quality of service, it is necessary to identify the main factors that influence the customer's perception of the delivered service.

According to Kolanovic et al (2008), the understanding of the quality of service and its complications is the main reason for the need to define several dimensions and attributes of the quality of service where considerable efforts have been made by many authors to determine them. There is lack of understanding the concept of service quality

between researchers. For instance, (Voss et.al, 1985) have highlighted the problem in defining the service quality, which stems from the nature of the service itself. In general, service is a result of the mutual interactions between the customer and the relevant service system, including the equipment, concerned staff, service environment and service facilities. This sort of interaction affects the characteristics of service, which cause the provision, assessment and control of quality become quite difficult. These vital characteristics include simultaneity of production of the service and its consumption, intangibility, heterogeneity and perishability. (Ugboma et al., 2007, p. 333).

The researchers (Berry, Zeithaml & Parasuraman, 1985) have proposed a larger number of dimensions by which the service quality can be defined. These ten service quality dimensions are as below:

- Reliability – consistency of the performances, no delays, and no errors.
- Accessibility – readiness to provide services by employees.
- Competence – knowledge and capability of the contact personnel.
- Access – accessibility and easiness to contact.
- Courtesy – gentleness, respectability, decency, companionship.
- Communicability – informing and listening to customers
- Credibility (support) – honesty, trustfulness.
- Safeness – absence of dangers and risks.
- understanding in detail the user's needs
- Appearance – the service user's point of view of the service, equipment and Staff.

Moreover, James A. Fitzsimmons et. al (2014) have reported that the dimensions of service quality were determined by marketing specialists who studied a variety of services categories including retail banking, appliances repair, long-distance telephone services, credit card companies and security brokerage. Five fundamental dimensions have been identified which customers use to assess the quality of service, which are reliability, responsiveness, assurance, empathy, and tangibles, which listed in order of declining relative importance to customers, which are:

Reliability. The capability to carry out the promised service in a dependable and accurate manner. Reliable services service performance is regarded as a customer

expectation which implies the service can be delivered on time, in the desired manner, and with no errors every time. For instant, receipt of post at approximately the same time every day is an important thing to most of people. Reliability also important in the back office activities , where billing and record keeping are expected to be accurately performed.

Responsiveness. The readiness to help customers and to deliver the best service. Leaving customers waiting, specially without clear reason can create undesirable negative perception of quality. In the case of a service failure takes place the the capability to recover in a professional way will result in a very positive perceptions of quality. For instance, example, in the case of a delayed flight, offering free drinks to passengers can change their negative impression into a positive remembrance.

Assurance. The knowledge and kindness of employees as well as their experience in conveying confidence. The assurance level includes some characteristics to deliver services including, politeness and respect of customers, efficient communication with customers, and the server knows the preferred interests of the customer, and the general attitude that the server has the customer's best interests at heart.

Empathy. The provision of cariness, dedicated attention to different customers. Empathy may include these features: sensitivity, approachability, and efforts to address the needs of the customer. A typical example of empathy is that the airline gate attendant in case of delayed connection flight should behave exactly as if it is his own problem and to do every effort to find proper solutions to customers.

Tangibles. The appearance of physical equipment, persons, facilities, and communication material. The condition of the physical surroundings is tangible evidence of the attention to detail that are exhibited by the service provider. This type of assessment dimension may extend to other customers.

Customers usually use the above five dimensions to establish their assessments of service quality, which are essentially based on a comparison between expected and perceived services. The measured gap between expected and perceived service is an important of service quality, customer satisfaction can be either positive or negative.

2.5. Measurement of Port Service Quality Dimensions

The growth in competitive market, technological progress and the globalization of ports have all contributed to the need to adapt to the change in the services market. According to (Kolanovic et. al 2008), there are new challenges for port managers, operators and port authorities to cope with continuous changes within the port environment, shipping process, management of port and transport logistics.

Many studies have contributed to the examination of details related to quality of service in the various services activities. However, despite the expansion of trade in services and the subsequent investments, there is a lack in literature and scientific research on the quality of port services. (Ha, 2003) emphasizes that quality has an effective role in the enhancement of the port sector in a competitive market and the pressures of stakeholders in the port. Therefore, ports must follow the strategy of permanent progress of quality of service obtained or will be at risk of competition with alternative transport services that do not require transfers through ports. However, previous port studies were limited to the development of facilities, privatization of the port, port management and operating costs of the terminal. There was little attention to quality service programs.

However, (Frankel, 1993) has stated that in the last two decades, achieving quality in services and products has become an important marketing issue. There are many studies and research on the subject of assessing the quality of port services from different points of view. The first of these studies was (Foster's, 1978) research, which conducted a survey of US manufacturers and traffic managers to find out the most important port-neutral standards to be used. According to the data obtained from the survey that was adopted on the point of view of the shipper, the frequency of the service, its facilities and its proximity to the port are important factors for port selection. In a second study of the same researcher in 1979, he conducted a more accurate survey to determine the request of shippers and on what basis they select, certain ports for their use and the results are found to be different from the previously conducted research. Also, it has found that service costs and charges are the most significant factors in the selection of ports factors such as level of obstructions, number of sailings, closeness to the port, access to the equipment and service variability, amount of free time allowed

for cargo, customs handling equipment quality, security and reputation were found to be less important. When it evaluated, although the results of the two researches were in different because of nature of the questions and the type of expected responses, they have provided useful indications for further researches.

Slack (1985) conducted a study on container shipping companies operating between North America and Western Europe. The study focused on several factors including port equipment, quality of customs handling, port charges, number of sailings, size of port, port security, congestion, possibility of intermodal links, proximity of port, free time, and the inland freight rates. The author proposed that decision makers are more affected by the cost and services aspects of land and water carriers than the perceived difference in the ports of admittance and departure. Murphy et. al (1987) relied on variable and multivariate methodology of analysis to determine the requirements of clients when selecting a port. This study showed that the port selection process were carried out differently by the target of customers, namely ocean shipping companies, shipping agents through ports and port authority, and then focusing on the most effective factors for selecting the port they use. The factors they selected for: (1) accessibility to loading and unloading constructions, (2) possibility to deal with large quantity of cargo, (3) lower handling cost of shipment, (4) reduced frequency of damages or losses of cargo, (5) accessibility to facilities, suitable delivery and pickup times, (6) accessibility to information about shipment, (7) assistance in handling of demands, (8) flexibility in coping with requests for a special handling. These are the main factors regarded as quality features of the port service. A five level of likert scale (1 – very unimportant to 5 – very important) was used.

According to Tongzon, (2002) which found that one of the most important determinants contributing to port selection was: - High efficiency of the port- frequency of shipping - Appropriate infrastructure - proper location - Low charges – Fast response to the needs of port users Excellent reputation for the cargo safety. Based on semi-structured interviews of participants from industry. (Hanelt et al. 1987) have indicated that each participant had valued characteristics in different way. They reported that many significant factors are beyond the control of the port authority. Port managers have no impact on the two most crucial factors which are the local market size and the costs of domestic transportation. However, they can indirectly influence the productivity of the

port labor, port accessibility, rail transit times, ocean carrier intermodal networks, and total transit time. The port managers also directly influence channel and berth depth, terminal gate capacity, indirect port charges, cargo handling equipment, and port charges on cargo or carrier.

Further study for (Ha, 2001), evaluating the quality of service of nine major container ports in East Asia, in which some strategies for cooperation between ports were proposed. As a result, service quality factors classified into seven main categories from the shipping point of view. Ugboma et. al (2004) had assessed in their study the port service quality for two ports in Nigeria. The obtained results proved that there is a difference between perceived and expected service quality where the researchers has found that the level of quality of the delivered service is lower than expected. The limitations of the study is the small number of examinees and their capability of using the SERVQUAL model for assessing the port service quality.

Another research was made by (Ng, 2006) which indicated that, in selecting a port, the regular users of the Northern-European container ports are mostly affected by efficiency, geographical location and service quality, rather than the cost of the service. The model SERVQUAL considered one of the most commonly used tools to assess the service quality (Parasurman et. al., 1988) and it consists of five dimensions: tangibles, reliability, response, assertiveness and empathy. (Hopkins et al. 1993) Use a model SRVQUAL to evaluate the quality of knowledge service in the logistics sector, who considered customer expectations as the primary condition for customer satisfaction.

Although the SERVQUAL model is widely used, many researchers have criticized it. For instance, (Cronin & Taylor, 1992) suggested a model of SERVPERF that takes in consideration only actual performance and neglects the predictive part of the model SERVQUAL. In addition, (Carman, 1990) criticized the SERVQUAL model because its dimensions lacked stability. In addition, (Baker & Lam, 1993) indicates SERVQUAL model neglects the service as it has been designed to handle the service provision only. Nevertheless, research did not stop finding a model that would be more accurate in measuring the quality of service.

Gronroos (1984) developed a three-dimensional model, namely job quality, technical quality, and corporate image. This model considered the element of service

results as the basis when assessing the service quality. So that the technical quality explains how the customers get the service while the functional quality explains the service that were accomplished and at the same time the image of the institution plays an effective important role in influencing the quality perceived positively, neutrally or negatively. According to Lehtinen & Lehtinen (1991) who emphasized the significance of this feature, they proposed a model that includes the three dimensions of quality: interactive quality, physical quality, and the corporate image.

Despite research activity and the multiplicity of studies related to measuring the service quality in various industrial activities. However, the marine industry was the least in terms of number of research, especially with regard to ports. Much of the focus of this research has been on issues of carrier selection and ports. Among these investigations (Ugboma et al., 2004), who concluded that all the five SERVQUAL dimensions are valid. In the same context, a study of (Lopez & Poole, 1998) indicates that elements such as efficiency, timing and safety contribute to service quality. In addition, (Brady & Cronin, 2001) defined aspects of service, including rational quality, product quality, and physical environmental quality, and developed this study by (Cho et al. 2010) so that it touched on other sub-factors of quality of service so that "rational quality" includes port sales, customer relations and the distribution network, either. External quality "It is represented in the quantities of goods, areas of back and the size of free trade zones (FTZ). In another study for (Ha, 2003), which refers to a set of quality of service factors, which include: port geographical location, port management, port operating time, available facilities, customer comfort, and port costs.

Another study for (Cho et al. 2010) that introduced separate measurement tools for port service quality, which includes internal quality, external quality, and relational quality, as this study demonstrated the effect of port quality on customer satisfaction, loyalty, and referral intentions. Many researchers have taken advantage of the results of this study, in subsequent studies for each of (Lee, 2000; Song & Yeo, 2004), which shed light on the efficiency and quality of Asian port services and evaluated customer response to various quality factors. However, these studies did not pay attention to the critical dimension of social responsibility, which related to the image or reputation of the organization and thus the perceived quality of its services. Especially as most of the worlds, ports today are seeking to reach the ideal level for their services.

According to Thai (2008) who validated the measurement, model ROPMIS to define the concept of the service image in maritime transportation. The developed model consists six dimensions as follows: management, resources, process, results, social responsibility, and image. As this model included newly developed components such as the dimensions of quality related to management, social responsibility and image on the basis of a global review of the different dimensions and factors of service quality in previous researches by comparing it with a model SERVQUAL, it was found that the model ROPMIS is the most applicable in the marine industry and in particular in Ports. Yeo et.al (2015) used the ROPMIS model in the analysis of service quality of ports and customer satisfaction level in Korean ports. The study has recommended future work to study the impact of service quality on other vital factors including loyalty of customer, word of mouth and repurchase intention. These important factors are considered by this study as measures for customer satisfaction.

2.6. Customer Satisfaction

Most business organizations today seek to satisfy their customers because they are the basis for the survival of the organization and its continuation in the market. Many researchers gave different definitions of the concept of customer satisfaction, depending on the research environment and the model used to determine customer satisfaction. According to Wang (2000), he described customer satisfaction as an emotional reaction as a result of customer interaction with the organization or products (goods and services). In addition to this (Gitman & Medaniel, 2005) He says that satisfaction arises from knowing the rate of change between what the customer expects and the actual level of performance of the institution when providing the service. In a sense, that the products or services provided by the institution are able to achieve clients' demand. (Heskett & Swe, 1997) Those who, through a study of them, have found results that demonstrate customer satisfaction and expectations towards a real service provided by the institution. This explains that there is a connection between the services quality, perception and customer satisfaction through the clients' experience with the institution.

On the other hand, customer satisfaction is the feeling that clients found an experience of service that achieves or exceeds their expectations. In this regard, (Dwyer & Oh, 1987) indicates, according to marketing priorities, the company defines

satisfaction as the global assessment of the completeness of the relationship. On the other hand, the case affected positively by the evaluation of the company's relationship as indicated by both (Gaski & Nevin, 1985; Farrelly & Quester, 2005) and confirms (Sanzo et.al, 2003) that satisfaction is one of the substantial constituents in set the correlation between the participants or achieving consumer response (Oliver, 1997).

In general, customer satisfaction is achieved as a result of a change in the level of quality of services provided, which means that it has a direct relationship to the quality of services or products provided to the clients in a positive way that contributes to improving the level of satisfaction and the perceived quality of product and service. Ugboma et.al (2004) suggest that management needs to focus on key management of how to enhance customer satisfaction given the fact that customer behaviour for re-purchase can be increased.

In addition, some studies (Oliver, 1980; Lee, 2000; Szymanski, & Henard, 2001) indicate that customer satisfaction is a fundamental variable that explains returning customers and their subsequent behaviours to purchase products and services. In addition, many studies confirm that in the services sector there is a positive relationship between quality of service and customer satisfaction (Brady & Robertson, 2001; Cronin & Taylor, 1994; Parasuraman et al., 1994). In this regard, some few studies in the transport sector, including aviation (Anderson et al., 2009) and high-speed railways (Cao & Cahen, 2011) confirm a positive relationship between service quality and customer satisfaction. However, research in the port sector in terms of quality of services and its relationship to customer satisfaction is negligible and requires more search.

2.7. Relation Between Customer's Satisfaction and Service Quality

According to the definitions of customer satisfaction and quality of service, it expresses two terms in the concept. Whereas, the quality of the service reflects the general evaluation of the customer experience with the service provider or organization, while satisfaction is the evaluation of those experiences with the organization. (Schneider & white, 2005) Indicates that when finding the relationship between customer satisfaction and quality of service, it is necessary to know which one affects the other. In this context (Parasurman, 1998) confirms that the provisions related to quality will lead to satisfaction and therefore the quality of service will be before

customer satisfaction in this case, customer expectations are applied as a standard to compare customer satisfaction and dissatisfaction. This result confirms that customer satisfaction is the result of a true service experience vis-à-vis the organization and the customer's expectations for the institution. In addition to that, (Heskett & Swe, 1997) he says that there is a close relationship between the perceived quality of service and customer satisfaction so that both are the result of the customer's experience with the institution.

According to Brink & Brendt (2005), customers evaluate the services based on the quality of service and the level of satisfaction that you obtain. Therefore, the concept of quality of service and customer satisfaction are considered two basic pillars of the organization because it is one of the factors that must be evaluated quantitatively. In addition to that (Brink et al) confirms that the reason for this evaluation is that the organization will be different from other organizations by providing a package of distinguished high-quality services and absorbing as much of the customer satisfaction as possible. Achieve competitive advantage and get more benefits that achieve the goals of the organization (Lovelock & Wright, 2002).

2.8. Social Responsibility and Customer Satisfaction

It noted that most of the companies and institutions that achieve growth in reputation and revenue are the ones that contribute economically and morally to the society to which they provide their services (Drobetz et al. 2014). The element of social responsibility has become one of the newly applied and binding standards that most business companies strive to achieve. The application of corporate social responsibility (CSR) gets many benefits, such as increasing profits, customer loyalty, trust, positive branding attitude, and combating negative advertising as indicated by many studies (e.g. Brown & Dacin, 1997; Drumwright, 1996; Maignan & Ferrell, 2001; Murray & Vogel, 1997; McDonald & Rundle-Thiele, 2008; Sen & Bhattacharya, 2001; Sen et al. 2006).

Moreover, another study for (Maignan & Ferrell, 2004) indicate that there are positive impacts of CSR programs on clients. Other studies also confirm that consumers are ready to support the activity of companies committed to marketing that causes environmentally friendly practices or ethics (Barone et al. 2000; Berger & Kanetkar, 1995; Cryer & Ross, 1997). According to Gimenez et al (2012) who believes that,

implementing programs such as employee safety and improving working conditions may lead to support community projects and improve the company's performance and social reputation. Some studies also show that port authorities are making efforts to achieve a relationship with the local community to build trust and enhance the positive image (Puig et al. 2015; Saengsupavanich et al. 2009). (Hick, 2000) Confirms that the success of the institution in dealing with environmental management leads to improving the image of the company and providing new opportunities for companies to enhance their capacity as indicated by (Hansmann & Caludia, 2001).

The following table provides a summary of the concept of service quality in ports, as well as the methodologies used by the authors to determine the quality of service in ports. As shown in the table, the main factors that indicate the quality in ports in are tangibles like infrastructure, availability of equipment and facilities, reliability of service performance like timeliness, accuracy, safety and security, responsiveness and empathy, and lastly social responsibility.

Conclusion

Services today have an important and effective role in the development and growth of institutions, as the services sector has become the biggest competitor in the structure of the global economy compared to other sectors. On the other hand, many studies have explained the concept of service from different perspectives. For the service to be of value, it must be linked to the concept of quality, so that the two terms serve common goals that the organization seeks to achieve. From this standpoint, many studies have managed to reach the dimensions of the quality of service that have been used as models that can be studied through the study of the relationship between service quality and customer satisfaction, and among these models SERVPERF, SERVQUAL and finally ROPMIS that was adopted in this study.

Studies also indicate that improving the quality of services contributes to achieving profits, preserving existing customers, attracting new customers, in addition to increasing competitiveness and ensuring the continuity of the institution in the market.

CHAPTER 3

RESEARCH METHODOLOGY

3.1. Introduction

As we stated in advance, the Tripoli port is the most important port in Libya, it has many characteristics that have gained it a competitive advantage over other local ports. In addition, given that Libya's ports in general considered to be still under development. The studies and research conducted and still on the quality of port services are a tool through which it can reach the level of port efficiency and identify strengths and weaknesses through different levels of service quality and clients' satisfaction.

Depending on the lack of previous studies related to the quality of services in Libyan ports, this study adopts the ROPMIS conceptual model sophisticated and approved by (Thai, 2008) to measure PSQ. Some dimensions of this model may not apply to the research sample due to some differences in the technical and operational environment, which is what makes this model under development after proving the validity of its use on the research sample.

This chapter included many basic elements that would give a general understanding of the research methodology used. these elements included the research design, and search strategy, which included the concept of descriptive research and quantitative and qualitative research in addition to data collection methods through which the researcher addressed the primary and secondary data, the administered questionnaire, the conceptual framework, data collection and finally the data reliability and validity.

3.2. Research Design

According to Denzin & Lincon (1994), the research design illustrates a number of directives that contribute to linking the theoretical side with the study strategy and how to collect experimental materials. (Yin, 1999) Confirms that the research design is a map showing the path of the researcher to move from one point to another. In addition, it can be said that there is a logical link between the data that can be obtained and what can be deduced from the study's research questions.

(Punch, S., 2000) Also indicates that the importance of design lies in how the questions are linked to the data, the extent to which the research questions fit with the available data, and what tools and procedures are used to answer them. Meaning that the design is the main plan for experimental research and represented in the strategy, sample, means, and steps that must be followed to collect and analyse data. Rosenthal & Rosnow (1991) believes that the research design is thought to be a diagram explaining to the researcher the steps involved in collecting and analysing data.

3.3. Research Strategies

According to what was presented in the paragraph (1.3) which included the four research questions for this study, a strategy for reviewing the literature, surveying the questionnaire and the interview was adopted. The use of research strategies can have explained as follows:

3.3.1. Descriptive Research

According to Dane (1994), who clarifies the concept of descriptive research as a deep reading of a phenomenon to clearly identify it, or how to distinguish between two phenomena. In addition to determining, the behaviour variables or the relationship between the two behaviours is one of the criteria for measuring a specific phenomenon on which descriptive research depends. Philip, J.A (2000) Argues that descriptive research works to detection the border of the formerly proposed popularization.

One of the advantages of descriptive research is the multiplicity of variables used for analysis, unlike other methods that use only one variable. According to (Borg & Call, 1989) he said that descriptive studies aim to discover "what is" so monitoring and surveying methods used repeatedly to collect metadata. Therefore, it is clear that the four research questions in this study are descriptive in nature.

3.3.2. Quantitative and Qualitative Research

Any research process requires choosing a specific methodology to find data. One of the most important research methods used to obtain data is the qualitative method and the quantitative method, and each has its own advantages and reasons for the researcher choosing it when conducting the research. In some cases, the researcher is required to

use the two methods with the same research and consider them complementary to each other (Money et. al, 1998).

Moreover, (Hussey & Hussey, 1997) indicates that one of the most important differences between the qualitative and quantitative methodology is the focus on the individual through which the researcher can reach a deeper understanding of the research problem. Consequently, the quantitative method means that the researcher collects the largest possible amount of data and facts that which he audits and analyses later.

In this regard, (Patton, M.Q. 1990) says that the quantitative methodology is appropriate if the target research sample is large. Based on the previously mentioned, the researcher relied in this study on the quantitative method as an instrument for collecting data.

3.4. Data Collection Methods

The ways of gathering data are one of the foundations on which the research design depends. Researchers follow many methods of gathering information, where each method has its features and faults, which allow the researcher to choose the appropriate ones for his research. Among the methods used to collect data are the following:

3.4.1. Primary and Secondary Data

Research generally based on two types of data. The first type is new data that used for a specific aspect of the research and it called preliminary or original data. While the second type is called secondary data, which is the current and actual data represented in the statistics, reports, research and literature, which are used for a purpose completely different from the first type. Therefore, this study based on using the original and secondary data together to compare the results that can reached with the results that already exist (Hussey, J., & Hussey R, 1997).

3.4.2. Administered Questionnaire

The questionnaire is one of the methods used to obtain the opinions of colleagues on a specific issue. Although this method is most used, the process of creating a questionnaire is not easy. It requires the collection of information and the details required by the research. Therefore, the questionnaire questions must be prepared well, because

whenever the questionnaire is well prepared, this will have a positive impact on the reliability and validity of the data used. (Robson, 2002).

Although the questionnaire questions are prepared in advance according to the modified model ROPMIS as we indicated earlier, the research sample applied to this model may differ in some respects from those applied to it in previous studies, especially that this study is the first of its kind in the port sector in Libya. Consequently, the researcher took into consideration this aspect in cooperation with specialists and consultants to clarify any opacity in the questionnaire questions to guarantee that there are no mistakes in the general and linguistic concept.

3.5. Sampling and Data Collection

This study used the survey as one of the tools to collect data. The target sample represents the list of Tripoli port clients, which includes carriers, manufacturers, export and import companies and others. (350) questionnaires were distributed to all of the above sample categories on 15-2-2019 and they were given a maximum period of two months to receive the questionnaire forms. Then receive (272) forms after the end of the specified period, Table 3.1 shows the sample response rate in terms of the number of forms distributed to the sample, the numbers received and their percentage.

Table 3.1. response rate.

Distributed	Completed Questionnaires	Response Rate
350	272	77.71%

The questionnaire used fixed alternative questions and open questions and consisted of two parts so that the first section contains spatial questions such as specialization, practical experience, and type of goods. The second section contains a set of expressions that describe the factors of service quality for the Tripoli port, in which respondents asked to specify their attitudes and their satisfaction level toward the port services used. The respondent's attitudes measured according to a five-point Likert scale, which shows, respectively, 1- Agree 2- Strongly Agree 3- Disagree 4- Strongly Disagree 5- Neutral as indicated in the questionnaire form in Appendix No. (1).

The questionnaire distributed to a small sample of experts, academics and shipping companies to test it and ensure that the phrases used in terms of language and

clarity of meaning are correct to ensure the validity of the measurement design validity. Finally, the process of managing and distributing the questionnaire.

3.6. Conceptual Framework and Measurement

This study based on the conceptual model of the ROPMIS system developed and used by (Thai, 2008) to measure the PSQ. This model tests six dimensions of quality of service; each dimension contains a set of attributes that measure the perceptions and expectations of Tripoli port customers, as follows:

1 – Quality dimension –related to Recourses: This dimension explains the infrastructure, condition of facilities and equipment, location and material and financial resources.

2- Quality dimension related to results: This dimension refers to the services provided to clients, for example, the speed of service provision, the accuracy of the service, and the high technical performance in the service progress that guarantees the safety and security for goods and ships, in addition to the competitive price of service.

3- Quality dimension related to the process: It refers to the set of elements that measures the level of employee and customer interaction, for example, professional behaviour in meeting customer requirements, the speed of staff response to respond to customer requests and inquiries, the level of application (IT) in customer service.

4 – Quality dimension related to the Management: This dimension includes the effective selection and distribution of resources to ensure that clients' needs are met their expectations, and their level of understanding, skill, and professional competence met to suit the actual needs and requirements of customers.

5- Quality dimension –related to Image: This dimension refers to the level of a comprehensive understanding of customers about the organization of service in the port, for example, the port's reputation in the market and its relationship to other ports and social responsibility, and that the port operates according to environmental requirements.

6- Quality dimension related to social Responsibility: It includes moral awareness and the processes that the organization follows in its behaviour in a socially responsible way.

Figure 3.1. illustrates the conceptual framework for this study.

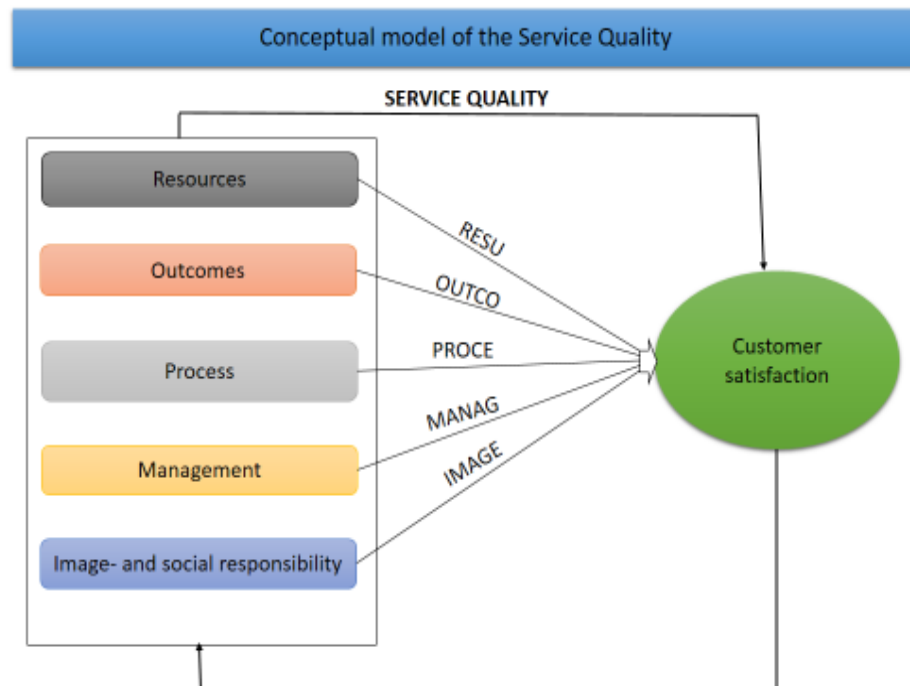


Figure 3.1. The conceptual framework of study.

Table 3.2. Constructs and measurement items.

Code	Research variables & measurement items	Author(s)
Resource-related PSQ		Revised from Thai (2008)
RESOU1	The port that we are using always has available equipment and facilities to meet our requirements	
RESOU2	The equipment and facilities of the port that we are using are modern and always function properly	
RESOU3	The port that we are using has strong and stable financial stability	
RESOU4	The port that we are using has excellent shipment track and trace capability	
RESOU5	The port that we are using excellent physical infrastructure such as berths, yards, warehouses, distribution centers, and hinterland connection networks	
Outcome-related PSQ		
OUTCO1	The port that we are using always provide fast service	
OUTCO2	The port that we are using always provide service in a reliable manner	
OUTCO3	The port we are using always provide service in a consistent manner	
OUTCO4	The port that we are using always ensure safety and security to our ships/shipments	
OUTCO5	The port that we are using always produce errorfree invoice and related documents	
OUTCO6	The port that we are using always offers competitive price of service	
OUTCO7	The port that we are using can always meet our service requirements anytime and anywhere we want	
Management-related PSQ		
MANAG1	The level of ICT applications in port operations and management at the port that we are using is comprehensive	
MANAG2	The port that we are using demonstrates high level of efficiency in operations and management	
MANAG3	The management in the port that we are using always demonstrate good knowledge and competence, including incident-handling capability	
MANAG4	The management in the port that we are using always demonstrate good understanding of our needs and requirements	
MANAG5	The port that we are using always collect our feedback about their services and reflect on their improvement	
MANAG6	The port that we are using continuously improve their customer-oriented operation and management processes	

Code	Research variables & measurement items	Author(s)
Image and Social Responsibility-related PSQ		
IMAGE1	The port that we are suing demonstrates good relationship with other ports and land transport service providers	Revised from Thai (2008)
IMAGE2	The port that we are using possesses positive reputation for reliability in the market	
IMAGE3	The port that we are using always emphasized on operations and work safety	
IMAGE4	The port that we are using demonstrates good record of operations and work safety	
IMAGE5	The port that we are using fulfill good social responsibility to their employees and other stakeholders	
IMAGE6	The port that we are using always emphasizes on environmentally responsible operations	
IMAGE7	The port that we are using has in place the environmental management system	
Customer Satisfaction		
SATIS1	Overall, we are satisfied with the facilities, equipment and other infrastructures of the port that we are using	Anderson et al. (2009), Pantouvakis (2010), Cao and Chen (2011)
SATIS2	Overall, we are satisfied with the management and employees of the port that we are using	
SATIS3	Overall, we are satisfied with the service quality of the port that we are using	
SATIS4	We will refer service of the port that we are using to our business partners	
SATIS5	We will continue using services of the port we are using	

The conceptual model shows the relationship between two variables, one is fixed and the other is variable, meaning the dimensions of service quality provided by the Tripoli port and its impact on customer satisfaction. Table 3-1, which illustrates dimensions of service quality, research variables and measurement elements, which represent 34 evaluation statements.

Due to the correlation of the social responsibility of the service organization and its perceived image among clients and society, the dimensions of the image and social responsibility have combined in one dimension under the name of the image and social responsibility in the model of measuring PSQ. Each dimension of the service quality measured using a number of variables that revised from a model (ROPMIS) to suit the specific context of the port under study. Moreover, the level of satisfaction with customers is one of the concepts developed as indicated by most modern literature, as

well as how it used to assess customer satisfaction with equipment and facilities, service satisfaction and general satisfaction (Anderson et al., 2009; Pantouvakis, 2010) In addition to that, the inability to achieve customer satisfaction with what is provided by services mostly leads to customers They use the service and refer it to others (Cao & Chen, 2011). Consequently, these measurement elements added to the structure of customer satisfaction.

Given the multiplicity of studies that examine issues of quality of services, especially with regard to the relationship between service quality and customer satisfaction, and despite the results of these studies, they are still under research and discussion, therefore this study examines the impact of the services quality of Tripoli Port on customer satisfaction, and for this reason, it was approved The hypotheses referred to in the part of introduction and background.

3.7. Data Validity and Reliability

Reliability and validity are among the most important basic characteristics of a procedure, any measurement. These two concepts can be clarified as follows:

3.7.1. Validity

According to Silveman (2000), who indicates that validity means reality or remaining as close as possible to this reality. However, this task may seem complicated because the nature of the study may contribute to finding subjective biases. During the research, we tried to be objective and avoid bias as possible. Riley, L.P., & Coolican, M.B (1999) indicates that there are three methods, one of which can be used to test the research validity named: construction of validity, validity of content and validity of the standard. In this study, use content validity to ensure that data collection tools are valid. It was found that the form is usable.

3.7.2. Reliability

Research reliability is achieved if the method used to collect data can lead to similar results each time it is used (Rapoport, M, 2004). Reliability indicates merit, stability, consistency, predictability and research accuracy. (Rapoport, M, 2004) Indicates two main types of reliability: the first is external and the second is internal. External reliability related to the consistency and consistency of the tests involved in

research conducted on several occasions. Given that the questionnaire placed in this study is taken from previous studies by researchers in the same field of interest, they designed the questionnaire and measured internal reliability by using interoperability reliability to choose the consistency of respondents' answers to all elements of the scale so that the elements are independent measures for the same concept. (Cronbach, L. J, 1946) The most widely used choice for interoperability reliability is the Alpha Cronbach coefficient, which used for multi-point elements.



CHAPTER 4

RESEARCH ANALYSIS

4.1. Introduction

This chapter introduces the section on Data Analysis with Descriptive Statistics. The independent variables were the dimensions of the service quality provided to the clients of the Tripoli port, represented in resources, outputs, results, process, management, image, and social responsibility.

Processing the data collected through multivariate analysis using the program SPSS .24, which was achieved through several steps so that in the first step the main component (PCA) and exploration factor analysis (EFA) and structural equation model (SEM) were analysed, then the correlation matrix of the original features was examined and the adequacy of the application of factor analysis was confirmed.

In the second step, the reliability of the feature set was measured in common factors to determine the values of the Alpha Cronbach factor. In the third stage, the reliability of separate factors and dimensions was measured and determined by using the method (CFA). Validity was also tested to determine the ability of the model to adapt to the data obtained. Finally, fourth stage statistical analysis.

4.2. Scales validity and reliability

4.2.1. Quality Factors Scale Validity

Table 4.1. Shows each factor explained variance and factor loadings after rotation.

Pattern Matrix ^a				
	Component			
	1	2	3	4
RESU2	.860			
RESU3	.829			
IMAGE6		.854		
IMAGE3		.795		
OUTCO3			-.924-	
OUTCO1			-.799-	
OUTCO2			-.511-	
MANAG6				-.907-
MANAG1				-.713-
<i>Explained Variance (%)</i>	<i>33.420</i>	<i>17.073</i>	<i>12.409</i>	<i>8.557</i>
<i>Total Explained Variance (%)</i>	<i>71.459</i>			
<i>Kaiser-Meyer-Olkin Measure of Sampling Adequacy</i>	<i>.726</i>			
<i>Bartlett's Test of Sphericity: χ^2 (36) = 567.307, $p < .001$</i>				
Extraction Method: Principal Component Analysis.				
Rotation Method: Oblimin with Kaiser Normalization. ^a				

A principal components factor analysis was conducted on the 25 items. An initial analysis was run to obtain eigenvalues for each factor in the data. Due to cross-loading or low factor loading 16 items were deleted. The Kaiser–Meyer–Olkin measure verified the sampling adequacy for the analysis, KMO = .726. The Bartlett test of sphericity is used to test the presence of correlations among the variables, the correlation matrix has significant correlations among at least some of the variables, χ^2 (36) = 567.307, $p < .001$. Four factors in combination explained 71.459% of the variance. Factor one is Resources-related PSQ, factor two is Image-related PSQ, factor three is Outcomes-related PSQ and factor four is Management-related PSQ. (Table 4.1.) shows each factor explained variance and factor loadings after rotation. Results indicate that the scale is valid.

4.2.2. Quality Factors Scale Reliability

Table 4.2. Reliability Analysis for Quality Factors Scale

Reliability Statistics				
Scale and Sub-scales	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	Mean Inter-Item Correlations	N of Items
Quality Factors Scale	.742	.728	9	.742
<i>Resources-related PSQ</i>	.752	.752	.603	2
<i>Image-related PSQ</i>	.587	.588	.416	2
<i>Outcomes-related PSQ</i>	.706	.705	.444	3
<i>Management-related PSQ</i>	.600	.605	.433	2

Table 4.2. shows Reliability Analysis for Quality Factors Scale. The scale had a satisfactory reliability, Cronbach's $\alpha = .742$. Sub-scales reliability ranged from .587 to .752. All sub-scales have reached satisfactory Cronbach's Alpha value of at least .70 or had Mean Inter-Item Correlations between .2 to .4 (Briggs and Cheek 1986). Results indicate that the scale and the sub-scales can be used in measurement of the indicated variable.

4.2.3. Customer Satisfaction Scale Validity

Table 4.3. Component Matrix a.

Component Matrix ^a	
	Component 1
SAT4	.859
SAT5	.859
<i>Explained Variance (%)</i>	73.863
<i>Kaiser-Meyer-Olkin Measure of Sampling Adequacy</i>	.500
<i>Bartlett's Test of Sphericity: $\chi^2 (1) = 69.660, p < .001$</i>	
Extraction Method: Principal Component Analysis.	

A principal components factor analysis was conducted on the 5 items. An initial analysis was run to obtain eigenvalues for each factor in the data. Due to low contribution to reliability, items; SAT1, SAT2 and SAT3 were deleted. The Kaiser–Meyer–Olkin measure verified the sampling adequacy for the analysis, KMO = .500. The Bartlett test of sphericity is used to test the presence of correlations among the variables, the correlation matrix has significant correlations among at least some of the

variables, $\chi^2 (1) = 69.660$, $p < .001$. Only one factor is retained and explained 73.863% of the variance. Results indicate that the scale is valid.

4.2.4. Customer Satisfaction Scale Reliability

Table 4.4. Reliability Statistics.

Cronbach's Alpha	Reliability Statistics		
	Cronbach's Alpha Based on Standardized Items	Mean Inter-Item Correlations	N of Items
.641	.646	.477	2

(Table 4.4) shows Reliability Analysis for Customer Satisfaction Scale. The scale had a satisfactory reliability, Cronbach's $\alpha = .646$. The scale had Mean Inter-Item Correlations between .2 to .4 (Briggs and Cheek 1986). Results indicate that the scale can be used in measurement of the indicated variable.

4.3. Statistical Analysis

4.3.1. Sample Descriptive

Table 4.5. Descriptive statistics of Sample.

Category	Frequency	Percent
Specializations		
Carrier	58	21.3
Manufacturing	51	18.8
Import/Export	156	57.4
Other	7	2.6
Total	272	100.0
Practical Experience		
Less than 5 years	7	2.6
From 5 to less than 10 years	16	5.9
From 10 to less than 15 years	75	27.6
From 15 to less than 20 years	84	30.9
Twenty years and above	90	33.1
Total	272	100.0
Goods		
General goods	119	43.8
Dry goods	58	21.3
Liquid goods	26	9.6
Containers	55	20.2
Other	14	5.1
Total	272	100.0

(Table 4.5) shows the distribution of the target sample in terms of numbers and percentage for each category. Where we note that export and import companies represent

the highest percentage of port customers at 57.4% of the total sample and others represent the lowest percentage, which represents 2.6%. As for the types of goods, the statistic shows that general cargo is the most traded in the port of Tripoli, so it constitutes 43.8% of the research sample, followed by dry goods at 21.3%, and containers represent 20.2%.

4.3.2. Descriptive Statistics Of Study Variables

Table 4.6. Descriptive Statistics of study variables.

Descriptive Statistics of study variables			
	N	Mean	Std. Deviation
Resources-related PSQ	272	2.31	.967
RESU2	272	2.43	1.085
RESU3	272	2.18	1.077
Image-related PSQ	272	4.26	.470
IMAGE3	272	4.26	.543
IMAGE6	272	4.27	.574
Outcome-related PSQ	272	3.53	.693
OUTCO1	272	3.22	.982
OUTCO2	272	3.85	.673
OUTCO3	272	3.52	.933
Management-related PSQ	272	2.74	.856
MANAG1	272	2.83	.935
MANAG6	272	2.66	1.085
Customer Satisfaction	272	3.89	.303
SAT4	272	3.91	.325
SAT5	272	3.88	.379

(Table 4.6) shows descriptive Statistics of study variables. In a five points scale Resources-related PSQ (M= 2.31, SD= .967), Image-related PSQ (M= 4.26, SD= .470), Outcome-related PSQ (M= 3.53, SD= .693), Management-related PSQ (M= 2.74, SD= .856) and Satisfaction (M= 3.89, SD= .303).

4.3.3. Correlations between Customer Satisfaction and Factors-related PSQ.

Table 4.7. Pearson Correlations between Customer Satisfaction and Factors-related PSQ

		Resources-related PSQ	Image-related PSQ	Outcome-related PSQ	Management-related PSQ
Satisfaction	Pearson Correlation	.307**	-.036-	.177**	.332**
**. Correlation is significant at the 0.01 level (2-tailed).					

(Table 4.7) Shows Pearson Correlations between Customer Satisfaction and Factors-related PSQ. There are significant positive correlations, weak to moderate, between Customer satisfaction and Resources-related PSQ, $r = .307$, $p < .01$, Outcome-related PSQ, $r = .177$, $p < .01$ and Management-related PSQ $r = .332$, $p < .01$. Hypotheses H1, H2, and H4 are all supported. There is no significant correlation between Customer satisfaction and Image-related PSQ $r = -.036$, $p > .05$. Hypotheses H5 was not supported. H3 cannot be tested due to invalid subscale.

4.3.4. Influence of Factors-related PSQ on Customer Satisfaction.

Regression analysis is used to test the influence of four Quality Factors-related PSQ on Customer Satisfaction variable. Results are shown below.

Table 4.8. Summary of regression analysis ^a

Model	Independent Factors	R ²	F	β	t	p	DW
1	Management-related PSQ	.110	33.434***	.332	5.782	.000	2.069
2	Management-related PSQ	.142	22.191***	.243	3.852	.000	
	Resources-related PSQ			.198	3.139	.002	
3	Management-related PSQ	.142	14.759***	.240	3.678	.000	
	Resources-related PSQ			.194	2.967	.003	
	Outcome-related PSQ			.014	.229	.819	
4	Management-related PSQ	.146	11.455***	.253	3.833	.000	
	Resources-related PSQ			.180	2.714	.007	
	Outcome-related PSQ			.026	.403	.687	
	Image-related PSQ			-.071-	-1.211-	.227	

^a Dependent variable: Customer Satisfaction *** $p < .001$

(Table 4.8) shows a summary of regression analysis. Model two is the best fitting model. Management-related PSQ and Resources-related PSQ are both statistically significant predictors of Customer Satisfaction. The total variance explained by the

model was 14.2%, $F(2, 269) = 33.434$, $p < .001$. Management-related PSQ and Resources-related PSQ factors recorded significant beta values (beta = .243 and .298 respectively, $p < .001$). Findings lead support to hypotheses H6 and H9. Outcome-related PSQ and Image-related PSQ were not significant predictors of Customer Satisfaction. H7 and H10 were not supported. H8 cannot be tested due to invalid subscale.

4.3.5. Customers' evaluation of the quality of services factors and Customer Satisfaction

Table 4.9. One-Sample Statistics of tested factors and dependent variable.

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
<i>Resources-related PSQ</i>	272	2.3070	.96740	.05866
<i>Outcomes-related PSQ</i>	272	3.5306	.69311	.04203
<i>Management-related PSQ</i>	272	2.7445	.85583	.05189
<i>Image-related PSQ</i>	272	4.2629	.47036	.02852
<i>Customer Satisfaction</i>	272	3.8934	.30317	.01838

(Table 4.9) shows One-Sample Statistics of tested factors and dependent variable. Image-related PSQ recorded the highest score in a five points scale ($M = 4.26$, $SD = .470$) while Resources-related PSQ recorded the lowest score in a five points scale ($M = 2.31$, $SD = .967$).

Table 4.10. One-Sample t Test.

One-Sample t Test						
	Test Value = 3					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
<i>Resources-related PSQ</i>	-11.815	271	.000	-.69301	-.8085	-.5775
<i>Outcomes-related PSQ</i>	12.626	271	.000	.53064	.4479	.6134
<i>Management-related PSQ</i>	-4.924	271	.000	-.25551	-.3577	-.1534
<i>Image-related PSQ</i>	44.281	271	.000	1.26287	1.2067	1.3190
<i>Customer Satisfaction</i>	48.600	271	.000	.89338	.8572	.9296

A One Sample t-test was conducted to compare Customers' evaluation of the quality of services factors and Customer Satisfaction to the benchmark of a five point's

scale; (3). There was statistically significant decrease in Resources-related PSQ scores ($M = 2.31$, $SD = .967$), $t(271) = -11.815$, $p < .001$ (two-tailed). The Mean Difference score was $-.69$ with a 95% confidence interval ranging from $-.81$ to $-.58$. The eta-squared statistic (.34) indicated a large effect size. **H11** is not supported.

There was a statistically significant increase in Outcomes-related PSQ scores ($M = 3.53$, $SD = .693$), $t(271) = 12.626$, $p < .001$ (two-tailed). The Mean Difference score was $.53$ with a 95% confidence interval ranging from $.45$ to $.61$. The eta-squared statistic (.37) indicated a large effect size. **H12** is supported.

There was a statistically significant decrease in Management-related PSQ scores ($M = 2.74$, $SD = .856$), $t(271) = -4.924$, $p < .001$ (two-tailed). The Mean Difference score was $-.26$ with a 95% confidence interval ranging from $.15$ to $.36$. The eta-squared statistic (.08) indicated a moderate effect size. **H14** is not supported.

There was a statistically significant increase in Image-related PSQ scores ($M = 4.26$, $SD = .470$), $t(271) = 44.281$, $p < .001$ (two-tailed). The Mean Difference score was 1.26 with a 95% confidence interval ranging from 1.21 to 1.32 . The eta-squared statistic (.88) indicated a large effect size. **H15** is supported. H13 cannot be tested due to invalid subscale.

There was a statistically significant increase in Customer Satisfaction scores ($M = 3.89$, $SD = .303$), $t(271) = 48.600$, $p < .001$ (two-tailed). The Mean Difference score was $.89$ with a 95% confidence interval ranging from $.85$ to $.93$. The eta-squared statistic (.90) indicated a large effect size. **H16** is supported.

From the above through the stages of data analysis, we note that the results support the hypotheses H1, H2, H4, H6, H9, H12, H15, and H16. While the results did not support the hypotheses H5, H7, H10, H11, H14. Hypotheses H3, H8, H13 were considered invalid for measurement. As shown in the table 5.11.

Table 4.11. Results of the Hypothesis Test.

Hypothesis	Dimensions	Person Correlation	β	T- test	Result
H1	Resource	0.307			Supported
H2	Out com	0.177			Supported
H3	Process				Invalid
H4	Management	0.332			Supported
H5	Image	-0.036			Not supported
H6	Resource		0.243		Supported
H7	Out com		0.014		Not supported
H8	Process				Invalid
H9	Management		0.198		Supported
H10	Image		-0.071		Not supported
H11	Resource			-11.815	Not supported
H12	Out com			12.626	Supported
H13	Process				Invalid
H14	Management			-4.924	Not supported
H15	Image			44.281	Supported
H16	Satisfaction			48.600	Supported

CHAPTER 5

CONCLUSION AND RECOMMENDATIONS

5.1. Introduction

Through this chapter, we will present some of the results extracted from this study and then touch upon the limits of the study followed by presenting some recommendations that were formulated through tracking the stages of the study and its goals and the results reached, which include recommendations for programs to improve the quality of services for the port of Tripoli and recommendations for further research in the future.

5.2. Finding and Discussion

Given that this study aims to provide a practical conceptual framework that defines concepts and indicators of quality through a model that specifies the factors associated with the port services quality program and customer satisfaction.

This study has sought, through reviewing many previous studies and researches that contributed to finding criteria for the port services quality, using various models to determine the dimensions of service quality for the port from different points of view, so researchers have used the model SERVQUAL (Parasurman et al, 1988). Others use the model SERVPERF (Cronin & Tylor, 1992). Finally, the revised ROPMIS model was used by (Thai,2008) which adopted six dimensions of port service quality, which was considered more usable instead of SERVQUAL to measure port customer satisfaction, which was adopted in this study.

Through the methodology adopted in this study, as well as data analysis processes through which the researcher seeks to achieve the goals of the study by answering the four research questions referred to in the part of introduction and background.

Looking at the process of analysis of the set of factors in the approved model, which shows us the following results: -

- Through the analysis, a model consisting of four dimensions of the service quality provided by the Tripoli port was reached, which is represented in resources, image, results, and management, so that these factors showed 71,459% of the variance in the sample consisting of 272 respondents out of 350 questionnaires, as indicated in (Table 4.1.) that explains each factor that explains the variance and load factors after rotation, and the results indicate that the scale is valid. In addition, the reliability analysis of the customer satisfaction scale indicates satisfactory reliability. That is, the measure had an average correlation between elements 0.2 to 0.4 (Briggs and Cheek, 1986) as show in (Table 4.2). Results indicate that the scale and the sub-scales can be used in measurement of the indicated variable.

-With regard to measuring the validity of the model for customer satisfaction and by analysing, the main components on the five items as shown in table (Table 4.3) the results indicate that the scale is valid. Moreover, the reliability of the customer satisfaction scale was analysed as shown in (Table 4.4). The results indicate satisfactory reliability and thus the scale can be used to measure the indicated variable.

- One of the results of this study that all the dimensions and their elements referred to in the approved model are comprehensive and focus on most of the requirements and needs of port customers (cargo owners and shipping lines) and they are among the elements that customers study when making a decision to choose a shipping port, especially in light of the intense competition between ports. this result supported by result of previous studies (Murphy ea le, 1987; Tongzon, 2009; Zarei, 2015).

- By analysing, the relationship between customer satisfaction and port services quality related to factors as shown in (Table 4.7) the results of the analysis indicate that there are positive correlations statistically between customer satisfaction and the services quality related to resources, outputs and management, which is support the hypothesis H1, H2, H4. While the correlation coefficient between Customers satisfaction and services quality related to image are weak ($r = -0.036$) and this result does not support hypothesis H5. The results also showed that the hypothesis H3 is not measurable.

- Regarding the impact of factors related to port services quality on customer satisfaction. As shown in (Table 4.8), which indicates the result of the regression analysis, where the effect of four elements of port services quality related to quality factors on the customer satisfaction variable was tested. Where the results of the download indicate that the port services quality related to management and resources is one of the most important statistical indicators for the satisfaction clients of the Tripoli port. This supports the hypothesis H6, H9. The effect that quality of service has on customer satisfaction is one of the results supported by other studies in the literature (. Polyorat & Sophonsiri, 2010. Dehghan et al, 2012.M. Shanaki et al 2012 & Thai, 2015). In addition, this result did not support hypothesis H7, H10. While hypothesis H8 was not valid for measurement.

Despite the importance of the dimension related to the image and social responsibility in terms of its positive impact on the quality of port services and customer satisfaction as indicated by the results of one of the previous studies (Thai, 2016), which emphasizes the importance of social performance of the port institution as a supportive factor in the quality of service that reflects the perceived image of the client in terms of operations environmentally responsible, Especially marine accidents often have a significant negative impact on the marine environment and the safety of workers and goods, in addition to restrictions that make both the port authority and operator accountable to external regulators and observers (IMO & UNCTAD) in applying regulations and the international conventions and treaties with regard to the marine environment as well as the management and operation of ports. However, the results of analysis showed that the quality of services related to the image did not have a positive impact on customer satisfaction and therefore the hypothesis (10) was not supported.

-With regard to customer evaluation of the quality of service factors and customer satisfaction. Through (Table 4.9 & 4.10) the results indicate that the services quality related to resources has scored the lowest score in a five-point scale. By testing (t) for one sample to compare customer evaluation of the quality of service factors and customer satisfaction with scale mark (3) with a five-point scale, the results indicate a significant decrease in the degree of port services related to resources, which does not support the hypothesis H11.

In the same context, the results indicated a statistically significant increase in the quality of services related to results and image, which supports the hypothesis H12, H15. While the hypothesis H14 related to the management were not supported. Other literature supports the result that the assessment of services quality related to OUTCOME and IMAGE are much higher than the mid-point of measurement for a five-point scale (Thai, 2015 & Thai, 2016).

The results also indicate a statistically significant increase in the levels of customer satisfaction, which supports the hypothesis H16. This result is supported by the results of previous studies (M. Shanaki et al, 2012 & Manuel.C et al, 2015).

-Among the results of this study, which are of benefit to the directors and operators of Tripoli Port Referring to that that the Ports Authority and the Socialist Company responsible for managing and operating commercial ports in Libya do not pay much attention to the concepts of PSQ and therefore this study will be of assistance to the managers and operators of the port in terms of access to The level of awareness and understanding of the aspects and dimensions of PSQ that enable them to achieve customer demand and work to improve the services quality and consider the customer satisfaction measure a basic criterion for maintaining existing clients and attracting new customers.

5.3. Recommendations

First / with regard to improving the quality of services:

1. In the modern economy, the quality of services has become an essential role in the development and growth of institutions and improving their competitiveness with others. Therefore, the meaning of quality of service must be a firm concept at all levels of management in the port, which leads to an understanding and awareness of customer needs and providing services to them better and faster.

2. Enhancing the concept of service quality and its importance in maintaining existing clients and gaining potential clients through focused training courses supervised by the Libyan Ports Authority in cooperation with the Tripoli Port Administration so that these courses target department managers, their assistants and service supervisors in the port.

3. Increased attention to infrastructure and superstructure, which will contribute effectively to improving the PSQ.

4. Increase the level of information technology applications (IT) that will enhance customer service in terms of reliability and speed of performance.

5. Improve the port's image and reputation through good relations with other ports, fulfil the social responsibility of employees and stakeholders at the port, and follow modern environmental management systems, and that all port operations are environmentally friendly.

Second / regarding future research:

As we mentioned earlier, this study is the first of its kind on the Libyan ports, and therefore, it paves the way for more studies on the same port or the rest of the other local ports taking into consideration the obstacles of this study. In addition to increasing the sample size and different groups of participants so that can do more tests to reach better results on the relationship between the quality of services and customer satisfaction.

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Appendixes

Appendix 1. Questionnaire in English

ROP MIS Model 2008

Survey to determine the services quality of the Tripoli port according to the views of users

The purpose of this research is to determine the perceptions and opinions of the users of the Tripoli port about the services provided by the port and to find the relationship between the dimensions of service and customer satisfaction.

Therefore, please cooperate in answering all questions in the questionnaire, noting that your generous contribution in answering these questions will help the researcher achieve the required scientific results. We would like to draw your attention to the fact that the information you will use will be used for the purpose of scientific research.

Thank you for your participation.

Suction A. general information

- 1- Specialization: carrier () manufacturing () export and import ()
Others () (Please specify)
- 2- Practical experience: Less than 5 years () from 5 to 10 years ()
() from 10 to 15 years () from 15 to 20 () more than 20 (Please specify)
- 3- Start handling port:.....
- 4- Type of goods: general cargo () Dry Goods () liquid Goods ()
Containers () others () (Please specify)

Section B. Questions related to Tripoli port services

Please evaluate the following statements ranging from: 1 = strongly disagree 2 = disagree

3 = neutral 4 = agree 5 = strongly agree.

N	Statements	Strongly disagree	Disagree	neutral	Agree	Strongly Agree
RESU1	Tripoli Port always has available equipment and facilities to meet our requirements.	1	2	3	4	5
RESU2	Tripoli port equipment and facilities used are modern and operate properly.	1	2	3	4	5
RESU3	Tripoli Port has excellent physical infrastructure such as berths, yards, warehouses, distribution centers and hinterland connection network.	1	2	3	4	5
RESU4	Tripoli Port has strong and stable financial stability.	1	2	3	4	5
RESU5	Tripoli port has excellent shipment track and trace capability.	1	2	3	4	5
OUTCO1	Tripoli Port always provide fast service.	1	2	3	4	5
OUTCO 2	Tripoli Port always provide service in a reliable manner.	1	2	3	4	5
OUTCO 3	Tripoli Port always provide service in a consistent manner	1	2	3	4	5
OUTCO 4	Tripoli port always ensure safety and security to our ship/shipments.	1	2	3	4	5
OUTCO 5	Tripoli Port always produce error free invoice and related documents.	1	2	3	4	5
OUTCO 6	Tripoli Port always offers competitive price of services.	1	2	3	4	5
OUTCO 7	Tripoli Port can always meet our service requirements any time and any where we want.	1	2	3	4	5
PROCE1	The staff in Tripoli Port always demonstrate professional attitude and behavior in meeting our requirements.	1	2	3	4	5
PROCE 2	The staff in Tripoli Port always respond quickly to our enquiries and request.	1	2	3	4	5
PROCE 3	The staff in Tripoli Port always demonstrate good knowledge our needs and requirements.	1	2	3	4	5
PROCE 4	The level of ICT applications in customer service at Tripoli port comprehensive.	1	2	3	4	5
MANAG1	The level of ITC applications in port operations and management at Tripoli port comprehensive.	1	2	3	4	5
MANAG2	Tripoli Port always demonstrates high level of efficiency in operations and management.	1	2	3	4	5
MANAG3	The management in Tripoli port always demonstrate good knowledge and competence including incident-handling capability.	1	2	3	4	5
MANAG4	The management in Tripoli port always demonstrate good understanding of our needs and requirements.	1	2	3	4	5
MANAG5	Tripoli Port always collect our feedback about their services and reflect on their improvement.	1	2	3	4	5

MANAG6	Tripoli Port always continuously improve their customer oriented operation and management processes.	1	2	3	4	5
IMAGE1	Tripoli Port demonstrates good relationship with other ports and land transport service providers.	1	2	3	4	5
IMAGE2	Tripoli Port possesses positive reputation for reliability in the market.	1	2	3	4	5
IMAGE3	Tripoli Port always emphasized on operations and work safety.	1	2	3	4	5
IMAGE4	Tripoli Port demonstrates good record of operations and work safety.	1	2	3	4	5
IMAGE5	Tripoli Port fulfill good social responsibility to their employees and other stakeholders.	1	2	3	4	5
IMAGE6	Tripoli Port always emphasizes on environmentally responsible operations.	1	2	3	4	5
IMAGE7	The port that we are using has in place the environmental management system.	1	2	3	4	5
SAT1	Overall, we are satisfied with the facilities, equipment and other infrastructures of the Tripoli Port.	1	2	3	4	5
SAT2	Overall, we are satisfied with the management and employees of the Tripoli Port.	1	2	3	4	5
SAT3	Overall, we are satisfied with the service quality of the Tripoli Port.	1	2	3	4	5
SAT4	We will refer service of the Tripoli Port to our business partners.	1	2	3	4	5
SAT5	We will continue using services of the Tripoli Port.	1	2	3	4	5

If there is something else you would like to add please write.

.....
.....
.....
.....

* Dear participant, if you want to share the results of our research with you please write your e-mail address.....

Appendix 2. Questionnaire in Arabic

ROPMIS Model 2008

نسخة اللغة العربية

استبيان

لتحديد جودة خدمات ميناء طرابلس البحري وفقاً لأراء المستخدمين

الغرض من هذا البحث هو تحديد تصورات و آراء مستخدمي ميناء طرابلس البحري حول الخدمات التي يقدمها الميناء وإيجاد العلاقة بين ابعاد الخدمة ورضاء العملاء.

لذلك يرجى التعاون في الإجابة على كافة الأسئلة الموجودة في استمارة الاستبيان، علماً بأن مساهمتكم الكريمة في الإجابة على هذه الأسئلة ستساعد الباحث في التوصل الى النتائج العلمية المرجوة ونلفت انتباهكم الى ان المعلومات التي ستدلون بها سوف تستخدم لغرض البحث العلمي وبالتالي نرجو منكم الإجابة بدقة وحياد.

وتفضلوا بقبول فائق التقدير والاحترام

الباحث

القسم الأول: -معلومات عامة

1- التخصص: ناقل () تصنيع () تصدير واستيراد () أخرى ()

2- الخبرة العملية: اقل من 5 سنوات () اقل من 10 سنوات ()

من 10 الى 15 سنة () اقل من 20 سنة ()

اكثر من 20 سنة () . "ارجو التحديد"

3- بداية العمل مع

الميناء.....

4- نوع البضاعة الموردة او المصدرة:

- بضائع عامة () - بضائع صب جاف () - بضائع صب سائل ()

- حاويات () - أخرى () "رجاء حدد"

القسم الثاني:- الأسئلة المتعلقة بخدمات ميناء طرابلس البحري

يرجى تقييم العبارات التالية التي تتراوح من: 1= لا أوافق بشده 2= لا اوافق

3= محايد 4=موافق 5= موافق بشدة

5	4	3	2	1	البيان	ت
					ميناء طرابلس دائما يوفر المعدات والمرافق لتلبية متطلباتنا.	1
					معدات ومرافق ميناء طرابلس المستخدمة حديثه وتعمل بشكل صحيح.	2
					ميناء طرابلس لديه بنى تحتية ممتازة مثل الأرصفة، الساحات، المستودعات، مراكز التوزيع وشبكات اتصال مع مناطق الظهير.	3
					يتمتع ميناء طرابلس باستقرار مالي قوي ومستقر.	4
					يتمتع ميناء طرابلس بقدرة تتبع وشحن ممتازة.	5
					ميناء طرابلس دائما يقدم خدمة سريعة.	1
					ميناء طرابلس دائما يوفر الخدمة بطريقة موثوقة.	2
					الخدمات المقدمة بميناء طرابلس تتم باحترافية.	3
					ميناء طرابلس يضمن دائما السلامة والأمان للسفن / البضائع.	4
					ميناء طرابلس دائما يقدم فواتير ومستندات خالية من الأخطاء.	5
					ميناء طرابلس دائما يقدم خدمات بأسعار تنافسية.	6
					يستطيع ميناء طرابلس دائما تلبية متطلبات خدمتنا في أي وقت وأي مكان نريده.	7
					يبرهن الموظفون في ميناء طرابلس دائما على السلوك والسلوك المهني في تلبية متطلباتنا.	1
					يستجيب موظفو ميناء طرابلس دائما بسرعة لاستفساراتك وطلبك	2
					الموظفين في ميناء طرابلس يبذلون دائما معرفة جيدة باحتياجاتنا ومتطلباتنا.	3

					4	مستوى تطبيقات تكنولوجيا المعلومات والاتصالات في خدمة العملاء بميناء طرابلس شامل.
					1	مستوى تطبيقات مركز التجارة الدولية في عمليات الموانئ والإدارة في ميناء طرابلس شاملة.
					2	يوضح ميناء طرابلس دائماً مستوى عالٍ من الكفاءة في العمليات والإدارة.
					3	تثبت الإدارة في ميناء طرابلس دائماً المعرفة والكفاءة الجيدة بما في ذلك القدرة على التعامل مع الحوادث.
					4	تثبت الإدارة في ميناء طرابلس دائماً الفهم الجيد لاحتياجاتنا ومتطلباتنا.
					5	يقوم ميناء طرابلس دائماً بجمع ملاحظتك حول خدماتهم والعمل على تحسينها.
					6	يعمل ميناء طرابلس دائماً على تحسين عمليات التشغيل والإدارة الموجهة للعملاء.
					1	ميناء طرابلس لديه علاقة جيدة مع الموانئ الأخرى ومقدمي خدمات النقل البري.
					2	يتمتع ميناء طرابلس بسمعة إيجابية من حيث الموثوقية في السوق.
					3	ميناء طرابلس يؤكد دائماً على العمليات وسلامة العمل.
					4	لدى ميناء طرابلس سجل جيد للعمليات وسلامة العمل.
					5	ميناء طرابلس يتميز بالوفاء بالمسؤولية الاجتماعية الجيدة لموظفيها وأصحاب المصلحة الآخرين.
					6	يؤكد ميناء طرابلس دائماً على العمليات المسؤولة بيئياً
					7	يوجد في ميناء طرابلس نظام الإدارة البيئية.
					1	بشكل عام، نحن راضون عن المرافق والمعدات والبنى التحتية الأخرى لميناء طرابلس.
					2	عموماً، نحن راضون عن الإدارة وموظفو ميناء طرابلس.

					3	عموماً، نحن راضون عن جودة الخدمة بميناء طرابلس.
					4	سنرجع خدمة ميناء طرابلس لشركائنا التجاريين.
					5	سوف نستمر في استخدام خدمات ميناء طرابلس.

* إذا لديك ما تود إضافته ارجو التفضل بالكتابة

هنا.....
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* عزيزي المشارك، إذا كنت ترغب في مشاركة نتائج بحثنا معك، فيرجى كتابة
عنوان بريدك الإلكتروني.....

CURRICULUM VITAE

Salem Ali S. Eshtewee was born in 1966 in Libya. He graduated from Libyan Naval academy in 1988. He earned Master's degree in industrial planning from Planning Institute of Graduate Studies in Tripoli, in 2005. He has been working at the Naval Academy in Tripoli since 1988. Formerly, he was a lecturer at the Higher Institute of Marine Science Technologies between 2006 -2013.

