A CUSTOMER SERVICE STRATEGY FOR NGQURA CONTAINER TERMINAL

BY

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DECLARATION

I Mkhululi Terrence Mtshiselwa, hereby declare that;

The work in the treatise is my own original work;

All sources used or referred to have been documented and recognised; and

This research has not been previously submitted in full or partial fulfilment of the requirements for an equivalent or higher qualification at any other recognised education institution."

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MKHULULI TERRENCE MTSHISELWA   DATE

ACKNOWLEDGEMENTS

ABSTRACT

The container terminals play an increasingly important role in the economy of many countries. In today's global competitive environment delivering quality service is considered as an essential strategy for success and survival. In the very competitive container terminals, service quality is important in attracting and retaining customers. The shipping companies are interested in speed and reliability from the terminals. The time a ship stays in a port must be minimised, and, therefore, the handling of containers must be executed in a fast and reliable way. The importance of customer service as a competitive strategy in container terminal has long been recognised.

The growth in container volumes and higher productivity by Ngqura Container Terminal has created greater demand than before from its customers in the shipping business. The current growth in container volumes and increased customer demand has made the situation at NCT less encouraging at times, due to additional traffic of vessels awaiting to dock at the port creating congestion problems; resulting in unplanned lengthy dock occupation by vessels and the current status quo is affecting NCT strategy in terms of arrival docking and providing a quick response to customers. The Ngqura terminal is under increasing pressure from its customers and stakeholders to demonstrate that their services are customer-focused and that continuous performance improvement is being delivered.

Therefore, a literature study and questionnaire survey forms the main input for this research combined with interviews with terminal managers. The purpose of this research is to examine the service quality concepts and offer an operational approach for the measurement of the quality of Ngqura Container Terminal services.

The main research problem in this study was to identify customer service strategies that could be applied by Ngqura Container Terminal in order to maintain and exceed its business growth as well as customer expectations? The study employed the

SERVQUAL model as a measuring tool in establishing the customers' general expectations of a service and their perceptions of the service received at Ngqura Container Terminal. The five elements of SERVQUAL, which are tangibles, reliability, responsiveness, assurance, and empathy, were used to deal with and solve the main problem. Below are the sub-problems that have been identified in order to investigate and develop a research strategy:

- What is the customer's perception of service quality at NCT?
- What are the specific customer service requirements of NCT's customers?
- Does NCT's service operations performance enable it to fulfill its customer service requirements?
- How can the performance gap between customer service requirements and service operations performance be bridged?
- Which service quality elements are important to customers for container terminals?

This study wants to concentrate on the customers' perception and evaluation toward service performance in Ngqura Container Terminal.

Table of Contents

LIST OF FIGURES

LIST OF TABLES

CHAPTER ONE

INTRODUCTION, PROBLEM STATEMENT AND DEFINITION OF SELECTED CONCEPTS

Transportation by ship is by far the most universal and important global shipment method, accounting for two-thirds of all international movements. The universal use of containers has reduced damage and increased accessibility (Langley, 2008).

South Africa needs strong, globally competitive and globally connected port operations capabilities to integrate the regional container system and capture a larger share of international container traffic. This would be possible by developing a transshipment-hub port that would be able to handle larger ships, with faster handling capabilities and deeper drafts. Transnet forecasted a rapid growth trade between countries in the southern hemisphere and the south trade route as a significant global trade route in the medium to long term (Port Finance International, 2012).

Therefore, Transnet made an investment of more than R10 billion in the Eastern Cape, with the aim of infiltrating the forecasted trade market. The construction of Ngqura Container Terminal (NCT) took place around 2003 and the port started operating in October 2009. The port has grown the economy of the Eastern Cape region, creating more than 800 direct jobs and 300 indirect jobs, changing the face of industry across the Eastern Cape since it started operations (Eastern Cape Roadmap Performance Containers, 2013).

From the time when the terminal started operations in 2009, NCT has had an unforeseen volume year-on-year growth, from handling 78985 container volumes in 2009 to an increase of 623565 container volumes in 2012. The Port of Ngqura container volumes is projected to grow by 1015 527 Twenty-foot Equivalent Units (TEUs) by 2015 (Eastern Cape Roadmap Performance Containers, 2013).

Ngqura Container Terminal's performance productivity rate has been outstanding, improving every year since it started operations. According to Eastern Cape Container Terminal General Manager Siya Mhlaluka cited in (Odendaal, 2013) that "technological advancements and new equipment have contributed to the consistent high productivity at the Ngqura Container Terminal, in the Eastern Cape".

This has made Ngqura Container Terminal to be one of the preferred ports of choice by the shipping lines or shipping customers in the container business. The growth in container volumes and higher productivity by NCT has created greater demand than before from its customers in the shipping business and if this growth is properly managed well it can act as a catalyst for development of the Eastern Cape region, as well as the country. However, the recent growth in container volumes and increased customer demand has made the situation at NCT less encouraging, due to additional traffic of vessels awaiting to dock at the port is creating congestion problems; resulting in unplanned lengthy dock occupation by vessels.

The current status quo is affecting NCT strategy in terms of arrival docking and providing a quick response to customers. These factors have huge implications for the quality of the service delivered by the terminal and affect the choice of terminal preferences in which the shipping customers invest. .The above-mentioned circumstances also make it difficult to organise operational activities properly.

Furthermore, infrastructural challenges such as yard stacking or storage areas and shortages of equipment such as mobile cranes, rubber- tyre gantries (RTG's), Ferrari haulers (trucks), all of which involving high levels of capital investment. All these constraints have a significant impact on port operations such as productivity and also customer relations. According to James Phillipson (n.d., cited in Julie King 2007) when a business is successful and grows, particularly when the growth is rapid, management is almost always operating with limited resources.

To maintain and sustain a successful business growth and economy, NCT needs to ensure that these constraints are managed well and imports, exports and transshipments reach their final destination as quickly and safely as possible. Therefore, NCT should recognise and develop strategies that can be used to

overcome the common pitfalls associated with growth in order to continue to grow and thrive. The terminal also needs to come up with strategies that will meet the customer's needs and expectations as it is the value of the customer's experience with the service offered that is important.

In order to continue growing and attracting customers, NCT needs to understand what their current customer's requirements and needs are. This leads to the aim of the current study, which is to gather information from the shipping customers that are serviced by NCT, namely Mediterranean Shipping Company (MSC), Maersk Shipping Line (MSK) and Mitsui O.S.K. Lines (MOL) to determine their perception about service quality at NCT and to identify which service qualities features are important to the customers. By understanding the customers' perception on service quality and recognising, which service quality features are important to the customers, NCT can formulate corrective strategies, aimed at aligning the terminal strategy to meet customer requirements.

2.   PROBLEM STATEMENT

It is evident from the introduction that the investment made in Ngqura Container Terminal by Transnet is having positive results, and a recent study by the Drewry Maritime research company revealed that NCT's volume growth had more than doubled at 129% making the port the fastest growing port in the world, thanks to an increase in transshipment (Container Port Insight, 2013).

Transnet Port Terminal (TPT) Chief Executive Officer Karl Socikwa says they expected the port's volumes to remain on an upward trend, noting that a new service introduced by one of TPT's key customers further boosted transshipment volumes (Mavuso, 2013). Ngqura Container Terminal will want to strive to sustain and maintain its current growth, as well as to exceed its customers' expectation through higher productivity and good customer relations. Maintaining and sustaining world-class standards by NCT is important for TPT, and also for the economic growth of the Eastern Cape.

Growing businesses face a variety of challenges, as business grows; different problems and opportunities demand different solutions – a strategy that worked a year ago might now not be the best approach (Info entrepreneurs, 2012).

It is important for NCT to take the following points into account that, the competition for transshipment cargo is fierce. The transshipment business is much more volatile than the handling of local cargo. Carriers may switch their transshipment port without warning, which makes it crucial for the port to achieve maximum productivity at the lowest costs (Economic Commission for Latin America and the Caribbean, 1998).

Therefore, the fast growth of NCT runs the risks of the port not being able to meet its customers' requirements and performing at desired operational standards. This might result to the port having to be privatised because of the inefficiencies, unable to cope with market pressures (performance, reliability and quality of service). The onus will be on Transnet to prove that public owned terminals can be just as more efficient in terminal operations as private companies. Additional consequences that are to be considered are poor productivity and low service delivery by NCT that can force customers to move their business to other container terminals, subsequently leading to a loss in revenue and future business growth opportunities, as well as job creation in the Eastern Cape.

The aim of the research is to develop a customer service strategy for Ngqura Container Terminal to maintain and exceed its rapid business growth, as well as customer expectations.

This leads to the following problem that will be dealt within this paper:

What customer service strategy could be implemented by Ngqura Container Terminal in order to maintain and exceed its business growth, as well as customers' expectations?

3. **PURPOSE OF THE STUDY**

The purpose of the study covers the following points,

- Discuss the theories about the nature and importance of service quality.
- Analyse the importance of providing excellent service quality to customers and how the profitability of a business will increase as the service quality increases.

- Investigate the methodology that supports the service quality and SERVQUAL model as a service quality framework that is used to measure the customer's perception at Ngqura Container Terminal.
- Evaluate the overall perception of NCT's customers on service quality.
- Provide recommendations for management of Ngqura Container Terminal and for future research connected to the topic.

4. CONCEPTUAL FRAMEWORK

As the framework of this study is the overall management and maintaining the business growth of NCT, as well as exceeding customer expectations, it is natural to focus on customer service strategies that can be applied at NCT.

Below are the sub-problems that have been identified in order to develop a research strategy to deal with and solve the main problem:

a. What is the customer's perception of service quality at NCT?
b. What are the specific customer service requirements of NCT's customers?
c. Does NCT's service operations performance enable it to fulfill its customer service requirements?
d. How can the performance gap between customer service requirements and service operations performance be bridged?
e. Which service quality elements are important to customers for container terminals?

The goal of this research paper is to advance the understanding of the considerable significance of customer service delivery in container terminals, and also to explore their connections to NCT business strategy, its rapid volume growth, customer relations, as well as the economic development of the Eastern Cape region. The recent forecasted demand in transshipment volumes that is to be handled at NCT and the current investment made by Mediterranean Shipping Company (MSC) switching a considerable transshipment volume of West African cargo along its southern route from Valencia to NCT, it is a clear indication of additional possible growth for the terminal in the future (Transnet Internal communication, 2013) .

In order for NCT to continue the rapid volume growth and investments made by its customers, it is imperative to realise the importance of the relation between the

quality service, customers' satisfaction and productivity levels of the terminal. Anderson, Fornell & Lehmann (1994), states that the "overall customer satisfaction should be an indicator of the firm's performance due to its links to behavioural and economic consequences beneficial to the firm". He also mentioned that word-of-mouth from satisfied customers lowers the cost of attracting new customers and enhances the firm's reputation, while that of dissatisfied customers naturally has the opposite effect.

Lastly NCT must develop customer service strategies aligned with its business growth, to attract and please its customers, compete successfully and achieve its targeted objectives. Hough, Thompson, Strickland & Gamble (2011, p.5) state that a company's strategy is all about how management intends to grow the business, how it will build a loyal clientele and outcompete rivals, how each functional piece of the business (research and development, supply-chain activities, production sales and marketing, distribution, finance, and human resources) will be operated, how performance will be boosted.

Understanding the importance of maintaining and sustaining the business after the "how" has been achieved is critical, in the case of NCT developing customer service strategies to assist in maintaining and sustaining the business growth will be the empirical study, also how NCT plans to exceed its customers' expectations.

Like other interdisciplinary topics, business strategies are often mentioned but rarely analysed. Therefore, they are often poorly implemented and understood by the organisations and its employees. It is common to see businesses with great potential for growth fail commercially because little, if any, attention has been given to developing strategies that will make them respond to rapid business growth and international competitions.

5.   RESEARCH OBJECTIVES

 Primary Objective: The primary objective of this research is to develop a customer service strategy for Ngqura Container Terminal to maintain and exceed its rapid business growth, as well as customers' expectations.

In order to achieve the primary objective, the following secondary objectives will be pursued:

Secondary Objective: The secondary objective of this research is to determine the customers' perception on service quality at NCT and important elements of service qualities, in order for NCT to develop aligned business customer service strategies of operating a transshipment-hub terminal, through emphasis on good excellent customer service.

Research Design Objectives

In order to attain the above-mentioned objectives, the following research design objectives are pursued:
- conducting a secondary literature review on the variables being explored
- conduct an empirical study by;
- constructing a questionnaire for the collection of empirical data
- distributing the questionnaire to three selected shipping customers and targeting about forty employees
- capturing the data in an Excel computer software programme
- analysing the data using the STATISTICA computer software programme
- interpreting the results and drawing conclusions
- providing recommendations to management.

6.   DEMARCATION OF THE RESEARCH

The aim behind the demarcation of the research study is to avoid the research topic from becoming disorganised. Demarcating the research serves the purpose of making the research more manageable. The omission of certain topics does not imply that there is no need to research them in future.

6.1   Organisation

Transnet Port Terminals (TPT) was established in 2000, when Transnet's then single port division Portnet was divided into operations and landlord businesses namely, SAPO (Transnet Port Terminals) and National Port Authority (TNPA). Since its inception, Transnet Port Terminals has played a key role in supporting the South

African government's export-led growth strategy. Most Southern African import and export commodities are handled through South Africa's seven logistics ports, which are: Richards Bay, Durban, Saldanha, Cape Town, Port Elizabeth, East London, and Port of Ngqura. Port Terminals services the container sector, mineral bulk, agricultural bulk, and Roro (roll-on/roll-off) sectors.

Port Terminal's major customers represent a broad spectrum of the economy and include the shipping industry, vehicle manufacturers, agriculture, timber and forest products, the mining industry and exporters of minerals, metals and granite.

TPT operates container terminals at Durban, Ngqura, Port Elizabeth and Cape Town. TPT has invested billions in upgrading this sector. In 2007 the redeveloped Durban Container Terminal Pier1 facility - South Africa's first rubber tyre gantry operation was launched. Next in line was the launch of Ngqura Container Terminal (NCT), the state of the art transhipment hub, servicing traffic from the East, South America and West African markets.

6.2. Geographical Area

The empirical component of this study will be limited to South African ports, with main emphasis in the following geographical areas:

The area that was chosen for the research was the Ngqura Container Terminal in Port Elizabeth, the Nelson Mandela Metropolitan.

The empirical survey will be conducted by a questionnaire and interviews at Ngqura Container Terminal. The aim of excluding other areas is to make it possible to handle the research process.

6.2.1 Ngqura Container Terminal

After examining the economic benefits, costs, non-financial benefits, risks and their impact on the investment, as well as other qualitative supporting information, Transnet decided that South Africa needs a third deep-water port. From 2002 to 2009 the Port of Ngqura was developed to alleviate the economic constraints in the Eastern Cape. In October 2009 the Container Terminal started operating and new

'water'started flowing into the economy of the region (Eastern Cape Roadmap Performance Containers, 2013).

Ngqura Container Terminal was built, in part, to enhance South Africa's role in the container shipping and transhipment business. A transshipment facility allows large vessels to move their long-haul cargo onto smaller ships destined for regional ports. Transhipment ports are deep, to accommodate these large vessels (Business Day, 2013)

Figure 1: Ngqura Southern Hub for world shipping routes

Shortest Trade Route between Shanghai and Santos is via South Africa 11,270nm = **22 days** @ 21 knots
via Panama Canal13,130nm = 26 days + transit fee
via Suez Canal 13,590nm = 27 days + transit fee

Source: Team Analysis Transnet Port Terminals Routes (2013)

Figure 1 above, shows the positioning of Ngqura Container Terminal in South African port system, which enables it to access to South – South trade, Far East trade, Europe & USA, East & West Africa regional trade. Figure 2 below shows the position of the port in relation to the rest of the world. The position of Ngqura makes the port the ideal location for any other ports in Africa.

Figure 2: Ngqura role as a hub port for transshipment traffic is to enable regional integration
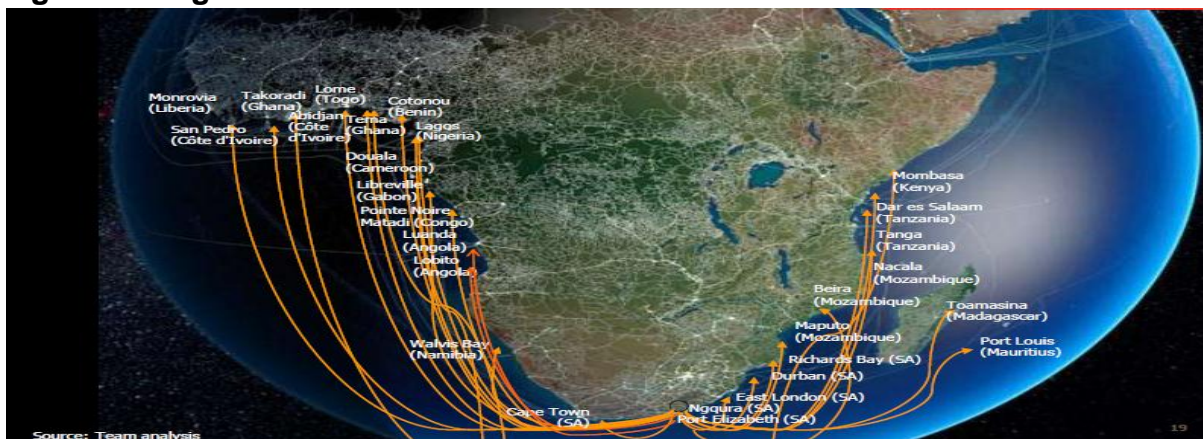
Source: Team Analysis Transnet Port Terminals Routes (2013)

6.2.2 Target Population

The study was aimed at all shipping customers that are currently serviced by Ngqura Container Terminal namely, MSC, MSK, MOL and CMA. The employees that are communicating daily with NCT and also that are responsible for making daily operational decisions were the main target.

7.   METHODOLOGY OF THE STUDY

This section outlines the main methodology that was followed in the study.

7.1   Research paradigm

The study will be mixed mode in nature, in other words, following a mixture of both the <u>quantitative and qualitative approaches.</u> The dominant paradigm will however, be the quantitative paradigm, as the descriptive statistics (means, percentages, and standard deviations) of the participants' responses will be analysed, reported and interpreted. Interviews with key staff members in the Ngqura Container Terminal will also be conducted in order to test their views of the research study.

7.2   Population

The population in the study comprised of three shipping customers that are serviced by NCT, the population consisted of 31 workers. The population comprises of five departments that were surveyed, which are: planning, operations, logistics, transshipments and customer service.

7.3   Data Collection Procedure
Literature Survey

A broad literature study of service quality concepts was carried out. This was done in order to better understand the role and importance of excellent service quality in the container terminals.

Measuring Instrument

The study required the use of a measuring instrument to test the perception customers have of service quality at NCT. The research was conducted in two

stages; firstly a service quality questionnaire developed in the eighties by Zeithaml, Parasuraman & Berry (1990) was used to ascertain the level of satisfaction of the customers. Secondly in-depth interviews were conducted with key managers at NCT.

Statistical analysis of data

A statistician was consulted once the questionnaire was completed to facilitate interpretation and analysis of the data. STATISTICA Version 11 (2012) and SPSS Version 22 (2013) were used for the statistical analysis of the data.

8. DEFINITION OF CONCEPTS

8.1 Transshipment

This is the transfer of goods from one means of transport to another for further transport. For example, container may be transferred from a small container vessel to a larger cargo vessel.

It can be further defined as the shipment of goods to an intermediate destination, and then from there to yet another destination. One possible reason is to change the means of transport during the journey (for example from ship transport to road transport), known as trans-loading. Another reason is to combine small shipments into a large shipment, dividing the large shipment at the other end. Transhipment usually takes place in transportation hubs (Wiegmans, Rietveld & Nijkamp, 2001).

8.2 Container Terminals

A container terminal is a facility where cargo containers are transhipped between different transport vehicles, for onward transportation.

8.3 Strategy

Thompson, Strickland and Gamble (2004, p.3) regard strategy as a game plan indicating the choices a manager needs to make for example how to attract and meet customer needs, how to compete successfully, how to grow the organisation, how to manage each the organisational architecture and develop needed dynamic capabilities, and how to achieve performance targets by implementing strategy successfully.

8.4   Service quality

Service quality is the comparison of the customers' expectation of service with their perceptions of the actual service performance. According to Zeithaml, Parasuraman and Berry (1990, p.18), service quality should meet or exceed what customers expect from the service.

9.   OUTLINE OF THE STUDY

The study will comprise of the following chapters:

Chapter 1 provides an introduction and the outline of the study. The chapter provides the problem statement, conceptual model, research objectives, sample, measuring instruments and the definitions of the concepts.

Chapter 2 focuses on the literature study that underpins the research problem.

In Chapter 3, the methodology of the study is discussed. This includes the research approach (paradigm), the sample, measuring instruments and data analysis procedures.

In Chapter 4, the empirical results will be reported and interpreted.

In Chapter 5, the empirical results will be discussed and conclusions will be drawn. The chapter also includes recommendations to managers, limitations of the study and the highlighting of areas for future research.

10.   SUMMARY

The aim of the chapter was to describe the scope of the study and discussed the background to the research problem, how the main problem and sub-problems were formulated and the objectives of the study. The research methodology, the definition of concepts and the outline of the study were provided. Chapter two follows and is concerned with the extent service quality literature derived and its application in service environments generally and container terminals specifically.

CHAPTER TWO

SERVICE QUALITY LITERATURE

2.1   INTRODUCTION

Chapter one served as an introduction to the study. The purpose, problem statement and the sub-problems of the study were presented. This chapter focuses on the literature study that underpins the research problem. The aim of this chapter is to use researched literature on service quality origins in order to identify factors of service quality that are important to customers. This would provide direction for improvement and closing the gap of service quality so as to bring customer satisfaction and retention for the researcher.

The importance of customer service as a competitive strategy has been recognised by service industries. There is a realisation that service markets should be segmented based on customer service requirements (Lu, Gong & Wang, 2011). This has been observed by the growth in quality service strategies that service industries have implemented to assist them in understanding the service needs and requirements of customers.

Service quality is important in attracting and retaining customers in the service industries, and the container terminal as a service-oriented entity, it is very important for them to provide the quality service that their customers require (Wiegmans, Rietveld & Nijkamp, 2004).Terminal customers have a choice before they call a container terminal, the choice is determined by many factors such as terminal capacity, productivity of labour and capital, level of service.

Service attributes are the most important factors that customers consider, such as port facility enlargement measures, modernisation of terminal equipment, development of feeder route, decreasing tariffs, providing enough storage hours, optimising line-haul truck operations, speedy and safe handling of special cargoes etc. (Lu, Gong & Wang, 2011). This has resulted in the increasing importance of service quality and the need to know the needs of terminal customers (Wiegmans, Rietveld & Nijkamp, 2001).

The container terminals that have embraced a quality service strategy for building customer retention and acquisition hold exceptionally strong beliefs about the importance of service excellence, which they view as a fundamental way to differentiate themselves from competitors, accelerate growth and improve profitability (Kaleappan, 2006, p.5). Therefore, it is important for Ngqura Container Terminal, which is the focus of the study, to have extensive knowledge of and insight into the subjects of service quality.

2.2   THE NGQURA CONTAINER TERMINAL

Growing businesses face a variety of challenges. As business grows, different problems and opportunities demand different solutions. A strategy that worked a year ago might now not be the best approach; also customer demands change and they demand better services (Info entrepreneurs, n.d). This statement holds true for the Ngqura Container Terminal, which has been growing at a phenomenal rate, especially during the last two years (2012-2013). Since it started operations in 2009 NCT has had an unforeseen volume year-on-year growth, from handling 78985 container volumes in 2009 to an increase of 623565 container volumes in 2012. The Port of Ngqura container volumes is projected to grow by 1015 527 Twenty-foot Equivalent Units (TEUs) by 2015 (Eastern Cape Roadmap Performance Containers, 2013, p.12).

According to Transnet Port Terminal (TPT) Chief Executive Officer Karl Socikwa this growth, which is attributed to the global economic boom leading to continuously increasing international trade, is expected to remain on an upward trend, noting that a new service introduced by one of TPT's key customers further boosted transshipment volumes for Ngqura Container Terminal (Mavuso, 2013).

Competition for transshipment cargo has also increased, and the focus has now shifted to the quality of services offered by container terminals to their customers (Lobo & Jain, 2002). Thus, understanding container terminal customers' service quality and satisfaction level becomes crucial in light of importance of container terminals.

For this reason it is important for the Ngqura Container Terminal to develop customer service strategies that enable them to meet their customers' needs and to

identify which service qualities features are important to the customer in order to increase the attractiveness of the terminal.

2.3   WHO IS THE CUSTOMER?

For the purpose of this study, it is important to establish who the customer is for Ngqura Container Terminal before commencing with a discussion on service quality. For a container terminal to be profitable it needs customers, hence the need to know who they are and what they need.   All of the developments in an organisation revolve around the customer. Customers need to be identified and understood clearly in order to provide the type of service they require and expect from the organisation (Brink & Berndt, 2008, p.87).

When the study focus on container terminal customers, the study begins to distinguish between four main groups of customers, these are: (Wiegmans, Rietveld & Nijkamp, 2001)

- **Container carriers** (deep-sea shipping companies);
- **Transport companies** (rail-, road-, barge-, and short-sea transport companies);
- **Importers/exporters** (intermediaries such as stevedore, ship broker, shipping agent and forwarder);
- **Shippers** (companies that sent and receive the freight).

Wiegmans et al. (2001) explain that the listed groups of container terminal customers are the terminal's source of profit and will provide growth for the port. The terminal growth is influenced by how well the customer's needs are met, through the level of service they received from the terminal. According to Magala and Sammons (2008), terminals must be integrated in a logistic chain that involves all the terminal customers and well organised to meet the customer's requirements, in order to assure their satisfaction. The shipping companies choose the container terminal according to his satisfaction regarding several characteristics of the terminal, maritime services, terminal reputation, service quality and terminal infrastructures (Lu, Gong & Wang, 2011).

For this study, the container terminal customers that the researcher will be referring to are the shipping companies (container carriers) that operate in the Ngqura Container Terminal.

In order to effectively evaluate Ngqura Container Terminal service delivery to its customers, an understanding the nature of service quality is required. The following section discusses issues relating to the definition and importance of service quality.

2.4   THE NATURE AND IMPORTANCE OF SERVICE QUALITY

2.4.1 Definition of Service

Researchers suggested different views on the definitions and characteristics of services; however, no agreement has been reached on how service is best defined. One of the most important and unique characteristics of services is that services are processes, not things, which mean that a service firm has no product or does not produce a tangible commodity and only an interactive process (Grönroos, 2000).

Zeithaml and Bitner (2000) defined service as any act or performance that one party can offer to another that is essentially intangible and does not result in the ownership of anything. Hinson (2004) offers a comprehensive definition of services where service is an activity or series of activities, which is intangible that normally take place in interactions between the customer and the service employee, which are provided as solutions to customer needs and problems.

Kotler (1997) cited in Wiegmans et al. (2001) also maintains that service is any activity or benefit that one party can offer to another, which is essentially intangible and does not result in the ownership of anything. This statement holds true to Kasper, van Helsdingen and de Vries jr (1994, p.8) when they define service as originally intangible and relatively quickly perishable activities, the obtaining of which takes place in an interaction process aimed at creating customer satisfaction, but does not always lead to material possession during the interactive consumption.

 Lovelock and Wright (2003, p.6) further define service as an economic activity that create value and provide benefits for customers at specific times and places. The concept of service should be approached from the customer's perspective, because it is the customer's total perception of the outcome, which is the service and

customer outcome is created in a process, meaning service is generated through that process according to Edvardsson, (1998, p.142).

A service according to Wiegmans et al. (2001) can be characterized by the following four distinguishing marks:

- Intangible;
- Simultaneous production and consumption;
- Heterogeneity;
- Transitory.

Intangible means that a service cannot fall on your feet. Generally, a service is not physical but it is more a sort of experience, it cannot be tasted or touched the way tangible goods can, which means that material possessions do not increase if a service is bought. Simultaneous production and consumption are also referred to as interactive consumption, the customer needs to be present when the service is produced. The customer is then partly seen as producer of the service. In the container industry the customer is asked, via the Internet, to provide specific information about his shipment to the container carrier.

After sending the required information to the container carrier, the status of his shipment is provided. The container terminal service is special in the fact that the service is bought by the management of a container carrier, but the service is experienced by employees who operate the ships. Under the concept of heterogeneity the service provider who delivers the service is often viewed by the customer as the service itself. The main effect of heterogeneity is that provision of service and the satisfaction of the recipient of the service rely on the performance of the service provider Wiegmans et al. (2001).

In summary, a service is an action of helping or doing work for someone, this practice is done with the aim of ensuring customer satisfaction. For the purpose of this research, a service is any activity that is delivered as a solution to terminal customers' needs and demands.

2.4.2 Definition of Quality
The importance of quality be it in product or service cannot be overemphasized. In the previous researches, quality had a simple definition — a product or service

should fit the purpose for which it was intended. Quality is what a customer expects in the product/service he/she is buying (Ghobadian and Jones, 1993, p.44). They classify the definitions of quality into five broad categories:

(a) **Transcendent:** Here quality is defined as innate excellence. Implicit in this definition of quality is the relationship between individual salience and perceived quality. The presence of this relationship has important implications for goods and service quality.

(b) **Product led:** Here quality is defined as the units of goodness packed into a product or service. This definition depends on the quantification of the service's units of goodness or tangible attributes.

(c) **Process or supply led:** In this approach, quality is defined as conformance to requirements. This definition lays emphasis on the importance of the management and control of supply-side quality. The focus is internal rather than external. Such a definition is useful for organisations that perceive their problems as lying within transformation or engineering process. Alternatively, useful in organisations producing either standard products or services.

(d) **Customer led:** Quality here is defined as satisfying customer's requirements or fitness for purpose. The focus is external. This approach relies on the ability of the organisation to determine customers' requirements and then meet these requirements. The customer led definition is probably most appropriate for organisations' offering high contact; skill knowledge based, or labour intensive services such as, health care, law, accountancy, education and consultancy.

(e) **Value led:** Quality here is defined either as the cost to the producer and price to the customer, or as meeting the customer's requirements in terms of quality, price and availability. The focus again is external. The approach implies that there is a trade-off between quality, price, and availability (Ghobadian and Jones, 1993, p.44).

The container terminal processes and quality aspects can be defined as customer led; the approach that is used in the terminal is heavily determined by customer requirements and expectations. In container terminal quality is important in attracting and retaining customers, container carriers have choices between different container ports that can meet their demand. For the terminal operator, this results in the

increasing importance of quality and the need to know the needs of customers (Wiegmans, Rietveld & Nijkamp, 2004).

Muffatto & Panizzolo, (1995, p.156), believe that the most accepted definition of quality is, defining quality as the extent to which a product and/or service meets and/or exceeds customers' expectations. The significance of this definition to our study is that quality is more important to the customer and this therefore means that manufacturer or service provider must consider the needs, wants and desires of customers in order to design products and services that satisfy them. This makes it possible for us to identify factors of service quality that are important to customers.

2.4.3 Service Quality Described

Service quality has emerged as a wide-ranging strategic force and has received a great deal of attention from both academicians and practitioners (Negi, 2009). Thus, it is not surprising to see business experts keen on accurately measuring service quality in order to better understand its important antecedents and consequences, and ultimately establish methods for improving service quality to achieve competitiveness and build customer satisfaction. Grönroos was quoted by Sureshchandar, Rajendran and Kamalanabhan (2001, p.2) define service quality as the comparison of the customers' expectation of service with their perceptions of the actual service performance. Service quality according to Zeithaml, Parasuraman and Berry (1990, p.18) should meet or exceed what customers expect from the service. Nitecki and Hernon (2000) also described service quality in terms of meeting or exceeding customer expectations, or as the difference between customers' perceptions and expectations of service.

Customers' expectation serves as a foundation for evaluating service quality because, quality is high when performance exceeds expectation and quality is low when performance does not meet their expectation (Asubonteng, McCleary and Swan, 1996, p.64). That means that if the perceptions would be higher than the expectations the service will be considered excellent, if the expectations equal the perceptions the service is considered good and if the expectations are not met the service will be considered bad.

Chang (2008) describes that the concept of service quality should be generally approached from the customers' point of view, because they may have different

19

values, different ground of assessment, and different circumstances. He maintains that understanding which factors that influence customer satisfaction makes it easier to improve quality and deliver service offers that corresponds to the market demands, but the attainment of service quality improvements depends on organisational processes.

Chang (2008) support the earlier line of thinking by Ghobadian and Jones (1993, p.46) of improving organisational processes that could lead to attainment of service quality improvements. Ghobadian and Jones (1994, p.46) listed the following requirements in attainment of service quality:

(a) **Market and customer focus.** Service quality problems are more likely to arise in organisations that are not focused on recognising and acting on the customer's needs and expectations. A service quality organisation should put itself in the customer's shoes and build its policies from the customer's point.

(b) **Empowerment of frontline staff.** Service quality can be improved by giving frontline staff the freedom to make important decisions regarding the customer's needs.

(c) **Well-trained and motivated staff.** It is important to ensure that frontline staffs are successfully trained on all customer service tactics and also ensure that they are well-motivated. Frontline staffs who are not adequately trained for their job will find it difficult to perform their tasks effectively. This will be noted by the customer and is likely to cause adverse quality perceptions.

(d) **A Clear Service quality vision.** It is extremely imperative for the organisation to have a clear service quality vision; this would enable employees to be well-informed in meeting customer service quality expectations. In the absence of a clear service vision and definition employees are likely to have their own interpretation of service quality. This will likely affect service delivery experienced by the customer.

All of the above definitions and requirements of service quality agree that the service should correspond to the customer's expectation and satisfy their needs and requirements. It can therefore be agreed that service quality involves a comparison of expectation with performance. In the context of Ngqura Container Terminal, the study is not only interested in learning more about the factors associated to service

quality perceived by customers and how service quality is measured but also provide a direction for improvement and closing the gap of service quality in order to bring customer satisfaction and retention.

2.4.4 Importance of service quality

In recent years business structure has undergone notable changes and customer service has become increasingly important for economic growth. As service becomes ever more important and competition between industries becomes fiercer within service markets, both customers and businesses carefully note service quality for strategic competitiveness (Chen and Tin, 2002, p.838). According to Ireland, Hoskisson and Hitt (2009, p.125), strategic competitiveness results only when the firm is able to satisfy a group of customers by using its competitive advantages as the basis for competing in an individual service market. Ghobadian, Speller & Jones, 1993, p.44) consider service quality as a critical determinant of competitiveness. They claim that the adoption of service quality as a strategy can help an organisation to differentiate itself from its competitors and in doing so gain a lasting competitive advantage.

A competitive advantage is when a firm has a product or service that is perceived by its target market customers as better than that of its competitors (Dess, Lumpkin and Marilyn (2005). Stutz & Warf (2007) also maintain that competitive advantage occurs when an organisation acquires or develops an attribute or combination of attributes that allows it to outperform its competitors. These attributes can include access to natural resources, or inexpensive power, or access to highly trained and skilled personnel human resources. Coyne cited in Chen and Tin (2002) recognises that every service factor would not have the same competitive benefit for a company to invest in and that a successful service strategy should pass through strict analysis.

The importance of service quality has been linked to increased profit margins, lower costs, and positive attitudes towards the service by customers, and willingness of customers to pay price premiums (Zeithaml, 2000). The research findings by Zeithaml (2000) have shown that the profitability of a business will increase as the service quality increases.

Cook (2002, p.2), support the earlier line of thinking by Zeithaml (2000) that service quality enables a business to:

- Improve its image in the eyes of the customer;
- Improve profitability;
- Increase customer satisfaction and retention;
- Enhance its reputation;
- Increase productivity;
- Reduce costs;
- Create a reputation for being a caring, customer-oriented company.

Thus, delivering services of high quality will have a positive influence on the profitability of the total assets of the business. Service quality is also an important requirement for the future stability and growth of any country. It accounts for a large portion of the economic activity in most countries. Therefore, service quality becomes a critical aspect of most companies' strategy (Guesalaga and Pitta, 2014, p.145). The port industry has also been growing at a phenomenal rate, especially during the last decade.

This growth is attributed to the global economic boom leading to continuously increasing international trade. The ports in any country play a significant role in transferring economic wealth to national, as well as international economies, today ports handle 90 percent of the world's trade in terms of volume (Song and Yeo, 2004). Therefore,, understanding port customers' expectations and perceptions of service quality becomes crucial in light of the importance of ports to national development. Service quality in container industry is defined on the basis of customers' overall evaluation on the services they received, from the terminal as part of their service experience.

In container terminals the improvement of terminal service quality may result in the port becoming a preferred supply of choice, thus, affording the terminal an opportunity to increase the chances of profitability. In general, higher service quality levels may justify higher prices charged by terminal operators (Wiegmans et al. (2001). Quality of service in speed and reliability in container terminals is what container carriers are interested in. The shipping lines want the time a ship stays in a terminal to be minimised, and, therefore, the handling of containers must be executed in a fast and reliable way. The handling of containers is one of the most costly aspects in the container terminal operations, and thus the objective is to

reduce handling operations in the supply-chain to an absolute minimum. This creates an extra dimension concerning service quality. There is a trend to minimise terminal handling to a minimum, stressing the importance of service quality even more for shipping companies (Wiegmans et al. (2001).

De Vries Jr (1994) cited in Wiegmans et al. (2001) hints at this approach of service quality importance by describing the costs associated with service delivery. They claim that the higher the value of the container the operator is transshipping the more important reliability and speed becomes. That service quality is comprised of the listed costs (de Vries, 1994):

(a) Prevention costs (e.g. training programs)

(b) Inspection costs (e.g. costs of quality tests)

(c) Internal repair costs (e.g. costs to repair errors before the product or service reach the customer)

(d) External repair costs (e.g. costs to repair errors after the product or service have reached the customer)

(e) Lost sales do not induce direct costs but may well represent the highest damage to the company of delivering worse service quality.

The information on costs may be used by the container terminal operator to ensure that costs of delivering good quality service is minimised and that profits are maximised in that process without affecting service delivery. Generally, it is extremely important for the container terminal operator to provide services that deliver excellent quality and fit into the value chain of its customers. Organisations should be aware of their customers' expectations and to ensure that these expectations are met in service quality. Rust and Oliver (1994, p.2) writes that the gaps exist between the service provider and the customer over expectations and perceptions of quality, and that the onus is on management to understand how customers view service quality.

In the next section the Gap model will now be presented and evaluated for the purpose of this research.

2.4.5 The Gap Model in Service Quality

The pressure in the service industry to ensure customers focused and continuously improved strategies drives managers towards the development and implementation of philosophies that are in support to the notion. A methodology that supports such a philosophy would be the Model of service quality gaps. Efforts made so far to study service quality, its actual and perceived gaps between customer expectations and perceptions, makes use of the "SERVQUAL" instrument in an attempt to measure service quality (Parasuraman et al., 1985).

Measuring the gap that exists as per expectations versus delivery and perceived service is vital and part of routine for feeding back to the consumers in service companies (Fitzsimmons, 2004).

There are five (5) major quality gaps that consist of parallel statements, each focusing on an aspect of the dimensions of service quality, the gaps within the Service Quality concept are as follows.

Gap 1: **Customers' expectations versus management perception**: this gap comes into existence as a result of a lack of marketing research orientation, inefficient upward communication and the various layers of management. Strategies to close the gap include communication with customers, conducting a market research, encouraging upward communication and decreasing layers of management

Gap 2: **Management perceptions versus service specifications**: the lack of commitment to service quality in certain mind frames comes into being e.g. unfeasibility, inadequate efforts to standardise an unclear goal setting. The strategies to close this are; top management commitment, establishing service quality goal and standardisation of tasks.

Gap 3: **Service specifications versus service delivery**: role ambiguity and conflict coupled with poor employee job fit and poor technology-job fits, inappropriate supervisory control systems, lack of perceived control and lack of teamwork best describe this gap.

Gap 4: **Service delivery versus external communication**: this gap is as a result of inadequate horizontal communications and prosperity to over-compromise. The

strategies to solve the situation include increasing parallel communications and avoiding tendencies to over promise.

Gap 5: **The discrepancy between customer expectations and their perceptions of the service delivered**: as a result of the influences exerted from the customers side and the shortfalls on the part of the service provider. This is demonstrated in figure 2.1.

Figure 2.1: Model of Service Quality Gaps
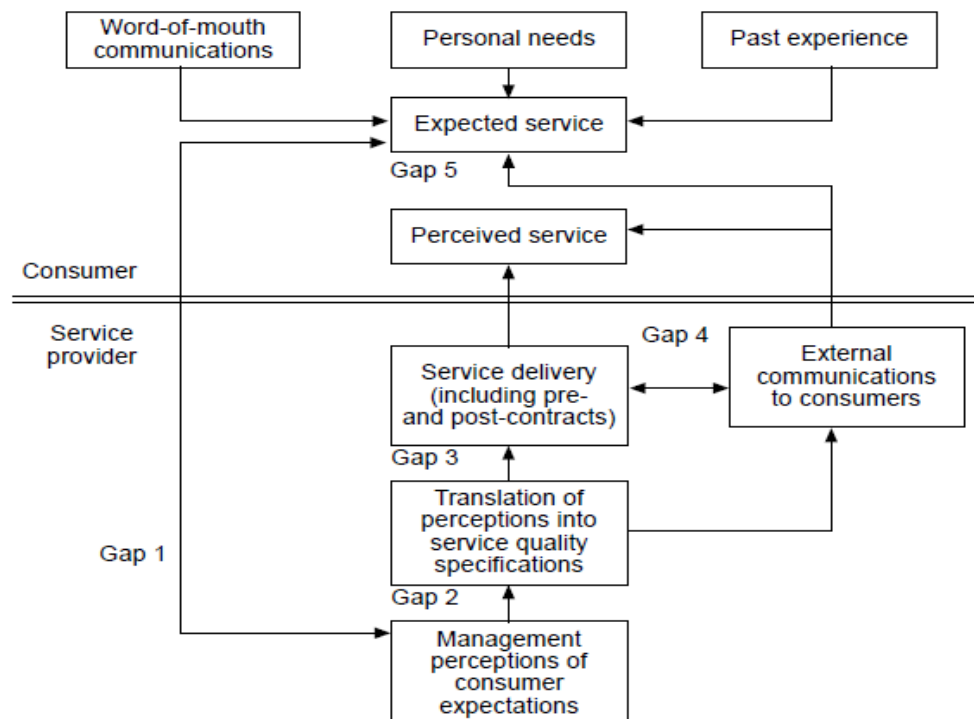
Source: Zeithaml et al. (2006)

In other words, the gap between the expected service and the actual service delivered by the company is described by gap five from the above-mentioned service quality gaps. Thus, the best way to close gap five is to manage the other four first to reduce service differences. In other words, the extent of Gap 5 depends on the direction of the first four gaps.

The aim of this research is to use the Quality Gap Model to ensure customer satisfaction and minimising all gaps that are in existence within the Ngqura Container Terminal. By identifying the gaps present, corrective strategies can be formulated, aimed at closing these gaps and aligning the terminal strategy to meet customer requirements. In this way NCT's customers will continue to be attracted in its

services, allowing NCT to remain competitive in terms of customer attraction and retention.

2.5   CUSTOMER SATISFACTION AND SERVICE QUALITY

In service industries it is widely observed that there seems to be a relationship between excellent service quality and customer satisfaction that can be achieved through improved output quality, which contributes to the success of an organisation. This adds to the image component of the organisation and improves profitability through repeat business, loyalty and positive word-of-mouth. It also increases the probabilities for the attainment of new business for the organisation and an enhanced positive reputation for quality experience (Suneeta and Koranne,2014, p.10).

Therefore, providing excellent service quality and achieving customers' satisfaction is a vital aspect facing the contemporary service industries (Hung, Huang and Chen, 2003). A review of literature implies that service quality is one of the main antecedents of customers' satisfaction. What is more, the relationship is positive, suggesting that higher service quality is likely to increase customers' satisfaction. This view is supported by Magi and Julander (1996, p.40) that customers' satisfaction and service quality has been proven important to help improve the overall performance of organisations.

As indicated, in the preceding sections, service quality is a comparison between expectations and performance and in further studies service quality is defined as the discrepancy between customers' expectations and perceptions (Zeithaml et al., 2000).Customers' satisfaction can be described as the customer's fulfillment response (Zeithaml et al., 2008). They pointed out that service quality and customers' satisfaction are fundamentally different concepts. They also pointed out that customers' satisfaction is a bigger concept in developing the framework of satisfaction and it has been noted that service quality should be considered as a major component of satisfaction. The study compiled by most researchers suggested that customers' satisfaction is influenced not only by service quality perceptions, but also by personal, situational factors and price.

From the perspective of Suneeta and Koranne (2014, p.9) customers' satisfaction may be termed as an individual's reaction in the form of sequence of information

processing, valuation of the degree to fulfill the functions, which a good service should possess. It also includes the feeling of happiness or joy of matching the expectation and having pleasure while consuming the service. Baker and Crompton, (2000, p. 787) further describe satisfaction as an emotional state of mind created by exposure to a service experience.

The competitive situation in the container industry requires every terminal to seek the highest customers' satisfaction and service quality, which proves to be highly instrumental in customers' retention. In this industry it has been determined that there is good amount of interest shown by leaders as they have strong feeling that profit is derived trough the implementation of strategies that support customers' satisfaction and improvement in service quality, all which leads to enhanced profits (Wiegmans et al. (2001).

The increase in container traffic growth has resulted in an increased requirement of large capital amounts for investments in terminals. Furthermore the transshipments' activities have intensified competition between nearby port terminals and within the same port, questioning customers' loyalty based on their search for satisfaction maximisation. In such a strong competitive environment and in order to regain customers' loyalty, it is important to maximise the level of satisfaction. The shipping line chooses the container terminal according to his satisfaction regarding several characteristics of the terminal, concerning infrastructures, reputation, maritime services, service quality and terminal organisation. Besides the strategic position of the port, liner services shipping companies search for reliability, service quality and lower costs per call and optimized turnaround times (Lu, Gong & Wang, 2011).

Literature reviewed indicates that satisfaction is not only important for external customers, but for employees, which are referred to as the internal customers (Spreng and Mackoy, 1996). Previous research done also stipulate that it is a vital aspect to view employees as a contributing factor of service quality. Furthermore it is important for the employer to ensure that their employees are satisfied as this will lead to more satisfied, motivated and willing employees, which all will benefit the company as the employees will best suitable to provide satisfactory services for the external customers. The interaction between an employee and a customer leads to an end result of satisfaction.

Thus, this paper follows the majority of recent research regarding service quality as an originator to satisfaction. Customers' satisfaction, for the purpose of this study, refers to customers' evaluation of a service in terms of whether the service has met or exceeded their needs and expectations.

2.6   CUSTOMER RETENTION AND SERVICE QUALITY

Organisations are increasingly focusing on building long term relationships with customers, thereby increasing their probability for success by offering customers higher levels of satisfaction, increasing customer loyalty, and ultimately retaining customers. Service industry in particular can benefit from retaining customers as the service industry is characterized by fierce competition (Mostert and De Meyer, 2010).

Organisations often fail to build relationships with their customers by rather focusing on acquiring new customers – a practice that does not make a lot of business sense as it is widely accepted that it is far more expensive to attract new customers continually than to retain existing ones. In any case, the cost of creating a new customer has been estimated to be five times the cost of retaining existing customers, (Murphy, 2001). Customer retention is described by Brink and Berndt (2008, p.42) as the maintenance of continuous trading relationships with customers over the long term. Conventionally, customer retention is defined as "the number of customers doing business with a firm at the end of a financial year, expressed as a percentage of those who were active customers at the beginning of the year.

Literature reviewed indicates that in a highly competitive business environment, gaining new customers is good news; the flip side is the loss of customers through defection. Some of the concepts that have been used to explain why customers leave or stay with an organisation are customers' satisfaction and quality service (Ocloo and Tsetse, 2013, p.139). Building and maintaining a successful long term-customer relationship, as well as existence in the current competitive market place, it demands the delivery of service quality to customers. Service quality refers to the consistency with which customers' expectations are met and the general superiority of the service relative to that of the competition.

In the container terminal this is demonstrated by practices such as turning around vessels on time, reliable information given to customers, pay attention to customers' complaints and demands and having competent and knowledgeable employees

(Claycomb and Marin, 2001). These improved service quality actions translates into favourable behavioural intentions that transforms into customer retention, which in turn leads to referrals, willingness to pay premium prices, increased spending (Zeithaml, et al 1996). Van der Wal and Pampallis (2002) shared similar views, that the key to successful business currently is retaining existing customers through the provision of quality service and anticipating and meeting their future needs.

Turning to the retention literature for guidance in developing retention strategies, practitioners find that there are variations in the conceptualisation of customer retention that confound the research findings.

2.6.1 Strategies for customer retention

Buttle (2004) discusses strategies for customer retention divided into two categories of positive retention strategies and negative retention strategies. Each category is discussed below.

(a) Positive retention strategies

According to Buttle (2004) positive retention strategies are strategies that lock the customer in by rewarding a customer for remaining in a relationship. These positive retention strategies include the following:

- **Customer delight or exceeding customer expectation:** This is going beyond what would normally satisfy the customer. It means being aware of what it usually takes to satisfy the customer and what it might take to delight or pleasantly surprise the customer;

- **Adding customer perceived value:** Companies can explore ways to create additional value without creating additional costs. If costs are incurred then the value-adds may be expected to recover those costs. Value can be added through programmes such as, loyalty schemes, customer clubs and sales promotions;

- **Creating social and structural bonds:** Social bonds are found in positive interpersonal relationships between people on both sides of the customer-supplier dyad. They are characterized by high levels of trust and commitment.

Structural bonds are established when companies and customers commit resources to a relationship. These resources yield mutual benefits for the participants; and

- **Building customer engagement:** Highly engaged customers have levels of emotional or rational attachment or commitment to a brand, experience or organisation that are so strong that they are highly resistant to competitive influence.

(b) Negative retention strategies

Positive retention strategies are strategies that lock the customer in by penalizing their exit from a relationship. This is done by imposing high switching costs on customers, discouraging their defection (Buttle, 2004). Jones, Mothesbaugh and Beatty (2002) identified six types of switching cost that a customer can incur if they leave a company. These costs are lost performance costs, uncertainty costs, pre-switching search and evaluation costs, post-switching behavioural and cognitive costs, setup costs and sunk costs. Some customers find these switching costs are high that they remain customers, though unwilling.

Similar to Buttle, Reichheld (1996) cited in Ahmad (2001) identified six economic benefits of retaining customers:

(1) Savings on customers' acquisition or replacement costs,

(2) A guarantee of base profits as existing customers is likely to have a minimum spend per period,

(3) growth in per-customer revenue as, over a period of time, existing customers are likely to earn more, have more varied needs and spend more,

(4) A reduction in relative operating costs as the firms can spread the cost over many more customers and over a longer period,

(5) Free of charge referrals of new customers from existing customers that would otherwise be costly in terms of commissions or introductory fees and

(6) Price premiums as existing customers do not usually wait for promotions or price reductions before deciding to purchase, in particular with new models or versions of existing products.

From these strategies and benefits it can be concluded that customer retention is indeed critical to the organisation and could therefore directly influence the organisation's bottom line (Chi & Qu, 2008, p.624). Organisations must therefore consider ways in which to improve their customer retention.

2.7 SERVQUAL MODEL AS THE BASIS OF THE PROPOSED METHODOLOGY

The measurement of service quality is obtained by comparing perceptions to expectations. A commonly used and highly debated measure of service quality is the SERVQUAL. The SERVQUAL is a service quality framework, developed in the eighties by Zeithaml, Parasuraman & Berry, aiming at measuring the scale of Quality in the service sectors. The model was originally measured on ten aspects of service quality: reliability, responsiveness, competence, access, courtesy, communication, credibility, security, understanding the customer, and tangibles, to measure the gap between customers' expectations and experience (Zeithaml et al., 2006)

. According to Ham and Hayduk (2003) through empirical research the ten components were reduced into five dimensions of service quality that were suggested to be generic to all service industries, namely reliability, assurance, tangibles, empathy and responsiveness. This is demonstrated in figure 2.2. on the next page.

Figure 2.2: The ServQual Model
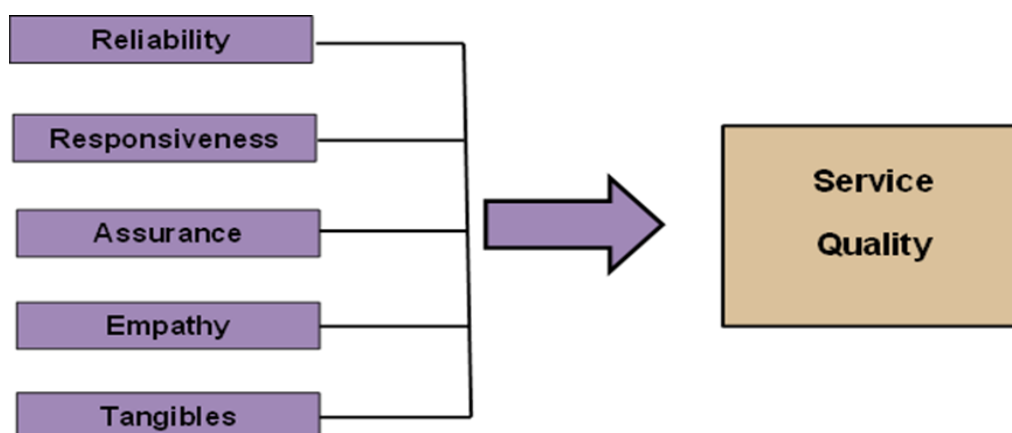
Source: Zeithaml et al. (2006)

These dimensions mainly focus on the human aspects of service delivery (reliability, assurance, responsiveness and empathy) and the tangibles of service. The five dimensions can be are described as follows (Ham and Hayduk, 2003):

- **Reliability** - Ability to perform the promised service dependably and accurately. This means that the service is accomplished on time and in a manner devoid of errors.
- **Responsiveness** - Willingness to help customers and provide prompt service. The ability to recover quickly to customers' needs and with professionalism can create very positive perceptions of service quality.
- **Assurance** - Knowledge and courtesy of employees and their ability to convey trust and confidence. The assurance dimension includes the following features: competence to perform the service, politeness and respect for the customer, effective communication with the customer and the general attitude that serves the customer's best interest.
- **Empathy** - The degree of caring and individual attention you show customers.
- **Tangibles** - Appearance of physical facilities, equipment, personnel, and communication materials.

These five dimensions of service quality are used by customers to form their perceptions of service quality, which are based on a comparison between expected and perceived service. The SERVQUAL model can assess the expectations and perceptions of internal customers as well – e.g. other departments in the container terminal such as operations, planning and technical (Lu, Gong & Wang, 2011).

The SERVQUAL model as an instrument for measuring service quality has been subjected to criticisms. It has been criticised that the five SERVQUAL dimensions are not universals, and that the model fails to draw on established economic, statistical and psychological theory. The model focuses on the process of service delivery, not the outcomes of the service encounter. Lastly, it is criticised that there is little evidence that customers assess service quality in terms of perception and expectation gaps (Munhurrun and Bhiwajee, 2010). But despite the criticisms, the SERVQUAL instrument has been used to measure service quality in a variety of industries. This wide selection of application of such an instrument makes the

researcher of this paper confident in utilising the model as a technique for measuring service quality for the Ngqura Container Terminal.

Ham and Hayduk (2003) present that the SERVQUAL instrument consists of 22 perception items that is used to measure customers' expectations and perceptions (E and P) of the five dimensions. The instrument is administered twice in different forms, firstly it records customer expectations of a company in the specific service industry; and secondly the 22 items measures customer perceptions of the company in that service industry. Results from the two sections are then compared to arrive at — gap scores for each of the five dimensions. The larger the gap, the farther customer perceptions are from expectations and the lower the service quality evaluation. In contrast, the smaller the gap, the higher the service quality evaluation measured.

This measuring technique will be used in this study, in this way strategies can be formulated to close any present gaps can between the terminal and its customers.

2.8   SUMMARY

The aim of this Chapter was to look at the overview of the nature and importance of service strategies. The importance of providing excellent service quality to customers was highlighted and how the profitability of a business will increase as the service quality increases. A methodology that supports the service quality was discussed, which is the Model of service quality gaps. Also the SERVQUAL as a service quality framework was debated, which is used to measure the scale of Quality in different industries. The relationship between the service quality to customers' satisfaction and customers' retention was emphasised that can contribute to the success of an organisation. Customers' retention strategies were also highlighted that could benefit an organisation if executed successfully.

CHAPTER THREE

RESEARCH METHODOLOGY AND ANALYSIS OF BIOGRAPHICAL DETAILS OF RESPONDENTS

3.1   INTRODUCTION

Chapter one provided an introduction and outline to the study. Chapter two scrutinised the literature study that underpins the research problem. In this chapter the research design and research methodology used in this study is discussed. The research design and methodology are necessary in addressing the main research problem and sub-problems outlined in chapter one. The key purpose of this chapter is to justify the use of the specific methods employed in the research methodology process in solving the primary objective of the current study.

The aim of this chapter is to examine customers' perception of service quality from the Ngqura Container Terminal and therefore, solving the first sub-problem (What is the customer's perception of service quality at NCT?)

In order to achieve this, a questionnaire was formulated that focused on the five service delivery factors that customers use to evaluate good service quality, namely: reliability, responsiveness, assurance, empathy and tangibles.

Interviews were also conducted with Ngqura Container Terminal managers, to understand the type of service quality that their departments provide to customers and structures that are in place for customer service delivery. Thus, enabling NCT to recognise the specific service quality requirements of Ngqura customers (MOL, MSK and MSC), and in this way the second sub-problem (Does NCT's service quality performance enables it to fulfil the customers service quality requirements?) was approached.

3.2   RESEARCH DESIGN

According to Collins and Hussey (2009, p.11) research design is the starting point, where the researcher needs to determine the research paradigm. The researcher in the research paradigm gives the framework that guides how the research will be conducted. Leedy and Ormrod (2014, p.2) define research as the systematic process

of collecting, analysing, and interpreting information (data) in order to increase our understanding of a phenomenon about which we are interested or concerned.

They add that all research consists of the following distinct characteristics:

- Research originates with a question or problem;
- Research requires clear articulation of a goal;
- Research usually divides the principal problem into more manageable sub-problems;
- Research is guided by the specific research problem, question, or hypothesis;
- Research requires a specific plan for proceeding;
- Research rests on certain critical assumptions;
- Data must be collected and interpreted to resolve the problem;
- Research is, by its nature, cyclical or, more exactly, helical.

This study drew upon the eight characteristics mentioned by Leedy and Ormrod (2014. p.2).

3.3   RESEARCH PARADIGM

A research paradigm is a framework that guides how research should be conducted, based on people's philosophies and their assumptions about the world and the nature of knowledge (Collis and Hussey, 2009, p.55).

Tekin and Kotaman (2013), state that research paradigms and the philosophical reflections on applications have been relied upon as fundamental scientific and intellectual support for the accountability of methods and approaches in empirical studies in both the natural and social sciences.

There are two fundamental research paradigms. They are a positivism and interpretivism (Collis and Hussey, 2009, p.56).

3.3.1 Positivism

The positivism approach is a paradigm that originated in the natural sciences. It rests on the assumption that social reality is singular and objective, and is not affected by the act of investigating it. The research involves a deductive process with a view to providing explanatory theories to understand social phenomena. The positivistic approach uses quantitative and experimental methods to test hypothetical logical

generalisations and is also referred to as the quantitative approach (Collins and Hussey, 2009, p.56).

3.3.2 Interpretivism

The interpretivism approach is a paradigm that in response to criticisms of positivism. It rests on the assumption that social reality is in our minds, and is subjective and multiple. Therefore, rather than adopt the quantitative methods used by positivists, interpretivists adopt a range of methods that seek to describe, translate and otherwise come to terms with the meaning. The paradigm uses a qualitative and naturalistic approach (Collins and Hussey, 2009, p.56)

The positivism paradigm was used in this research study. This paradigm was chosen because it is a method based on collecting data in a numerical format, which are subsequently then analysed using statistical methods.

3.4   RESEARCH METHODOLOGY

Marczyk, DeMatteo, and Festinge (2005) state that research methodology is the science of studying how researches are to be carried out, it is procedures by which researchers go about their task of describing, explaining and predicting phenomena. It is also defined as the study of methods by which knowledge is gained and its aim is to give the work plan of research (Rajasekar, 2013, p.5). The research studies are categorised into two broad categories, namely qualitative research methodology and quantitative research methodology (Leedy and Ormrod, 2005, 94).

Qualitative research focuses on phenomena that occur in natural settings and involves studying these phenomena in all their complexity. Detailed data is gathered through open ended questions that provide direct quotations. Whereas Quantitative research involves either identifying the characteristics of observed phenomena or exploring possible correlations among two or more phenomena and involves not changing or modifying the situation under investigation (Leedy and Ormrod, 2005, p.133).

In order to achieve our investigation in identifying factors of service quality that are important to customers the two research methodologies were considered.

Table 3.1 depicts the characteristics of Qualitative and Quantitative Research Methodologies

Qualitative research methodology	Quantitative research methodology
Uses small samples	Uses large samples
Generate theories	Tests hypothesis
Data is rich and subjective	Data is highly specific and precise
Reliability is low	Reliability is high
Validity is high	Validity is low
Generalises from one setting to another	Generalises from a sample
Produce qualitative data	Produce quantitative data

Source: Collins and Hussey (2009)

The study will be mixed mode in nature, in other words, following a mixture of both the <u>quantitative and qualitative approaches.</u> The dominant paradigm will however be the quantitative paradigm, as the descriptive statistics (means, percentages, and standard deviations) of the participants' responses will be analysed, reported and interpreted. The nature of the study is to gather a representative data from the targeted respondents. To better understand the impact of service quality on customer perception through a SERVQUAL analysis model. The advantage of using quantitative research is that it produces reliable data that are usually qualified to some large population.

Interviews with key staff members in the Ngqura Container Terminal will also be conducted in order to test their views of the research study.

3.5   CONSTRUCTION OF THE MEASURING INSTRUMENT

A measurement instrument refers to a process of allocating numbers to empirical events in compliance with a set of rules (Blumberg, Cooper & Schindler, 2008). Collis and Hussey (2003:17) mentioned the fact that there is a range of tools or ways in which research data can be collected, namely: structured interviews, observations, diaries, focus groups and questionnaires, to mention a few. They state that

structured interviews and questionnaires were the most commonly used research methods. For the purpose of this study, a questionnaire was used as a method of collecting original data from the selected sample group. In addition, structured interviews were conducted with key NCT managers namely, Key Accounts Manager, Chief Operations Manager and the Regional Planning Manager, in order to identify important aspects of customer service quality in their departments.

3.5.1 The Questionnaire

Leedy (1997, p.191) states that the questionnaire is a commonplace instrument for observing data beyond the reach of the observer. Nardi (2003, p.59) mentions that a questionnaire is more reliable tool for surveying large samples of respondents in short periods of time, and they are less expensive. Salkind (2000, p.136) also maintains that questionnaires save time as they allow individual respondents to complete questions without any direct intervention from the researcher.

Salkind (2000, p.136) listed the following important advantages of using questionnaires:

(a) Questionnaires are cheaper
(b) Questionnaires can be sent through mail, and the researcher can survey a broad geographic area.
(c) Respondents can be more willing to be truthful, because their anonymity is guaranteed.

The following question structure was used in the questionnaire, as a means of gathering the required information for the study (Slater, 2010):

- **Dichotomous questions**. With this question type, the respondents are offered a choice between two options only, for example "Male" or "Female".
- **Scaled-response questions**. With this question format the aim is to collect data on the attitudes and perceptions of the respondents' .The five point Likert-scale, ranging from (1) strongly disagree to (5) strongly agree, was used to determine respondents' level of agreement on a given question.

3.5.2 The Design of the Questionnaire

The questionnaires were sent directly to the participants and were personally collected by the researcher. Each questionnaire was accompanied by a covering letter that clearly explained the purpose of the study.

The questionnaire for the study was divided into three sections, namely:

Section A

Section A of the questionnaire consists of general demographic questions and company information questions. This section consists of questions like "which company do you work for?" and "What is your highest qualification?"

Section B

Section B of the questionnaire consists of questions that were designed to measure perceptions of service quality, which are based on a comparison between expected and perceived service. The questions in this part of the questionnaire were mostly informed by the literature review; the SERVQUAL model that was developed in the eighties by Zeithaml, Parasuraman & Berry (1985).

Section C

Section C comprises of questions, which were designed to measure the five service quality features, according to how important each feature is to the participant.

3.5.3 Questionnaire covering letter

Attaching a covering letter to the questionnaire is very important. It enables the researcher to explain the purpose of the study to the respondents.

Saunders, et al (2003, p306) provided the following guidelines in designing a covering letter:

- **Type of paper** - good quality, official letter head, including address, telephone number and email address (if possible);
- **Maximum length of letter** - one side (12 point font size);
- **Date** - in full i.e. 15 May 2014;

- **First set of messages** - why recipients response is important, how long it will take to complete;
- **Second set of messages** - promises of confidentiality or anonymity;
- **Third set of messages** - how results will be used;
- **Final set of messages** -   whom to contact if have any queries, who to return completed questionnaire to and date of returning the questionnaire;
- **Closing remarks** - thank respondents for their participation; and
- **Name and title** - yours, including forename and surname;

In the questionnaire used for this study a covering letter was compiled to explain and included all the above suggestions. The covering letter is attached herewith as Appendix 1.

3.5.4 Data Collection

Data collection is the stage where the necessary data useful for the purpose of the research are gathered from the field (Twumasi, 2001). The common methods used in gathering data are observation, interviews and questionnaires. This research adopted interviews and questionnaire for the purpose of collecting primary data from respondents whereas the literature reviews were the secondary sources of reference (Saunders, Lewis and Thornhill, 2007). According to Saunders et al. (2000, p.278), a questionnaire is a technique of data collection in which people are asked to respond to the same set of questions in a predetermined order.

The questionnaires were structured in line with the SERVQUAL model as developed by Parasuraman et al (1985). The instruments are based on five dimensions of service quality. These are responsiveness, assurance, tangibles, empathy and reliability. The questionnaire consisted of 23 statements with the exclusion of Section A that consists of biographical questions and Section C that comprises of five questions that were designed to measure the five service quality features. The questionnaire was distributed to the selected staff at Ngqura Container Terminal, as well as the key customers, and then collected after completion. The interviews were structured around the 23 statements that were used in the questionnaire; the aim of the study was to also get feedbacks from senior managers on their perception on service quality. The following figure illustrates the data collection process for the

study, which were self-administered, delivery, collection questionnaire, and interview structure questionnaire (Saunders, et al., 2007).

Figure 3.1 Questionnaire and Interview administration procedure.
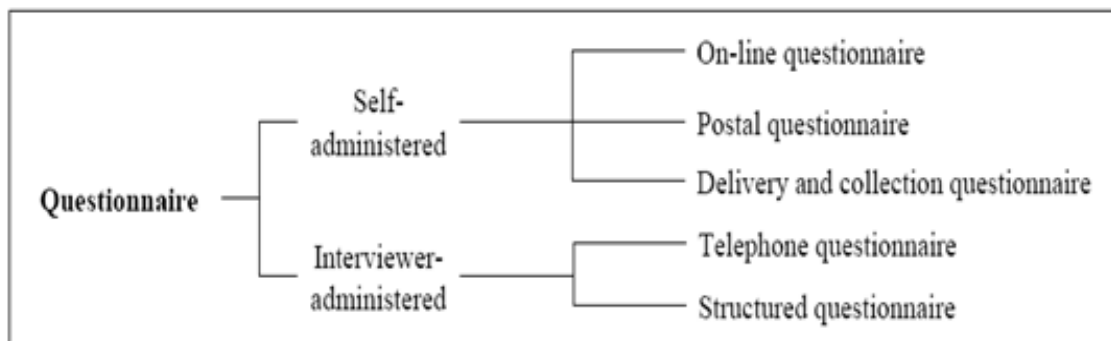
Source: Saunders, et al. (2007)

3.5.5 The Validity and Reliability of the Questionnaire

Reliability and validity are the most important concepts in the context of measurement (de Vos, Strydom, Fouché and Delport, 2005, p.160). According to Leedy and Ormrod (2005, p.27), the validity and reliability of the measurement instruments influence the extent to which one can learn something about the phenomenon they are studying. Validity and reliability are an indication of the extent to which the researcher can draw a meaningful conclusion from the data collected.

(a) Validity

Leedy and Ormrod (2005, p.28) maintain that the validity of a measurement instrument is the extent to which the instrument measures what it is supposed to measure. Validity also refers to how well a specific research method measures what it claims to measure (Chisnall, 2005, p.40).

There are various types of validity that should be considered by researchers to ensure integrity of their research instrument and the most common are (Salkind 2000, p.113):

  - **Face validity** suggests that the measuring instrument employed by the researcher actually measure or test what is supposed to be measured or tested.

41

- **Content validity** is the accuracy with which an instrument measures the factors being investigated.
- **Criterion validity** is the extent to which the results of an assessment instrument correlate with another.
- **Construct validity** determines the degree to which a measuring instrument successfully measures a theoretical structure.
- **External validity,** which is based on whether the conclusions reached in the study can be generalised.
- **Internal validity,** which refers to the freedom from researcher bias in forming conclusions in the light of collected data.

In the present study, content validity was determined on the basis of the literature review by assessing the impact of the service quality on customers' satisfaction and retention.

(b) Reliability

Leedy and Ormrod (2005) state that the reliability of a measurement instrument is the extent to which it yields consistent results when the characteristic being measured has not changed. Although the analysis is done after data has been collected, reliability also needs to be considered during the questionnaire design stage, such as test re-test, internal consistency and alternative form (Saunders, et al (2003, p.309).

Neuman (2006) mentions three types of reliability, namely; stability reliability, representative reliability and equivalence reliability. These types of reliability are described as follows:

- **Stability reliability** relates to the reliability over time and periodically measures whether the same result is observed over different time periods.
- **Representative reliability** relates to reliability across divisions or sub-groups of people and verifies whether the results will remain the same when measuring is done among different groups.
- **Equivalence reliability** exists when the same construct or hypotheses are measured more than once by the researcher.

The Cronbach's alpha was used in the study as a reliability test. The following table show the guidelines for using the Cronbach's alpha to test reliability.

Table 3.2: Guidelines for using the Cronbach's alpha

Cronbach's alpha	Internal consistency
$\alpha \geq 0.9$	Excellent (High-Stakes testing)
$0.7 \leq \alpha < 0.9$	Good (Low-Stakes testing)
$0.6 \leq \alpha < 0.7$	Acceptable
$0.5 \leq \alpha < 0.6$	Poor
$\alpha < 0.5$	Unacceptable

Source: Cortina (1993)

Thomas, Nelson and Silverman (2010) are of the opinion that the use of the Cronbach's coefficient alpha as a model measuring tool to use in cases where participants respond to questions anchored on a Likert-scale is recommended for researchers. They have maintained that a 5-point Likert-scale can help to increase reliability in the research. In the current study, the 5-point Likert-scale and Chronbach's coefficient alpha was used to calculate the reliability of the measuring scales.

3.6 IN-DEPTH INTERVIEW

Another technique of obtaining qualitative data is in the form of depth interviews. Malhotra (2004, pg.147) described depth interviews as an unstructured, direct, personal interview in which a single respondent is probed by a highly skilled interviewer to uncover underlying motivations, beliefs, attitudes, and feelings on a topic. Ferreira (2005, pg.8) lists the advantages of using depth interviews and they are identified as the following:

- A good relationship exists between the interviewer and the respondent if very sensitive data is willingly revealed.
- It is also possible to assign an answer to a particular individual.
- Peer pressure to conform to social or other norms is overcome.

- Deeper information is gathered than with structured research.

Ferreira (2005, pg.9) also stresses that the quality and completeness of the results from the interview will all depend on the interviewer's skills. In this study depth interviews were conducted with three key managers at Ngqura Container Terminal to determine their opinions on what features are important to the customers in terms of service delivery and if their departments meet their expectations. Also to determine which structures are available in their departments to enhance service delivery.

In the next paragraph, the interviews conducted with the three managers are presented.

3.6.1 INTERVIEWS CONDUCTED WITH KEY MANAGERS AT NGQURA CONTAINER TERMINAL

To enhance the theoretical and the descriptive statistics results of the study, interviews were conducted with selected key managers at NCT. The purpose was to determine if their opinions on service delivery were aligned to the descriptive statistics results collected from the questionnaires.

The questions with answers obtained during the interviews are presented below.

3.6.1.1 Interviews with the Key Accounts Manager

An interview was conducted with the Key Accounts Manager at Ngqura Container Terminal. The following questions were asked and the following answers were obtained:

Question 1: Describe the nature of service delivered by your department?

Answer: Customer service interventions structures are created by the department for port customers and to manage, as well as facilitating the achievement of key performance indicators. This might be accomplished through meetings with clients, operation meetings and workshops, or other methods designed to bring about the best interest of the terminal and the customers.

Question 2: How would you rate the quality of service offered by your department (excellent, good, average, very poor, poor?

Answer: Good

Question 3: In your opinion do you feel your department meets the expectations of customers in terms of service delivery?

Answer: Yes

Question 4: How would you describe the expectations of your customers in terms of service delivery?

Answer: The expectations of the customers are well-defined and they do not compromise on service delivery expectations. They clearly state to the terminal that every delay that takes place in the port, costs the shipping line a lot of money.

Question 5: What structures exist in your department to enhance service delivery?

Answer: There are Key Accounts plans that are developed for each financial year. There are also monthly and weekly meetings that are held with the customers, namely dashboard and wash up meetings.

Question 6: How effective are these structures?

Answer: They are very effective in identifying challenges and finding solutions to overcome these challenges.

Question 7: What challenges does your department face in meeting customer expectations?

Answer: The challenges that prevent us in meeting customers' expectations are operational inefficiencies, staff shortages, equipment shortages, and employees not responding to client's queries.

Question 8: How do you overcome these challenges?

Answer: By pressurising the operations department to perform according to agreed KPI's, and also putting pressure to the technical department to make the equipment available at all times for operations. Following up with customers' queries to ensure that we respond to the customers.

Question 9: How do you know whether your customers are satisfied or not with your service?

Answer: It is all measured on the turnaround time of the vessels, trucks and rail, if it is within the agreed time frames (KPI's) and if not then the customers will point out their dissatisfaction.

Question 10: Overall do you feel the company meets the expectations of its customers?

 Answer: Yes

From the interview with the Key Accounts Manager it was clear that the department has existing structures in place that are developed to enhance customer service delivery. Furthermore, the department used different strategies to ensure that customer expectations are met by the terminal and also the achievement of key performance indicators.

However, an area of concern is that there are challenges that prevent the department in meeting customers' expectations, there is lack of human resources and technical expertise, also employees not responding to client's queries on time.

3.6.1.2 Interviews with the Chief Planning Manager

An interview was also conducted with the Chief Planning Manager at Ngqura Container Terminal. The following questions were asked and the following answers were obtained:

Question 1: Describe the nature of service delivered by your department?

Answer: The department is responsible for effective planning of all operational activities within business units so they support overall business unit objectives and ensure customer requirements are met at all times e.g. Berth planning, Yard planning and vessel planning.

Question 2: How would you rate the quality of service offered by your department (excellent, good, average, very poor, poor)?

Answer: Good

Question 3: In your opinion do you feel your department meets the expectations of customers in terms of service delivery?

Answer: Yes it does, but sometimes our service is below their expectations.

Question 4: How would you describe the expectations of your customers in terms of service delivery?

Answer: The customer expectation's is speed and reliability; it is what container the customers are interested in. The shipping lines want the time a ship stays in a terminal to be minimised and the handling of containers must be completed in a fast, safe and reliable way, no damages to cargo.

Question 5: What structures exist in your department to enhance service delivery?

Answer: There are monthly meetings with shipping lines, which are intended to resolve and discuss customer enquiries, operational performance and strategies.

Question 6: How effective are these structures?

Answer: They are very effective in identifying challenges and finding solutions to overcome these challenges.

Question 7: What challenges does your department face in meeting customer expectations?

Answer: The challenges that the department faces are operating with limited resources such shortage of manpower, shortage of equipment and lack of understanding of customer requirements and expectations.

Question 8: How do you overcome these challenges?

Answer: Because of manpower shortages, every now and then the terminal will operate on a 12 hour shift pattern to meet customer demands. Also there are workshops that take place to highlight customer expectations and dissatisfactions about the terminal performance, strategies and processes are reviewed during the workshops.

Question 9: How do you know whether your customers are satisfied or not with your service?

Answer: Through customer service index survey (CSI); this survey is collected from the customers on a monthly basis indicating their ratings on agreed KPIs such as

turnaround time of the vessels, trucks times and rail. The CSI measures the basic customer value proposition namely to:

- Work the customers' vessels in accordance with mutually agreed ship working hour targets
- Handle the customers' vessels and containers in a safe manner
- Bill the customers accurately and timeously
- Resolve customers' queries appropriately and timeously

CSI measure is a simple/crisp measure that measures the bottom line service delivery in other words the measure is reflective of the customers' actual experience, not TPT's perception of how they experience the service offering.

Question 10: Overall do you feel the company meets the expectations of its customers?

Answer: Yes, but there are some areas that the department needs to improve on.

From the interview with the Chief Planning Manager, it can be concluded that despite the structures that are in place, there is still a service delivery gap from the terminal that makes the department not meet customer expectations.

Nevertheless, this interview has shown that the planning department should understand how critical it is to meet customer requirements. The challenges of having limited resources can make the terminal less encouraging for customers to invest in and they should also put pressure to the human resources department to make the manpower available at all times for operations. This would enable the terminal to effectively and efficiently design the service delivery process, thus ultimately providing better service to the customers. It is the responsibility of management to provide the necessary resources to meet the service quality standards of customers.

3.6.1.3 Interviews with the Chief Operations Manager

An interview was also conducted with the Chief Operations Manager at Ngqura Container Terminal. The following questions were asked and the following answers were obtained:

Question 1: Describe the nature of service delivered by your department?

Answer: The department is responsible for effective execution of all operational activities within the terminal so they support overall business unit objectives and ensure customer requirements are met at all times while maintaining a motivated workforce.

Question 2: How would you rate the quality of service offered by your department (excellent, good, average, very poor, poor)?

Answer: Good

Question 3: In your opinion do you feel your department meets the expectations of customers in terms of service delivery?

Answer: Yes

Question 4: How would you describe the expectations of your customers in terms of service delivery?

Answer: They expect zero delays for docking their vessels and expect a faster vessel turnaround time to the next port of call.

Question 5: What structures exist in your department to enhance service delivery?

Answer: There are operational strategies that are developed for each financial year and which are designed to evaluate the extent of service delivery they provide to their customers. There are also monthly and weekly meetings that are held with the operations managers, to address operational challenges.

Question 6: How effective are these structures?

Answer: They are very effective in identifying challenges and finding solutions to overcome these challenges.

Question 7: What challenges does your department face in meeting customer expectations?

Answer: Lack of understanding the customer requirements and expectations, also lack of supervision in operation, shortage of manpower and equipment failure are the challenges**.**

Question 8: How do you overcome these challenges?

Answer: By pressurising the employees (operations mangers, supervisors) to perform according to agreed KPI's. Operations also puts pressure to the technical department to make the equipment available at all times for operations

Question 9: How do you know whether your customers are satisfied or not with your service?

Answer: The customers are satisfied with our service when their vessels are turnaround quickly and their cargo is handled safely without any damages.

Question 10: Overall do you feel the company meets the expectations of its customers?

Answer: Yes

In summary, all the challenges that have been highlighted by the managers have a major impact in the success and growth of any organisation. Generally, it is extremely important for the NCT to provide services that deliver excellent quality and fit into the value chain of its customers. NCT should be aware of their customers' expectations and to ensure that these expectations are met in service quality.

3.7   DATA SELECTION, COLLECTION AND RESPONSE RATE

3.7.1 Sampling method, units of analysis and sample size
Parasuraman, Grewal and Krishnan (2007, p.333) describes sampling as the selection of a fraction of the total number of units of interest to decision-makers. Collis and Hussey (2003) also maintains that selecting a sample for a research study is very important, as a sample is made up of a certain group of people or collection of items   that form part of a population and are used for research purposes.

For the purpose of the study, it was very important to decide if all the shipping lines that are serviced by Ngqura Container Terminal or only a sample of customers

should participate in the study would be sufficient, since it is not always practical to study a whole given population nor is it always probable (Neuman, 2006). Leedy and Ormond (2001) suggested guidelines for selecting a sample size; two of the guidelines are as follows; for small populations (N<100), there is little point in sampling; survey the entire population.

If the population size is around 500, 50 percent of the population should be sampled. The research study was conducted on the entire population of Ngqura Container Terminal customers since N<100. In this regard the population consisted of 31 workers. The population comprises of five departments that were surveyed, which are: planning, operations, logistics, transshipments and customer service.

3.7.2 Response to the survey
In this study the aim was to achieve a response rate of over 70 per cent for validity of data. The majority of respondents 31 out of a population of 40 completed the questionnaire. Therefore 77 per cent of the population completed the questionnaire. It can be concluded that the results obtained from the study are valid because of the representation of all shipping customers that are serviced by Ngqura Container Terminal.

Administering the questionnaire

For the empirical study, a survey was conducted with a questionnaire as the data gathering instrument. The questionnaire was hand delivered to the designated target group at each of the three shipping companies. The target group consisted of employees that performed core work at these companies and were directly involved with the Ngqura Container employees daily. A cover letter stating that the survey was anonymous and that the names were not required and that participant's confidentiality would be guaranteed accompanied the questionnaire.

The Operations Managers from MSc, Mol and Maersk were asked for permission to distribute the questionnaire to their staff. The researcher briefed all three operations managers at the three shipping companies with regards to the manner in which the questionnaire was to be completed. Respondents were issued with the questionnaire by the responsible person, by hand, at each of the three companies that allowed the

responsible person an opportunity to explain to the respondents how to complete the questionnaire.

3.8   The analysis of responses

Response rate refers to the number of completed questionnaires returned. The questionnaires were hand delivered to the respondents. A very satisfactory response

rate of 77% was achieved, taking into consideration that 31 of the 40 questionnaires were received. Section A of the questionnaire required respondents to provide their demographic information and company details. The results of the questions provided in Section A can be seen in Tables 3.3 to 3.6 and Figure 3.2 to 3.8. Explanation of the information analysis is provided under the tables and figures. Section B and C are discussed in Chapter Four.

3.8.1 Gender Composition

Question 1 required respondents to indicate their gender. The results to this question are visually presented in table 3.3 and figure 3.2.

Table 3.3: Response rate per gender

Gender		Frequency	Percent
Valid	Male	23	74.2
	Female	8	25.8
	Total	31	100.0

Figure 3.2: Response rate per gender
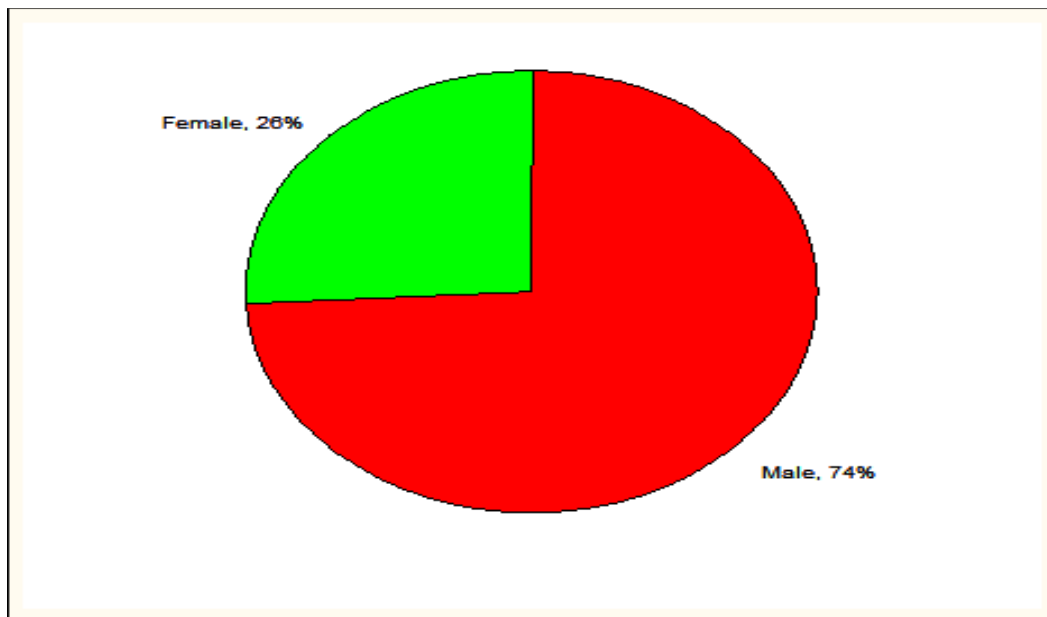
Table 3.3 and Figure 3.2 depicts that 74 percent of the respondents were males while 26 percent of the respondents were females.

3.8.2 Age Composition

Question 2 required respondents to indicate their age. The results to this question are visually presented in table 3.4 and figure 3.3.

Table 3.4: Response rate per age

Age		Frequency	Percent
Valid	20-24 years	2	6.5
	25-35 years	15	48.4
	36-45 years	10	32.3
	46+ years	4	12.9
	Total	31	100.0

Figure 3.3: Age groups of respondents
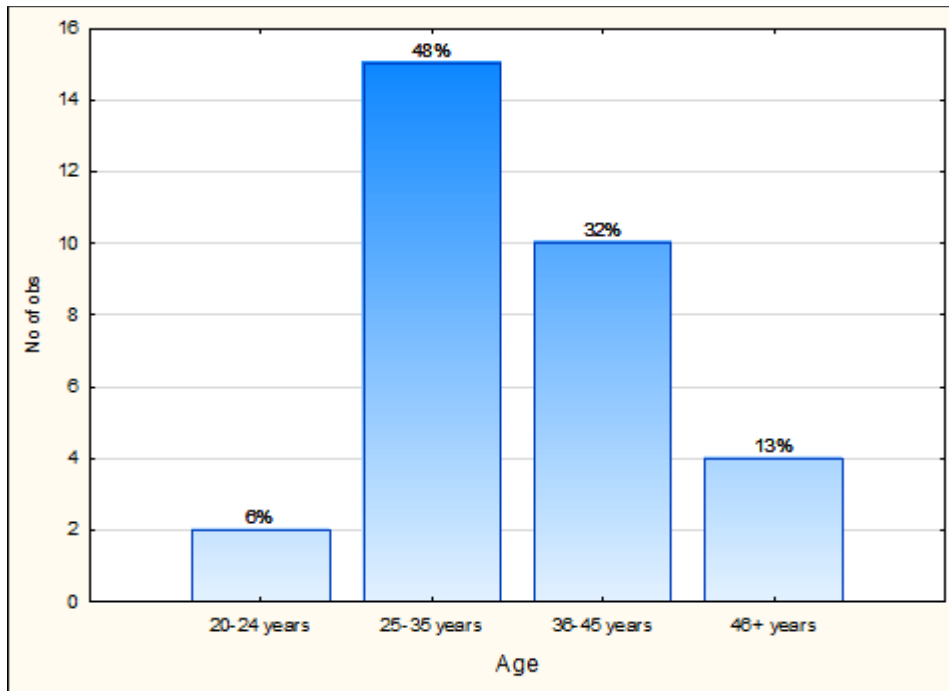
Six percent of the respondents fell within the (20–24) years age group, Forty eight percent fell within the (25-35) years age group 32 percent was between (36-45) years age group while thirteen percent fell in the (56>) age group.

3.8.3 Company name
Question 3 required respondents to indicate the company name they worked for. The results to this question are visually presented in table 3.5 and figure 3.4.

Table 3.5: Response rate per company

Company		Frequency	Percent
Valid	MSC	14	45.2
	MAERSK	9	29.0
	MOL	8	25.8
	Total	31	100.0

Figure 3.4: Response rate per company
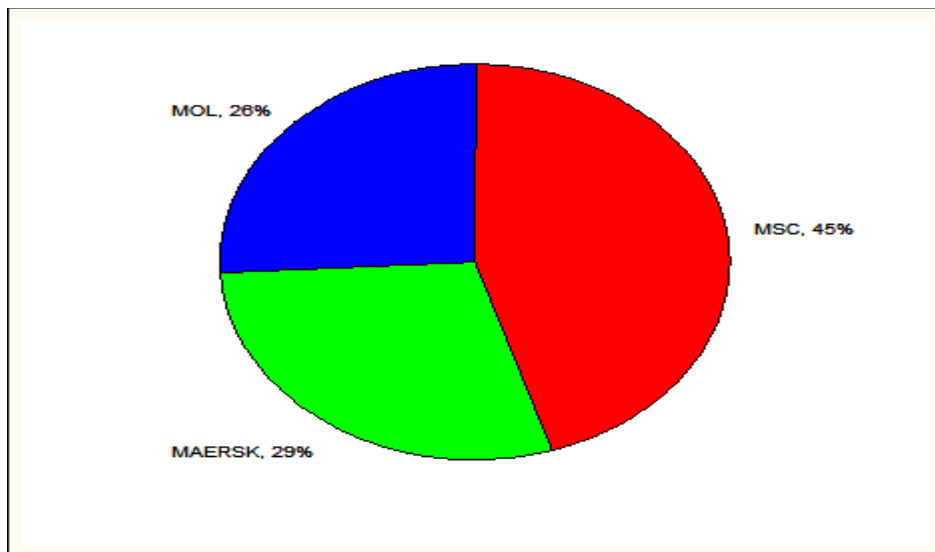
Table 3.5 and Figure 3.4 show that responses were not spread equally among all three companies. The company that contributed the most was Msc (45%) followed by Maersk (29%) and lastly by Mol at (26%).

3.8.4 Department name

Question 4 required respondents to indicate the department name they worked for. The results to this question are visually presented in table 3.6 and figure 3.5.

Table 3.6: Response rate per department name

Department		Frequency	Percent
Valid	Planning	1	3.2
	Operations	13	41.9
	Logistics	2	6.5
	Trans-shipments	7	22.6
	Customer service	8	25.8
	Total	31	100.0

Figure 3.5: Response rate per department name
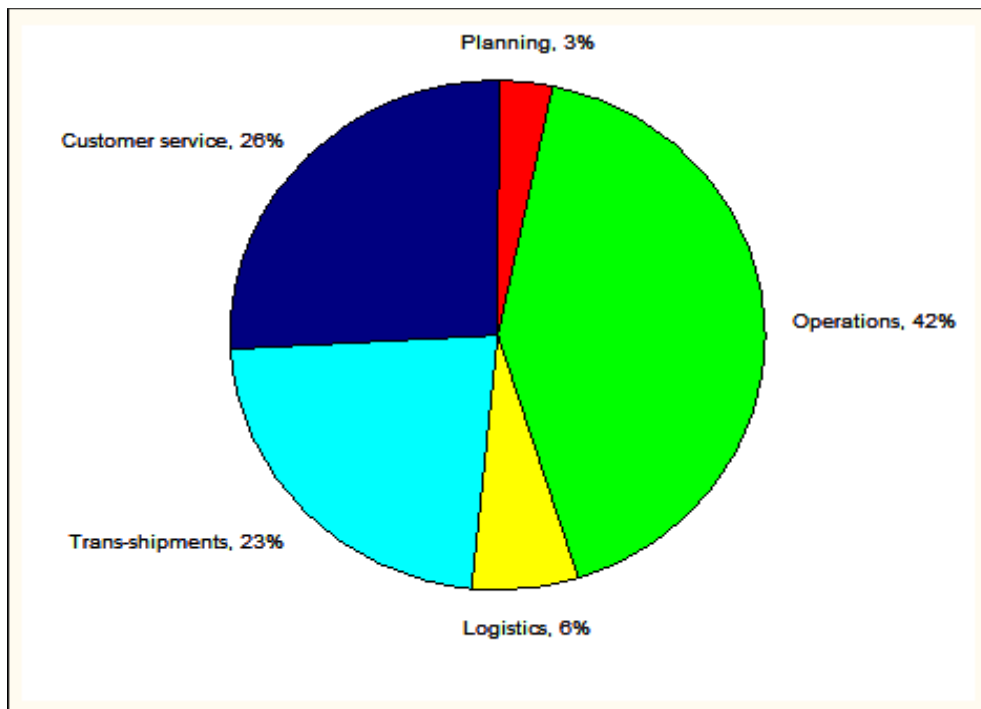
Table 3.6 and Figure 3.5 show the response rate per department in the three companies. The department that contributed the most was the operations (42%) followed by customer service (26%), then followed by the transshipment (23%) and lastly by planning at (3%).

3.8.5 Highest qualification
Question 5 required respondents to indicate their highest qualification. The results to this question are visually presented in figure 3.

Figure 3.6: Highest qualification
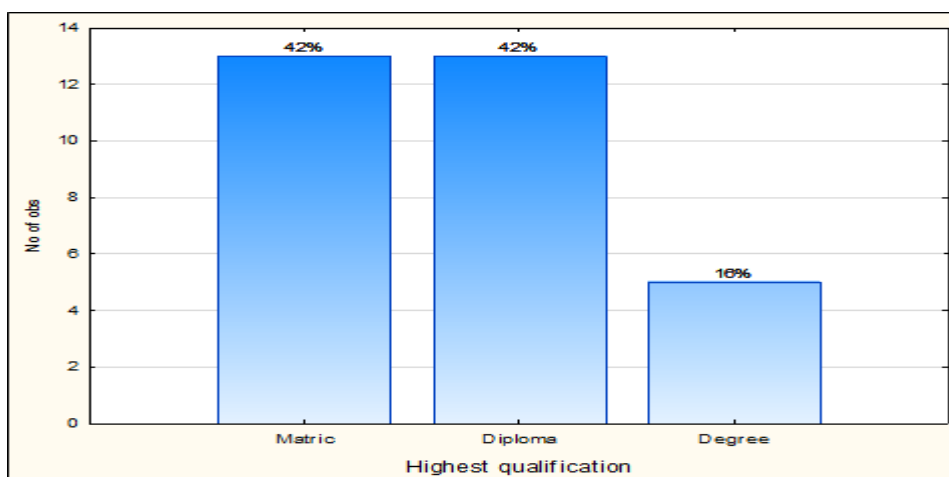
Figure 3.6 depicts that 42 percent of the respondents had matric and 58 percent had a post-matric qualification.

3.8.6 Position of respondents

Question 6 required respondents to indicate their positions in their companies. The results to this question are visually presented in figure 3.7.

Figure 3.7: Position of respondents
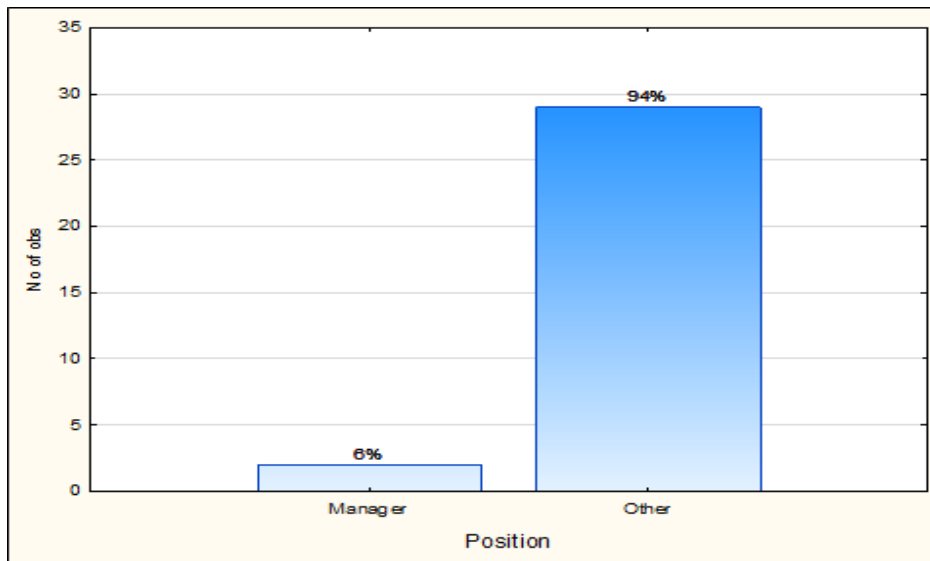
Figure 3.7 depicts that 94 percent of those who completed the questionnaire, did not hold managerial positions while the 6 percent were in management positions. This shows that the majority of employees dealing with NCT service are in non-management positions.

3.8.7 Length of service

Question 7 required respondents to indicate their years of service. The results to this question are presented in figure 3.8.

Figure 3.8: Length of service
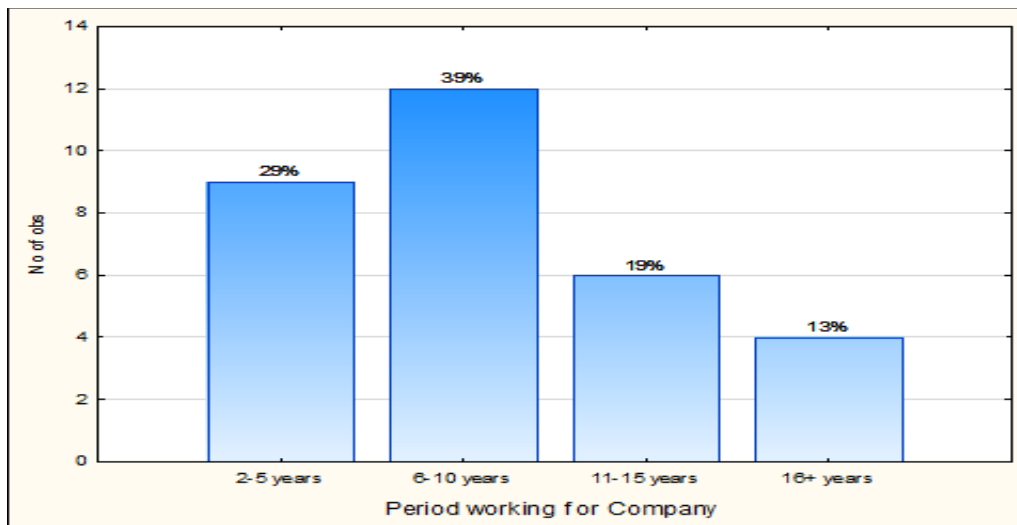
Figure 3.8 depicts the number of years an employee has spent in his/her company. Twenty nine percent of the respondents have been working for a period of between (2-5 years) in their company, 39 percent of the respondents have a period of (6-10 years) in their company. 19 percent have a period of (11-15 years) in their company while 13 percent have been working for a period of (16> years) in their company.

3.9   Summary

This chapter explained the research design and methodology used in the research study. It presented an outline of the research design, construction of the questionnaire and its administration. The chapter examined why the entire population of NCT customers were surveyed in the study. A quantitative research design, with a questionnaire as a data collection tool, was the dominant approach with a qualitative research design as a less dominant approach with interviews conducted with key managers at the Ngqura Container Terminal.

An analysis of respondents' biographical information and the company details were drawn from section A of the questionnaire. The results were presented and interpretations were depicted in tables and figures.

In the next chapter, the responses received on the survey are presented and analysed. An analysis of how respondents view the theoretical aspects of service quality characteristics and importance of service quality features is provided in the following chapter.

CHAPTER FOUR

PRESENTATION AND INTERPRETATION OF RESULTS

4.1 INTRODUCTION

In Chapter 3, the research methodology and design that were used in the study were outlined. This chapter starts with a presentation, analysis and interpretation of the data collected in the empirical study.

The chapter begins by presenting, as well as interpreting the results of Section B of the questionnaire that examines the five service delivery factors of service quality management namely, reliability, responsiveness, assurance, empathy and tangibles. Section B questions were designed to measure the customers' perceptions of service quality at Ngqura Container Terminal. This chapter continues and presents the results of Section C of the questionnaire, which was designed to measure the five service quality features, according to how important each feature is to the respondent. The results of this section would provide additional focus for quality improvement initiatives.

By conducting this investigation and its importance as discussed in the literature review, it will assist the researcher to demonstrate why service quality is essential for an organisation like the Ngqura Container Terminal.

The results of the study are presented in the same order as the sections and statements appear in the questionnaire, except the results for Section A, which were presented in the previous chapter. The responses of the respondents' to the various questions are presented descriptively, in tabular form, as well as graphically. Results of the questionnaire were captured and tabulated in a Microsoft Excel spread sheet in order to perform the required statistical analysis of data. The computer programs STATISTICA Version 11 (2012) and SPSS Version 22 (2013) were used to analyse data.

4.2 THE APPROACH TO QUANTITATIVE ANALYSIS OF RESULTS

As discussed in Chapter two, service quality is a standard pre-requisite, demanded by today's customer where service quality is fast becoming the number one factor for

customers when deciding which business to give their investment to. The purpose of Section B of the questionnaire was to attain the perception of the population group towards service quality at Ngqura Container Terminal.

The findings obtained from the raw data were analysed into descriptive and inferential statistics. The descriptive statistics presented in Section B and C included means, modes, medians and alphas.

Section B of the questionnaire was developed according to a Likert – type scale and for each item, the respondents had to indicate their perceptions, selecting either strongly agree, agree, uncertain, disagree and strongly disagree. Numerical values ranging from one (Strongly disagree), two (Disagree), three (Uncertain), four (Agree) to five (Strongly agree) were used to enable the quantitative analysis of the results obtained from the study.

4.3   THE RELIABILITY OF THE MEASURING INSTRUMENTS

In Chapter 3, guidelines for using the Cronbach's alpha to test reliability of the study were outlined in table 3.2. The Cronbach's coefficient alpha was used to calculate the internal consistency regarding the reliability of the measuring scales. The initial step in the data analysis process was to measure the internal reliability of the measuring instruments by means of Cronbach alpha coefficients. When the Cronbach's alpha is below 0.7 is not considered as being at an acceptable level, which indicates the tested domain has low internal reliability.

The results, reported in Table 4.1 show that all the factors returned alpha values of more than 0.70, which are regarded as reliable. When the Cronbach's alpha is high it means that there is higher internal reliability and the items in the domain measure the construct more consistently. Therefore for the current study, there was no reason to delete any of the questions to make the study reliable.

TABLE 4.1: CRONBACH ALPHA VALUES OF THE MEASURING INSTRUMENTS

MEASURING CONSTRUCT	ALPHA VALUE	AVERAGE INTER-ITEM CORRELATIONS
Tangibles	0.79	0.53
Reliability	0.86	0.63
Responsiveness	0.90	0.69
Empathy	0.90	0.65
Assurance	0.94	0.81

4.4 DESCRIPTIVE STATISTICS: SERVICE QUALITY PERCEPTION

This section presents a summary of the responses to Section B of the questionnaire. Table 4.1 to Table 4.5, as well as Figure 4.1 to Figure 4.5 summerised the respondents' perceptions of the five service delivery factors of service quality namely, tangibles (TANG), reliability (REL), responsiveness (RESP), empathy (EMP) and assurance (ASSUR). The respondents were asked to rate their levels of agreement with the statements set out in Section B of the questionnaire and relating to the service delivery at Ngqura Container Terminal.

As indicated, Section B of the questionnaire was developed according to a Likert – type scale and for each item, the respondents had to indicate their perceptions, selecting either strongly agree, agree, uncertain, disagree and strongly disagree. Each level on the scale were assigned numerical values ranging from one (Strongly disagree), two (Disagree), three (Uncertain), four (Agree) to five (Strongly agree) were used to enable the quantitative analysis of the results obtained from the study.

The scales from 1-5 were divided into three equal length intervals for the study and were interpreted using the average mean scores from low, medium and high. The average mean scores from the responses between (2.33) indicated a (Low) level of satisfactory, where mean scores between (3.67) showed a (Medium) satisfactory level and mean scores that were (5 >) indicated a (High) level of satisfaction from the

respondents. The below tables depicts the average mean scores on the five point Likert-scale.

4.4.1 Tangibles
Table 4.2: DESCRIPTIVE STATISTICS ON TANGIBLES

Code	Statement	Strongly Agree %	Agree %	Uncertain %	Disagree %	Strongly disagree %	Mean	Std. Dev
TAN G1	The NCT terminal has modern looking equipment	32.3	48.4	19.4	0	0	4.13	0.72
TAN G2	The physical facilities at the company are visually appealing	32.3	54.8	12.9	0	0	4.19	0.65
TAN G3	The company has modern operating systems	58.1	35.5	6.5	0	0	4.52	0.63
TAN G4	The company has visually appealing materials associated with the service	35.5	38.7	22.6	3.2	0	4.06	0.85

AVERAGE MEAN SCORE: 4.23

Table 4.1 reveals an average mean score of 4.23 in relation to Ngqura Container Terminal's tangibles. This indicates that the physical appearance of facilities and equipment at NCT are of high satisfactory standards. It means that the respondents are highly satisfied with the level and ability of the equipment, systems and the physical appearance of NCT. The statement that the company has modern operating systems received the highest mean score.

FIGURE 4.1: DESCRIPTIVE STATISTICS - TANGIBLES
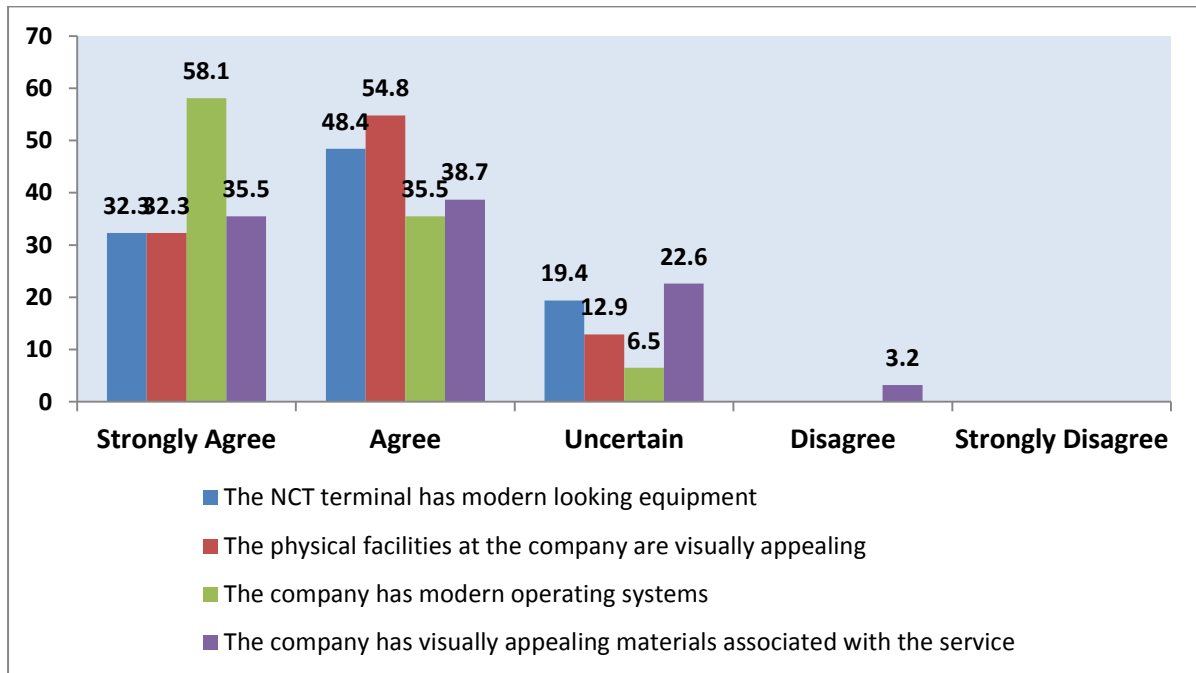
Table 4.1 and Figure 4.1 empirical results reveal that 93% of the respondents agree with the statement that NCT has modern operating systems while 6.5% were uncertain. Furthermore 87.1% of the respondents agree that the company's physical facilities are visually appealing. Only 3.2% of the respondents were disagreeing with the statement that the company has visually appealing material associated with the service. These responses show that NCT has invested significantly on equipment and facilities.

4.4.2 Reliability

Table 4.3: DESCRIPTIVE STATISTICS ON RELIABILITY

Code	Statement	Strongly Agree %	Agree %	Uncertain %	Disagree %	Strongly disagree %	Mean	Std. Dev
REL1	The NCT employees shows sincere interest in solving customer' problem	22.6	35.5	6.5	29.0	6.5	3.39	1.31
REL2	The employees perform their services right the first time	9.7	29.0	32.3	29.0	0	3.19	0.98
REL3	Service delivery is always timely	9.7	25.8	29.0	32.3	3.2	3.06	1.06
REL4	The employees give accurate and timely information to the customers	12.9	29.0	29.0	22.6	6.5	3.19	1.14

AVERAGE MEAN SCORE: 3.21

Table 4.2 reveals an average mean score of 3.21 in relation to Ngqura Container Terminal's reliability. This indicates that the ability of employees at NCT to provide what is promised, dependably and accurately is of medium level.

FIGURE 4.2: DESCRIPTIVE STATISTICS - RELIABILITY
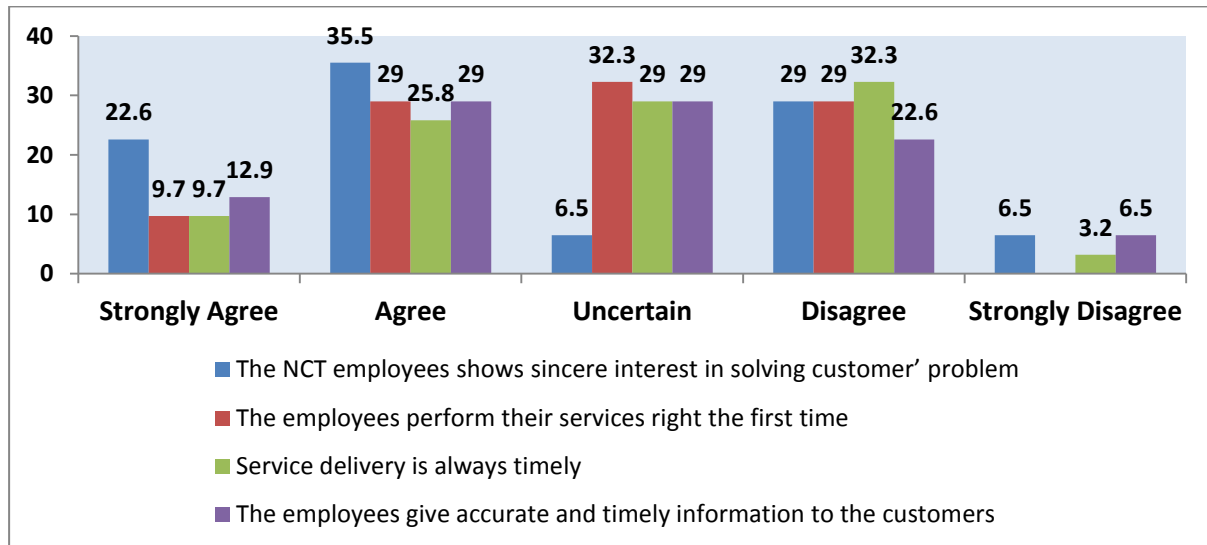
Table 4.2 and Figure 4.2 depicts that 58.1% of the respondents agree with the statement that NCT employees shows sincere interest in solving customers' problems, but the other 35.5 % of the respondents are disagreeing. The responses to this section are mixed, as 32.3% of the respondents indicated that the service delivery at NCT is not always timely, to the 35.5% which agreed that the service delivery is always timely while the 29% were uncertain.

An area of concern is that only forty-two percent (41.9%) of the respondents have agreed that the employees at NCT give accurate and timely information to the customers, with 29 % of the respondents unclear and a significant number of the respondents (29.1%) disagreeing with the statement.

4.4.3 Responsiveness

Table 4.3: DESCRIPTIVE STATISTICS ON RESPONSIVENESS

Code	Statement	Strongly Agree	Agree	Uncertain	Disagree	Strongly disagree	Mean	Std. Dev
RESP 1	Customers are always informed when services will be performed	9.7	41.9	22.6	22.6	3.2	3.32	1.05
RESP 2	The company offers prompt services to customers	9.7	38.7	22.6	29.0	0	3.29	1.01
RESP 3	Employees willing to go an extra mile to help customers	9.7	38.7	16.1	35.5	0	3.23	1.06
RESP 4	Employees are never too busy to respond to customers' request	9.7	38.7	19.4	12.9	19.4	3.06	1.31
RESP 5	Customers are always given the opportunity to give feedback	9.7	48.4	22.6	16.1	3.2	3.45	0.99

AVERAGE MEAN SCORE: 3.27

Table 4.3 reports an average mean score of 3.27 on responsiveness. This score indicates that there is medium level of responsiveness within the organisation. This means the ability to provide what is promised, dependably and accurately by the company is average.

FIGURE 4.3: DESCRIPTIVE STATISTICS - RESPONSIVENESS
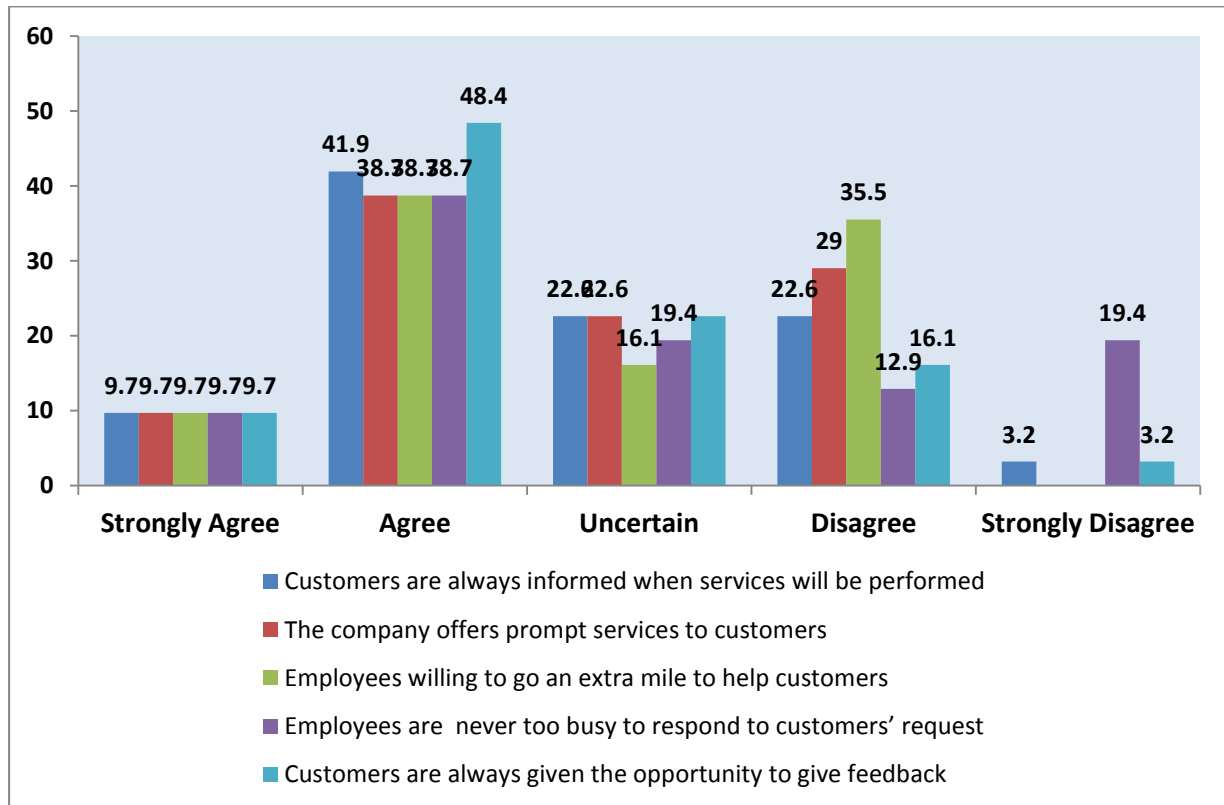
Table 4.3 and Figure 4.3 shows that fifty one percent (51.6%) of the respondents agreed that customers are always informed when services will be performed, the other 25.8% alleged that the customers were not always informed when services will be performed at NCT. 58.1 % of the respondents agreed that customers are always given the opportunity to give feedback whereas 19.3% disagreed.

An area of concern for NCT is that only forty-eight percent (48.4%) of the respondents have agreed that the employees at NCT are willing to go an extra mile to help customers, with 16.1 % of the respondents unclear and a substantial number of the respondents (35.5%) disagreeing with the statement.

4.4.4 Empathy

Table 4.4: DESCRIPTIVE STATISTICS ON EMPATHY

Code	Statement	Strongly Agree	Agree	Uncertain	Disagree	Strongly disagree	Mean	Std. Dev
EMP1	The company's operating hours are suitable for its customers	12.9	74.2	12.9	0	0	4.00	0.52
EMP2	The company shows genuine concern about customer needs and problems	9.7	48.4	38.7	3.2	0	3.65	0.71
EMP3	The company prioritizes the interest and concerns of its customers	9.7	64.5	22.6	3.2	0	3.81	0.65
EMP4	The employees have customers best interests at heart	9.7	38.7	38.7	12.9	0	3.45	0.85
EMP5	The employees understands customers' needs	9.7	41.9	25.8	22.6	0	3.39	0.95
EMP6	The employees gives individual attention to customers	9.7	45.2	25.8	19.4	0	3.45	0.93

AVERAGE MEAN SCORE: 3.6

Table 4.4 depicts an average mean score of 3.6 on empathy. It means that the degree of caring and individual attention the employees you show to customers is of average level.

FIGURE 4.4: DESCRIPTIVE STATISTICS – EMPATHY
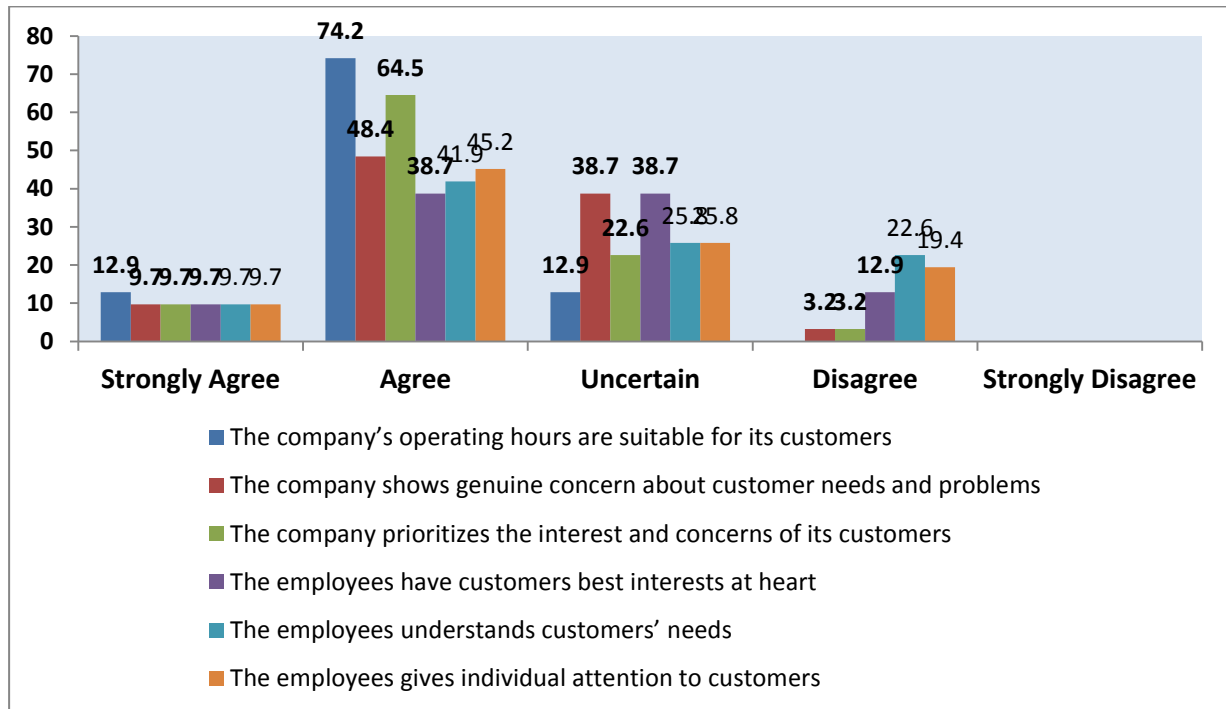
Table 4.4 and Figure 4.4 indicate that 87.1% of the respondents agreed with the statement that NCT operating hours are suitable for its customers and no respondent disagreed. A significant number of respondents agreed with the empathy statements, with only a few who disagreed. 74.2% were of the opinion that NCT prioritized the interest and concerns of its customers while 22.6% were uncertain and only 3.2% disagreed.

Areas that are worrying from the statements is that a substantial number of responses (22.6%) disagreed with the statement that the employees understands customers' needs, with 25.8 % of the respondents unclear and (51.6%) agreeing with the statement. Also 19.4% of respondents disagreed with the statement that the employees at NCT give individual attention to customers, with 54.9% agreeing with the statement, whereas 25.8% were uncertain.

4.4.5 Assurance

Table 4.5: DESCRIPTIVE STATISTICS ON ASSURANCE

Code	Statement	Strongly Agree	Agree	Uncertain	Disagree	Strongly disagree	Mean	Std. Dev
ASSUR 1	The employees are able to instill confidence in customers	6.5	38.7	32.3	22.6	0	3.29	0.90
ASSUR 2	The customers feel safe in their transactions with the company	9.7	48.4	16.1	25.8	0	3.42	0.99
ASSUR 3	The employees are considerate at all times to customers	6.5	58.1	19.4	16.1	0	3.55	0.85
ASSUR 4	The employees have the knowledge and expertise to answer customers' questions	9.7	45.2	32.3	12.9	0	3.52	0.85

AVERAGE MEAN SCORE: 3.44

Table 4.5 depicts an average mean score of 3.44 which indicates an average satisfactory level of assurance within NCT. The knowledge displayed to customers, and the ability to convey trust, competence, and confidence is not of highest level by NCT.

FIGURE 4.5: DESCRIPTIVE STATISTICS – ASSURANCE

Legend:
- The employees are able to instill confidence in customers
- The customers feel safe in their transactions with the company
- The employees are considerate at all times to customers
- The employees have the knowledge and expertise to answer customers' questions
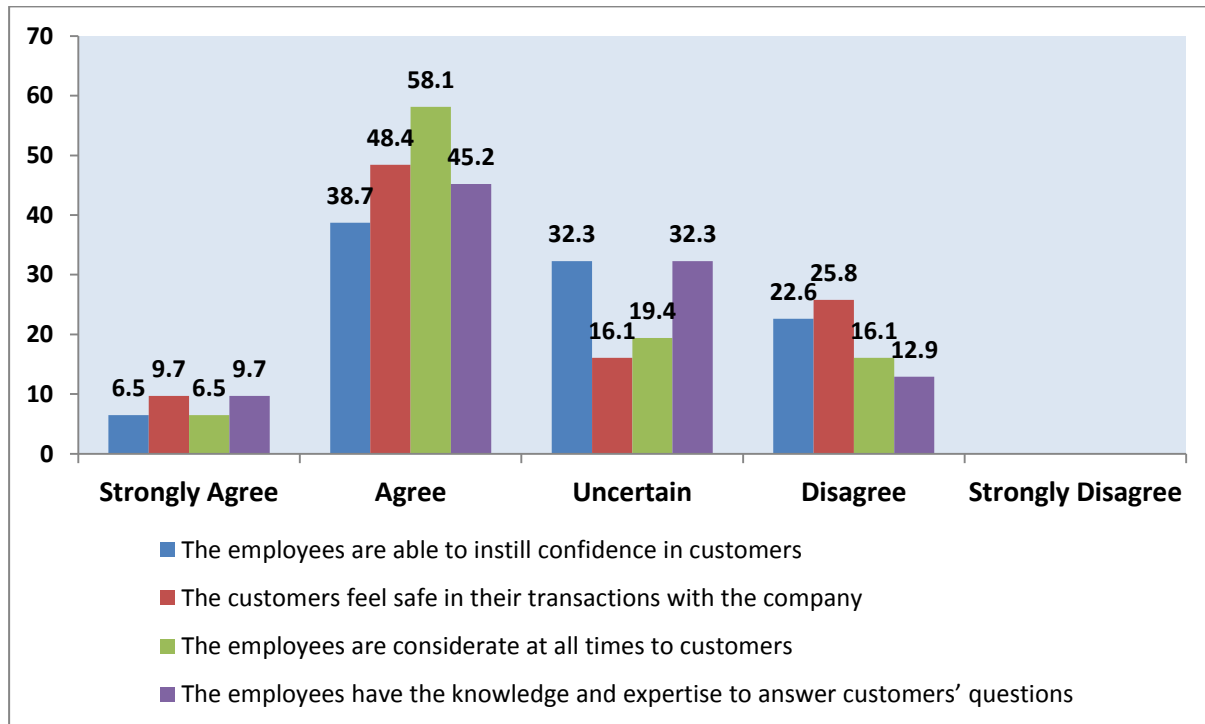
Table 4.5 and Figure 4.5 show that 64.6% of the respondents agreed with the statement that the employees at NCT are considerate at all times to customers, with 19.4% unclear, only a small number of respondents (16.1%) disagreed. 45.2% declared that the employees are able to instill confidence in customers, with 22.6% disagree, while 32.3% were uncertain.

A concern however, is that 32.3% of the respondents were uncertain in terms of whether the employees have the knowledge and expertise to answer customers' questions and another 32.3% of the respondents were unclear with the statement that the employees are able to instill confidence in customers.

4.5 DESCRIPTIVE STATISTICS: SERVICE QUALITY FEATURES

This section presents a summary of the responses to Section C of the questionnaire. Table 4.6, as well as Figure 4.6 summarised the level of importance respondents' place on the five service quality features namely, tangibles (TANG), reliability (REL), responsiveness (RESP), empathy (EMP) and assurance (ASSUR).

In Section C, the scales from 1-5 were also divided into three equal length intervals for the study and were interpreted using the average mean scores from low, medium and high. The average mean scores from the responses between (2.33) indicated a (High) level of importance, where a mean score between (3.67) showed a (Medium) level of

importance and with mean scores that were (5 >) indicated a (Low) level of importance from the respondents. The below table depicts the average mean scores on the five point Likert-scale

Table 4.6: DESCRIPTIVE STATISTICS ON FEATURES

Code	Statement	RANK 1 %	RANK 2 %	RANK 3 %	RANK 4 %	RANK 5 %	Mean	Std. Dev
TANG	The physical appearance of facilities and equipment.	0	0	0	19.4	80.6	4.81	0.40
REL	The ability to provide what is promised, dependably and accurately.	87.1	12.9	0	0	0	1.13	0.34
RESP	The willingness to help customers promptly.	9.7	51.6	38.7	0	0	2.29	0.64
EMP	The degree of caring and individual attention you show customers.	0	9.7	29.0	45.2	16.1	3.68	0.87
ASSUR	The knowledge displayed to customers, and the ability to convey trust, competence, and confidence.	3.2	25.8	32.3	38.7	0	3.06	0.89

AVERAGE MEAN SCORE: 2.99

Table 4.6 depicts an average mean score of 2.99. The mean scores to this section are mixed, with reliability having a mean score of 1.13. This means the respondents find reliability as highly important. Responsiveness is also regarded by the respondents as highly important with a mean score of 2.29. Empathy has a mean score of 3.68 and

assurance with a mean score of 3.06, both these service features has an average level of importance to the respondents. The tangibles were ranked the least important by the respondents, with the mean score of 4.81.

FIGURE 4.6: DESCRIPTIVE STATISTICS – FEATURES

Table 4.6 and Figure 4.6 a highly significant number of respondents ranked reliability as the most important service quality feature (87.1%), followed by responsiveness at 51.6%. The tangibles were ranked the least important by the respondents at 80.6% with empathy following it at 61.3%

4.6. PEARSON'S CORRELATION COEFFICIENT

Pearson's correlation coefficient is useful to determine if a relationship exists between two different variables. If so, how significant or how strong is this association between the two variables?

In this study, statistical correlation analysis was used to determine the strength of the association between the five factors of service quality, namely: reliability,

responsiveness, assurance, empathy and tangibles. In table 4.7 the Pearson's correlation coefficient measures the relationship between the five service quality factors.

Table 4.7: Pearson's correlation coefficient

	Tangibles	Reliability	Responsive	Empathy	Assurance
Tangibles	1.000				
Reliability	0.107	1.000			
Responsive	0.183	0.869	1.000		
Empathy	0.203	0.764	0.897	1.000	
Assurance	0.033	0.718	0.860	0.886	1.000

Red indicates statistically significant correlations ($p < 0.05$)

Table 4.7 shows that tangibles have no relationship with other service quality factors. There is a significant positive correlation between the other factors, reliability, responsiveness, empathy and assurance. These relationships are also very strong since the correlation coefficient (r) is greater than 0.50 in all cases.

Figure 4.7: Scatter Plots
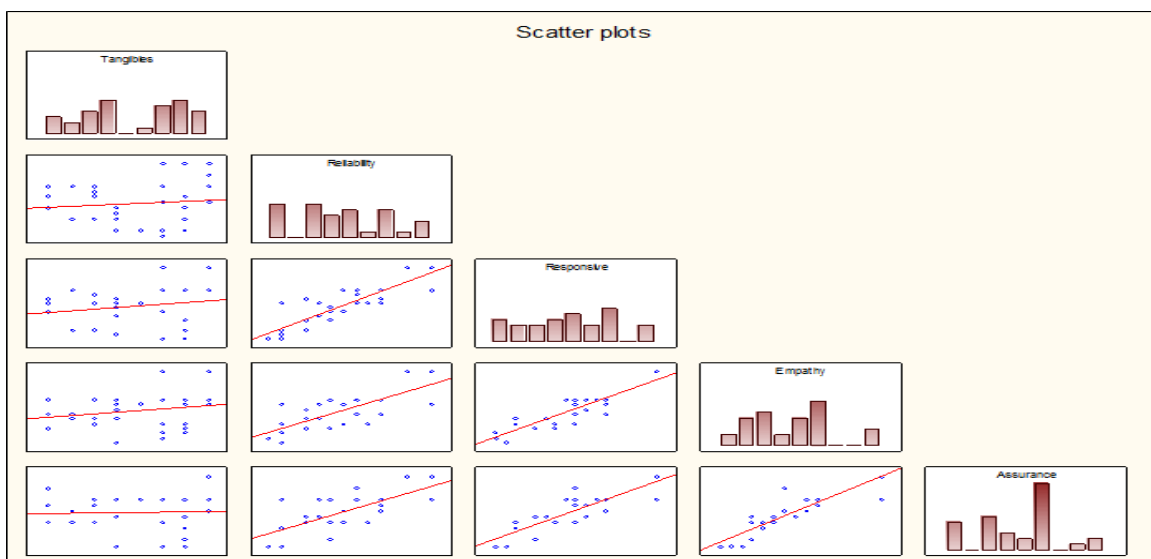
The above figure depicts the relationships among the five service quality factors graphically. These graphs confirm the strong relationships among reliability, responsiveness, empathy and assurance, and that tangible is the only service quality factor that has no relationship with the other factors.

4.7   DESCRIPTIVE STATISTICS: COMPARISON BETWEEN THE CUSTOMERS

Table 4.8: Customers Means Scores Results

COMPANY	MEAN SCORES				
	Tangibles	Reliability	Responsiveness	Empathy	Assurance
MSC	4.04	3.77	3.86	3.93	3.82
MAERSK	4.33	3.22	3.38	3.78	3.78
MOL	4.44	2.22	2.13	2.92	2.41

Table 4.8 shows that the mean scores for tangibles are very similar for the three companies, with MSC having a mean score of (4.04), MAERSK with a mean score of (4.33) and lastly MOL with a mean score of (4.44). This means that the customers have similar opinions about the tangibles at NCT.

A major concern however, is that MOL has a much lower mean score for reliability (2.22), responsiveness (2.13), empathy (2.92) and assurance (2.41) as compared to MSC and MAERSK that have means scores on these four factors ranging from 3.22 to 3.93. It means that from the three customers MOL has a huge different view with regards to reliability, responsiveness, empathy and assurance.

To test whether there are any statistically significant differences among the means scores, Analysis of variance (ANOVA) was used. The hypotheses tested with this technique are:

H$_0$: μ_{MSC} = μ_{MAERSK} = μ_{MOL} (population means are equal across the three groups)

H$_1$: Not all means are equal

The results of this analysis are given in the next section.

4.7.1 Analysis Of Variance (ANOVA)

The analysis of variance is an approach used to test for equality of means across multiple populations. The purpose is to determine whether there are statistical significant differences among the three group means in terms of the five factors in this study.

Table 4.9: Analysis of Variance

	F	P
Tangibles	1.58	0.2236
Reliability	11.56	0.0002
Responsive	21.28	0.0000
Empathy	11.05	0.0003
Assurance	18.11	0.0000

*Red indicates statistically significant differences (p<0.05)

Table 4.9 shows that there are statistically significant differences ($p < 0.05$) among the three group means in terms of four of the factors, namely Reliability, Responsive, Empathy and Assurance. No statistically significant group differences were detected in terms of tangibles ($p > 0.05$).

Since ANOVA does not indicate between which of the groups significant differences exist, a post hoc test (Scheffe used in this study) was done for this purpose.

4.7.2 Scheffe Test

The tables below give the results of the Scheffe test for each of the four factors where ANOVA yielded a statistically significant result. Also in these tables, Cohen's d values are given.

Cohen's d is an effect size measure that indicates the practical significance of a statistical significant finding.

The interpretation of this measure is as follows:

- < 0.5: (Small)
- 0.5 - 0.79: (Medium)

- 0.8+: (Large)

In all the tables, the bottom diagonal contains p-values and the top diagonal contains Cohen's d values.

Table 4.10: Scheffe Test: Reliability

Company	{1}	{2}	{3}
MSC {1}			2.36 (Large)
MAERSK {2}	0.2313		1.43 (Large)
MOL {3}	0.0002	0.0288	

Table 4.10 shows that there are only two statistically significant differences. They are:

1. Between MSC and MOL (p = 0.0002; Cohen's d = 2.36) – this finding is therefore of large practical significance.
2. Between MAERSK and MOL (p = 0.0288; Cohen's d = 1.43) – this finding is therefore of large practical significance.

Table 4.11: Scheffe Test: Responsiveness

Company	{1}	{2}	{3}
MSC {1}			2.85 (Large)
MAERSK {2}	0.1944		2.57 (Large)
MOL {3}	0.0000	0.0009	

Table 4.11 shows that there are only two statistically significant differences. They are:

3. Between MSC and MOL (p = 0.0000; Cohen's d = 2.85) – this finding is therefore of large practical significance.
4. Between MAERSK and MOL (p = 0.0009; Cohen's d = 2.57) – this finding is therefore of large practical significance.

Table 4.12: Scheffe Test: Empathy

Company	{1}	{2}	{3}
MSC {1}			1.82 (Large)
MAERSK {2}	0.7807		2.95 (Large)
MOL {3}	0.0004	0.0055	

Table 4.12 shows that there are only two statistically significant differences. They are:

5. Between MSC and MOL (p = 0.0004; Cohen's d = 1.82) – this finding is therefore of large practical significance.
6. Between MAERSK and MOL (p = 0.0055; Cohen's d = 2.95) – this finding is therefore of large practical significance.

Table 4.13: Scheffe Test: Assurance

Company	{1}	{2}	{3}
MSC {1}			2.32 (Large)
MAERSK {2}	0.9839		2.87 (Large)
MOL {3}	0.0000	0.0001	

Table 4.13 shows that there are only two statistically significant differences. They are:

7. Between MSC and MOL (p = 0.0000; Cohen's d = 2.32) – this finding is therefore of large practical significance.
8. Between MAERSK and MOL (p = 0.0001; Cohen's d = 2.87) – this finding is therefore of large practical significance.

4.8 Summary

This chapter aimed at presenting and interpreting the data obtained in section B to section C of the research questionnaire. It reported on the descriptive statistics results of the study. According to these results, the respondent's views about service delivery at Ngqura Container Terminal were diverse, especially in terms of service quality measured by reliability, responsiveness, empathy and assurance. These results

therefore, indicated which areas need special attention to the variables with which the respondents were dissatisfied.

The next chapter will consist of findings to the study, recommendations and conclusion based on the results obtained from the survey questionnaire. The managerial implications of the empirical findings will be discussed and recommendations on the strategies that can be employed by management to improve customer service delivery will be reviewed. It will also highlight problems and limitations encountered during the study and opportunities for future research.

CHAPTER 5

FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1   INTRODUCTION

The purpose of the final chapter is to summarise what has been investigated in the study. It is aimed at assessing service quality delivery in Ngqura Container Terminal from the customer's perception, targeted at drawing out operational performance issues of service quality to compliment the customer operational performance expectations.

In this chapter, the empirical results are discussed in terms of the managerial implications they present. The findings, limitations, recommendations and a conclusion of the research are provided. This chapter also suggests opportunities for further research.

5.2   OVERVIEW OF THE STUDY

The construction of the Port of Ngqura took place around 2003 and the port started operating in October 2009. The port has grown significantly at a rapid rate and this growth has developed the economy of the Eastern Cape region, creating more than 800 direct jobs and 300 indirect jobs, changing the face of industry across the Eastern Cape.

Ngqura Container Terminal performance productivity rate has been outstanding, improving every year since it started operations. This has made Ngqura Container Terminal to be one of the preferred ports of choice by the shipping lines or shipping customers in the container business. The growth of NCT has created greater demand than before from its customers in the shipping business, so to maintain and sustain a successful business growth and economy as well as to exceed its customers' expectations through higher productivity and good customer relations. It is therefore important for NCT to identify which service deliver features are important to the customers and what are the needs of these customers. This would assist the terminal to develop customer service strategies that can be used to meet customer requirements.

This study examined many factors that may lead to the ideal, efficient, and effective customer service strategy for the Port of Ngqura. Chapter 1 of the study described the research purpose and the background of the study. It gave a description of the study, explaining what the research was about. The research problems that contained sub-problems and the main problems were defined by the researcher.

In Chapter 2 of the literature review, looked at the overview of the nature and importance of service strategies. The importance of providing excellent service quality to customers was highlighted and how the profitability of a business will increase as the service quality increases. A methodology that supports the service quality was discussed, which is the Model of service quality gaps. The SERVQUAL as a service quality framework was also debated which is used to measure the scale of Quality in different industries. The relationship between the service quality to customer satisfaction and customer retention was emphasised which can contribute to the success of an organisation. Customer retention strategies were also highlighted that could benefit an organisation if executed successfully.

In Chapter 3, the research methodology of this study was also examined and both the quantitative and qualitative research was applied to source the data required resolve the main and the sub-problems. It presented an outline of the research design, construction of the questionnaire and its administration. The chapter examined why the entire population of NCT customers was surveyed in the study. A quantitative research design, with a questionnaire as a data collection tool, was the dominant approach with a qualitative research design as a less dominant approach with interviews conducted with key people at the Ngqura Container Terminal. An analysis of respondents' biographical information and the company details were drawn from section A of the questionnaire. The results were presented and interpretations were depicted in tables and figures.

In Chapter 4, the descriptive statistics results of the study were presented and interpreted. The questions were designed to measure the customer's perceptions of service quality at Ngqura Container Terminal and also to measure the five service quality features, according to how important each feature is to the respondent.

The main findings of the literature and the empirical study are discussed in the next section.

5.3   SUMMARY OF THE FINDINGS

As indicated in chapter two, service quality is a standard pre-requisite, demanded by today's customer where service quality is fast becoming the number one factor for customers when deciding which business to give their investment to. It is therefore in the interest of terminal operators to improve customers' perspective of service quality that would integrate all aspects of service to deliver value to customers.

In chapter two of the literature review, Edvardsson, (1998, p.142) reveals that the concept of service should be approached from the customer's perspective because it is the customer's total perception of the outcome, which is the service and customer outcome is created in a process, meaning service is generated through that process. Chang (2008) describes that the concept of service quality should be generally approached from the customers' point of view because they may have different values, different ground of assessment, and different circumstances. He further maintains that understanding the factors that influence customer satisfaction make it easier to improve quality and deliver service offers that corresponds to the market demands.

In the terminal environment the service features are the most important factors that customers consider, such as port facility enlargement measures, modernisation of terminal equipment, development of feeder route, decreasing tariffs, providing enough storage hours, optimising line-haul truck operations, speedy and safe handling of special cargoes etc. (Lu, Gong & Wang, 2011).

The study therefore made the following findings about the terminal:

5.3.1 Tangibles
Tangible is the appearance of physical facilities, equipment, personnel, and communication materials (Ham and Hayduk, 2003)**.**

In the study it was found that the customers have positive perceptions of service delivery features of service quality namely, tangibles at NCT. This shows that the physical appearance of facilities and equipment at NCT are of high satisfactory standards. They are overall satisfied (93%) with the physical appearance of facilities and equipment at the port.

There was no significance difference between the customers (Msc, Mol and Maersk) perception about the tangibles at NCT, with Msc having a mean score of (4.04), Maersk with a mean score of (4.33) and lastly MOL with a mean score of (4.44).

From the empirical results tangibles did not seem important to the customers, they were ranked the least important by the respondents, with the mean score of (4.81). Generally, the physical appearance of facilities and equipment was not rated highly in importance ratings compared to other service features.

5.3.2 Reliability

Reliability is the ability to perform the promised service dependably and accurately. This means that the service is accomplished on time and in a manner devoid of errors (Ham and Hayduk, 2003).

In the study it was found that the customer's view of the ability of employees at NCT to provide what is promised, dependably and accurately was average (3.21). The responses from the customers about reliability were mixed. A major concern however is that MOL has a much lower mean score (2.22) for reliability as compared to other shipping companies. It means that from the three customers MOL has a negative view with regards to reliability.

From the empirical results, it was found that reliability is the most important feature of service quality from the customers; it was ranked high with the mean score of (1.13). Finding reliability as the most important feature in service quality measurement supports the views of (Wiegmans et al. (2001). They maintain that quality of service in speed and reliability in container terminals is what container carriers are interested in. The shipping lines want the time a ship stays in a terminal to be minimised, and, therefore, the handling of containers must be executed in a fast and reliable way.

What was interesting from the findings of the study was that this notion of reliability also came across during the interview with the Key Accounts Manager, when he was asked, how he would describe the expectations of your customers in terms of service delivery. He indicated that, the expectations of the customers were well-defined and they did not compromise on service delivery expectations. They clearly stated to the terminal that every delay that takes place in the port, costs the shipping line a lot of money.

5.3.3 Responsiveness

Responsiveness is the willingness to help customers and provide prompt service. The ability to recover quickly to customer needs and with professionalism can create very positive perceptions of service quality (Ham and Hayduk, 2003).

In the study it was found that the customer's view of the employee's willingness to help customers promptly was also average (3.27). The responses from the customers about responsiveness were also mixed. This was evident from the mean scores, with Msc having a mean score of (3.86) and Maersk a mean score of (3.38), whereas Mol had a lower mean score of (2.13). It means that Mol has a huge different view with regards to responsiveness.

In ratings of the importance of service quality features, it was found that responsiveness was also rated high by the customers, with a mean score of (2.29). Customers have expectations with respect to the service provider's willingness to help clients and providing speedy response. Thus, responsiveness impacts on the quality of communications and outcomes in the service quality chain.

From the interview with the Key Accounts Manager this concept of responsiveness came across. When he was asked, what challenges do the department face in meeting customer expectations. He revealed that the challenges that prevented the terminal in meeting customer expectations are operational inefficiencies, staff shortages, equipment shortages, and employees not responding to client's queries. It was also very interesting to note that the other managers themselves from the interviews recognised that their departments were not being courteous enough to customers.

This was very concerning, as most of the customers ranked responsiveness as an important attribute in service delivery. Therefore, responsiveness is an important aspect that needs to be improved upon by the terminal.

5.3.4 Empathy

Empathy is the degree of caring and individual attention you show customers (Ham and Hayduk, 2003).

It was found from the study that the customer's opinion on empathy was average (3.6). It means that the degree of caring and individual attention the employees show

to customers is of average level. However, a major concern was that Mol lower mean score (2.92) as compared to Msc (3.93) and Maersk (3.78). These mean scores, again indicating that they have a totally different opinion on empathy.

Empathy was rated the fourth most important attribute of service quality by the customers, with a mean score of (3.68).

5.3.5 Assurance

Assurance is the knowledge and courtesy of employees and their ability to convey trust and confidence (Ham and Hayduk, 2003).

In the study it was found that the customer's view on assurance was average (3.44). Meaning that the knowledge displayed to customers, and the ability to convey trust, competence, and confidence is not of highest level by NCT. An area of concern, however from the study is that there were significant differences in customers opinions about assurance, with Mol having a lower mean score of (2.41). This indicates that Mol was not satisfied with the employee's level of competence.

Assurance was rated the third most important attribute of service quality by the customers, with a mean score of (3.06). It was also apparent from the literature that in the container terminal environment assurance that includes attributes of knowledge, respect and interpersonal skills, was an important measurement to customers. Customers seek an assurance that service providers do have appropriate skills and knowledge to perform the service as delivery depends on these skills.

In summary, from the above findings it was established that the significance of reliability as the most important and responsiveness as the next important element of service delivery in container terminals confirms findings of previous studies. Assurance was seen as the third most important feature identified in this research, followed by empathy and tangibles were not rated highly. However, these service delivery features at the end of the day may give classification of areas that are highly important to customers, assisting the terminal to meet the customer's needs and requirements. Knowing customers' perception on service quality is an essential process in delivering quality service at any level of an operation.

5.4   PROBLEMS AND LIMITATIONS

There were no major problems experienced in the research study and the research survey was successful because a 77 percent return rate was achieved. However, a problem encountered during this study was that the CMA shipping line declined to take part in the study survey, maintaining that the information disclosed by the questionnaire could reflect negatively on anything CMA does with NCT. They also did not wish to disclose any of their personal information and even after being reassured that their answers will be kept anonymous.

Although CMA did not respond, a fair representation of all group categories was achieved. A good balance of opinions was achieved, from the three shipping lines that participated in the study. The analysis of data progressed well with both quantitative and qualitative data giving depth to the findings.

5.5   RECOMMENDATIONS

This study can assist managers at NCT in understanding how customers within the container industry evaluate service quality. From a strategic position, being able to better understand how customers measure service quality and what they rate as the highest important service feature, can lead to better service delivery results for external customers and satisfaction. However, satisfaction is not only important for external customers, but for internal employees as well. Furthermore it is important for management to ensure that their employees are satisfied as this will lead to more satisfied, motivated, and willing employees, which all will benefit the company as the employees will provide satisfactory services for the external customers. The interaction between an employee and a customer leads to an end result of satisfaction. If an organisation is not aware of its customers' and employees' requirements, it cannot devote resources effectively, to improving those areas that may have the most significant impact on customer satisfaction.

In the case of NCT, it would be important to measure the perception of the employees about service quality in the port. The terminal employees need to measure service delivery against each department, This would assist the port in understanding the perception of employees about service quality in each area. Understanding the nature of internal service quality will allow tracking of the relative operational performance of organisational groups across the terminal. This would

represent opportunities to improve outcomes for external customers and to have greater efficiencies and effectiveness within the terminal.

From the study it was found that reliability and responsiveness were the most important features to the customers, which means that management needs to ensure that there are appropriate development and training of employees at NCT so that they are able to perform and display the qualities of responsiveness and reliability regarded by customers as being important. The trainings would enhance their customer service skills and would give the employees the ability to help customers resolve their queries and problems quickly.

To enhance the successful business growth of NCT and the economy of the Eastern Cape, management should seriously look into the customer requirements and needs. Among the three customers that were surveyed, MOL has a huge different view with regards to reliability, responsiveness, empathy and assurance. It means that from the three customers MOL has a negative view with regards to the four service quality features. This clearly shows that NCT management needs to give more support to MOL so that they can improve the quality of the services they are required to provide to customers. These differences in opinion from the customers indicate that it is advisable for the terminal to conduct regular surveys among its customers and employees to identify the most important areas for improvement, also identification of disappointed customers.

More importantly, service quality enhancement through customer and employee orientation will provide the terminal with an opportunity to gain confidence from the stakeholders and future investments. Thus, it is very essential to gain true measure of the importance service quality features due to the potential impact on customers and terminal processes.

5.6   AREAS FOR FUTURE RESEARCH

The study can provide a basis for further research. During the study, it was discovered that there is lack of efficiency in the terminal. The areas of research that were identified are:

1. Using the same approach, further studies can be carried out at the target terminal, to examine if there is a relationship between quality service and customer retention.

2. A similar study could also be made on the perception of service quality among departments in Ngqura Container Terminal.

3. Research using the same method should be conducted by all Transnet container terminals on all shipping lines that they serviced, on their perception on service quality.

5.7   CONCLUDING REMARKS

Service quality is one of the most critical elements for every organisation. From the study it was found that service quality is a standard pre-requisite, demanded by today's customer where service quality is fast becoming the number one factor for customers when deciding which business to give their investment to. It is therefore imperative for Ngqura Container Terminal to deliver and monitor the quality of their services to achieve customer satisfaction, retention and profitability at the same time.

Furthermore, the literature research has brought out the fact that reliability and responsiveness are the most important element of service delivery in container terminals, that   quality of service in speed and reliability is what container carriers are interested in. Additionally, the study also showed a major concern, that among the three customers that were surveyed, MOL shipping line has negative views about the service delivery at NCT. These views may influence local and international shipping customers to invest their businesses with NCT.

The findings from the study can assist management from NCT to develop strategies on enhancing the nature of their services that are offered to customers. In conclusion, excellent service quality can help Ngqura to retain their current customers and also attract other shipping lines to do business with the port.

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LIST OF APPENDICES

Appendix 1 Covering letter for the questionnaire

Nelson Mandela Metropolitan University

BUSINESS SCHOOL
Leaders for tomorrow

Ngqura Container Terminal

NMMU

Port Elizabeth

SOUTH AFRICA

Dear Sir/Madam,

My name is Mkhululi Terrence Mtshiselwa a student at the Nelson Mandela Metropolitan University (NMMU). I am studying Business Administration at the Master Level. As a requirement of my programme, I am expected to research a topic. The title of my research is "Customer service. A strategy for Ngqura Container Terminal".

Please I would appreciate if you could spend a few minutes of your busy schedule to fill the questionnaire below. Should you wish to be anonymous, you can avoid the questions that will disclose your identity. Please do not hesitate to contact me should you require any further information regarding the questionnaire. My contact details are:

Tel: (041) 507 8317 or 083 788 5865. Email: mkhululi.mtshiselwa@transnet.net.

Thanking you very much for your contribution,

Yours sincerely

Mkhululi Terrence Mtshiselwa

INSTRUCTIONS FOR COMPLETING THE QUESTIONNAIRE

Please answer each question as honestly as possible as it is vitally important that we get the correct information. Your responses will be treated with complete confidentiality.

The questionnaire will take you approximately 20 minutes to complete.

Instructions: The questionnaire consists of 23 statements with the exclusion of Section A which consists of biographical questions and Section C which consist of five service quality features. With each statement indicate the extent to which each statement is true. Next to each statement, indicate your agreement with the statement by crossing a value between one (1) and five (5).

Example:

I consider it a good thing that Shakes Mashaba is the National coach for Bafana - Bafana.

Strongly Agree	**5**
Agree	4
Neutral	3
Disagree	2
Strongly Disagree	1

Note:

Use as much time as required to decide on each statement.

Please give honest answers – there is no right or wrong answer.

Appendix 2 Questionnaire

QUESTIONNAIRE

SECTION A: DEMOGRAPHIC INFORMATION

Please supply the following information by making an 'X' in the appropriate block.

1. **Gender**

Male	1	Female	2

2. **Age bracket**

20 – 24	1	25-35	2	36-45	3	46+	4

3. **Which Company do you work for?**

MSC	1	MAERSK	2	MOL	3
Other	4				

4. **Which Department are you?**

Planning	1	Operations	2	Technical	3
Logistics	4	Containers	5	Trans-shipments	6
Customer Service	7	**Other:** (please specify)	8		

5. **What is your highest qualification**

Matric	1	Diploma	2	Degree	3	Post-graduate Degree	4

6. **What is your Position in the organisation?**

CEO	1
Manager	2

	Other (Please specify):	3

7. **How long have you been working for your company?**

Less than a year	2– 5 years	6 – 10 year	11 – 15 years	16 + years

SECTION B: The following questions concern your perceptions about service quality in Ngqura Container Terminal.

Indicate the extent to which you agree with the following statements by making an 'X' in the appropriate box.

		Strongly Agree	Agree	Uncertain	Disagree	Strongly disagree
		5	**4**	**3**	**2**	**1**
1	The NCT terminal has modern looking equipment	**5**	**4**	**3**	**2**	**1**
2	The physical facilities at the company are visually appealing	**5**	**4**	**3**	**2**	**1**
3	The company has modern operating systems	**5**	**4**	**3**	**2**	**1**
4	The company has visually appealing materials associated with the service	**5**	**4**	**3**	**2**	**1**
5	The NCT employees shows sincere interest in solving customer' problem	**5**	**4**	**3**	**2**	**1**
6	The employees perform their services right the first time	**5**	**4**	**3**	**2**	**1**
7	Service delivery is always timely	**5**	**4**	**3**	**2**	**1**
8	The employees give accurate and timely information to the customers	**5**	**4**	**3**	**2**	**1**
9	Customers are always informed when services will be performed	**5**	**4**	**3**	**2**	**1**
10	The company offers prompt services to customers	**5**	**4**	**3**	**2**	**1**

11	Employees willing to go an extra mile to help customers	5	4	3	2	1
12	Employees are never too busy to respond to customers' request	5	4	3	2	1
13	Customers are always given the opportunity to give feedback	5	4	3	2	1

	The following questions concern your perceptions about service quality in Ngqura Container Terminal.	Strongly Agree	Agree	Uncertain	Disagree	Strongly disagree
		5	4	3	2	1
14	The company's operating hours are suitable for its customers	5	4	3	2	1
15	The company shows genuine concern about customer needs and problems	5	4	3	2	1
16	The company prioritizes the interest and concerns of its customers	5	4	3	2	1
17	The employees have customers best interests at heart	5	4	3	2	1
18	The employees understands customers' needs	5	4	3	2	1
19	The employees gives individual attention to customers	5	4	3	2	1
20	The employees are able to instil confidence in customers	5	4	3	2	1
21	The customers feel safe in their transactions with the company	5	4	3	2	1
22	The employees are considerate at all times to customers	5	4	3	2	1
23	The employees have the knowledge and expertise to answer customers' questions	5	4	3	2	1

SECTION C: Could you prioritize the five features below according to how important each feature is to you. Rank from 1-5 where 1 is the most important feature.

	SERVICE QUALITY FEATURE	RANK
1	**Tangibles:** The physical appearance of facilities and equipment.	
2	**Reliability:** The ability to provide what is promised, dependably and accurately.	
3	**Responsiveness:** The willingness to help customers promptly.	
4	**Empathy:** The degree of caring and individual attention you show customers.	
5	**Assurance:** The knowledge displayed to customers, and the ability to convey trust, competence, and confidence.	

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

Thank you for your assistance, it is appreciated.

Mkhululi Terrence Mtshiselwa

Appendix 3 Interview questions

Nelson Mandela Metropolitan University

Business School
Leaders for tomorrow

INTERVIEW QUESTIONS

NGQURA CONTAINER TERMINAL

1.   Describe the nature of service delivered by your department?

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

2.   How would you rate the quality of service offered by your department (excellent, good, average, very poor, poor?

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

3.   In your opinion do you feel your department meets the expectations of customers in terms of service delivery?

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

4.   If no, why?

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

5.   How would you describe the expectations of your customers in terms of service delivery?

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

6.   What structures exist in your department to enhance service delivery?

....

....

....

7.   How effective are these structures?

....

....

....

8.   What challenges does your department face in meeting customer expectations?

....

....

....

9.   How do you overcome these challenges?

....

....

....

10.   How do you know whether your customers are satisfied or not with your service?

....

....

....

11.   Overall do you feel the company meets the expectations of its customers?

....

....

....

Thank you for taking the time in answering the interview!

Appendix 4 Ethics clearance (Form E)

Nelson Mandela Metropolitan University
for tomorrow

FORM E

ETHICS CLEARANCE FOR TREATISES/DISSERTATIONS/THESES

FACULTY: Business and Economic Sciences

SCHOOL/DEPARTMENT: Business School

I, Dr Vusi Msuthwana the supervisor for **Mkhululi Terrence Mtshiselwa** s20236445 a candidate for the degree of MASTERS IN BUSINESS ADMINISTRATION with a treatise entitled **Optimal Operation Strategy For Ngqura Container Terminal**:

Considered the following ethics criteria *(please tick the appropriate block)*:

		YES	NO
1.	Is there any risk of harm, embarrassment of offence, however slight or temporary, to the participant, third parties or to the communities at large?		×
2.	Is the study based on a research population defined as 'vulnerable' in terms of age, physical characteristics and/or disease status?		×
2.1	Are subjects/participants/respondents of your study:		
	(a) Children under the age of 18?		×
	(b) NMMU staff?		×
	(c) NMMU students?		×
	(d) The elderly/persons over the age of 60?		×
	(e) A sample from an institution (e.g. hospital/school)?		×
	(f) Handicapped (e.g. mentally or physically)?		×
3.	Does the data that will be collected require consent of an institutional authority for this study? (An institutional authority refers to an organisation that is established by government to protect vulnerable people)		×
3.1	Are you intending to access participant data from an existing, stored repository (e.g. school, institutional or university records)?		×
4.	Will the participant's privacy, anonymity or confidentiality be compromised?		×
4.1	Are you administering a questionnaire/survey that:		
	(a) Collects sensitive/identifiable data from participants?		×

	YES	NO
(b) Does not guarantee the anonymity of the participant?		×
(c) Does not guarantee the confidentiality of the participant and the data?		×
(d) Will offer an incentive to respondents to participate, i.e. a lucky draw or any other prize?		×
(e) Will create doubt whether sample control measures are in place?		×
(f) Will be distributed electronically via email (and requesting an email response)? Note: • If your questionnaire DOES NOT request respondents' identification, is distributed electronically and you request respondents to return it *manually* (print out and deliver/mail); AND respondent anonymity can be guaranteed, your answer will be NO. • If your questionnaire DOES NOT request respondents' identification, is *distributed* via an email link and works through a web response system (e.g. the university survey system); AND respondent anonymity can be guaranteed, your answer will be NO.		×

Please note that if ANY of the questions above have been answered in the affirmative (YES) the student will need to complete the full ethics clearance form (REC-H application) and submit it with the relevant documentation to the Faculty RECH (Ethics) representative.

and hereby certify that the student has given his/her research ethical consideration and full ethics approval is not required.

_____   28/05/2014
SUPERVISOR(S)   DATE

_____   _____
HEAD OF DEPARTMENT   DATE

STUDENT   DATE: 27 May 2014

Please ensure that the research methodology section from the proposal is attached to this form.