Service Delivery as a Competitive Differentiator for Spoornet to achieve Customer Satisfaction.

by

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SPOORNET

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To Whom It May Concern,

Re: Confidentiality Clause

Due to the strategic importance of this project and a request of confidentiality by the company researched, it would be appreciated if this research is not circulated.

Kind Regards

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DECLARATION

This dissertation represents the original work of Amsha Govender. The use of the work of others has been duly acknowledged in the text.

This research has not has not been previously accepted by any other University and is not being currently submitted for any degree purposes at any other University.

Signed: ---------- Date: 23/12/04.

Amsha Govender

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ABSTRACT

The rail industry in South Africa is represented by Spoornet, the only rail operator in this country. The rail industry in South Africa has undergone profound changes since the deregulation of the transport industry. Driving the changes that the rail industry now finds itself were the adoption of new technology, government legislation, difficult trading conditions, the strengthening of the rand and growing transport options available to rail customers. The rail transport industry must not only survive but also prosper in a radically different enviroment, to that in which it operated as a monopoly prior to 1990.

As South African companies are becoming more export driven by catering to international markets, these companies are governed by stringent international practices in terms of the manufacturing of goods and services. As such it is imperative for South Africa's transport companies to render a seamless transport and logistics service in order to facilitate the expansion of these local companies into new global markets.

This research aims to identify the factors that impact the level of service in the rail transport industry and to determine the actions necessary to improve the current levels of service.

This research was undertaken amongst Spoornet's Import / Export customers nationally. It investigates service quality in the rail transport industry by utilising the Servqual methodology. The Servqual measuring instrument has been found to be a reliable measure of service quality. A sample of 50 customers was selected and previous research on the topic reviewed.

The statistical analysis revealed that respondents indicated a high expectation of service and a low perception of service received. As a result, urgent attention must be focused on Spoornet's service delivery.

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CHAPTER ONE

INTRODUCTION

1.1 INTRODUCTION

South Africa's renewed entry into world markets since 1994 has resulted in South African companies experiencing a growth in business both locally and internationally as well as investment by international companies in South Africa. This expansion into international markets and the increased competition generated by international companies locally requires importers and exporters to conform to global best practice in terms of supply chain management. The competitiveness of South African logistics in a global context is therefore vital for retention of global market share. A key component of the supply chain is transport. Transporters are a crucial link in enabling South African manufacturers supply products on world markets according to internationally accepted best practices.

The import / export market plays a vital role in South Africa's economy and Spoornet as a rail operator plays an equally fundamental role. As a parastatal, Spoornet also carries a responsibility to meet the ideals of the South African economy and ultimately facilitate economic growth. To achieve this growth South African importers and exporters must have the appropriate support and backup of the transport / logistics industry. The facilitation of a seamless service is a prerequisite.

The current growth in international volumes offers rail the ideal opportunity to capture a large portion of this market as imported and exported cargo is increasingly containerised. Containers account for 63% of world general cargo trade. Economies of scale enable Spoornet as a rail transporter to efficiently transport large volumes of containers as opposed to road transporters. In view of this, the question that arises is "to what extent is Spoornet effectively servicing the import / export market?"

1.2 BACKGROUND OF THE STUDY

When considering the extent to which Spoornet is effectively servicing the import/export markets in South Africa it must be done with the following in mind. The import/export market plays a fundamental role in South Africa's economy and Spoornet as a rail operator does too. International trade is of the utmost importance to any country and occurs when it becomes cheaper for one country to buy a commodity from another rather than to produce the same item locally. Cognisance

must however be taken of the fact that this saving may be more than offset by additional costs like transportation, insurance, handling and the like. Everything that would thus reduce these costs should improve the opportunity for trade that is to the obvious benefit of the country. In terms of the import/export market, the transport costs are usually made up of road; sea and rail transportation and often all these modes are present in the conveyance of freight. It must also be realised that because labour costs is steadily rising it is obvious that such labour intensive operations (moving from one mode to another) can become quite expensive and often presents severe problems as this leads to an increase in the cost of transportation. A solution to this labour intense operation presented itself in the form of containerisation. The import/export markets in the Spoornet context refers to import / export containerised traffic, and this industry is generally referred to as the Intermodal Sector. Containerisation and intermodalism will thus for the purposes of this proposal be used interchangeably.

Containerisation started in 1956 when the company Sea Land initiated a service between New York and Puerto Rico. Its founder Malcolm McLean believed that and I quote "...the total transportation costs could only be reduced if the total distribution process was streamlined by eliminating excess handling from one mode of transport to another" (Container Handling Procedures at Matsapha ICD: 3: 1993). In 1967 the International Standards Organisation (ISO) was signed in Moscow, which lead to container sizes, and its characteristics being standardised, which resulted in cargo being containerised worldwide.

Containerisation was introduced in South Africa in 1977 and heralded one of the biggest Transnet projects ever and involved R2000m capital investment. Container terminals were built at the three principal ports, Durban, Port Elizabeth and Cape Town as well as rail terminals in Bayhead (Durban) and an inland container terminal at City Deep (Johannesburg) which all became operational in July 1977. Coastal feeder terminals were also built at East London and Walvis Bay. Other inland container terminals have also since been established at Pretcon (Pretoria), Mascon (Maseru), Vaalcon (Sasolburg); Gabcon (Gaberone) and a rail terminal at Belcon (Cape Town). A container terminal was also established in the Nigel area (Eastcon). The Matsapha inland container depot in Swaziland also represents an example of collaboration and co-operation between Spoornet, Swaziland Railway and Saftainer and may become a model for similar development in other countries of the region.

Although all these terminals were built from scratch and having learnt from experience, South Africa's ports have overtaken the world's previous leaders in some aspects of performance. In

1980 a commitment was made to containerise the sea route between South Africa and the Far East for 1981/1982 and involved R170m worth of orders for 5 special ships. During the 1980s when the rest of the world was sinking into an economic depression and cutting back on capital intensive projects, Transnet went ahead with containerisation according to plan, and was not afraid to make even further substantial commitments (Containerisation Is Established in Southern Africa: 5: 1980).

The 1990s were characterised by dramatic waves of fundamental changes in the political economics of the world. These changes were amongst the creation of a single European Market and tentative moves towards democratisation in the East European societies. In Africa we are also witnessing the processes of economic and political liberalisation. Most medium to large sized organisation around the world and especially in Africa are going through a period of dramatic change impacting on all aspects of its existence. Tomorrow will bring new ways of competing, and the organisations that are going to be successful are those that will grasp them first and overcome all the "normal" organisational barriers to doing things differently. For Spoornet to be successful, it needs to take note of the new playing field and the triggers necessary for change.

It is important to realise that South Africa is an emerging market that has the potential to attract substantial domestic, regional and foreign investment. This is however dependent on the steady investment flows and sustained growth and development, which in turn is dependent on the ability of industries to compete not only domestically and regionally but also internationally. It is within this context that Intermodalism will be discussed. Furthermore, the information economy has become a reality and to only compare more favourable in this ever changing environment means that Spoornet has a long way to go and systems integration now needs more attention than ever before.

1.3 MOTIVATION FOR THE RESEARCH

In today's competitive environment, no business can survive without satisfied customers. The awareness of the importance of service quality and customer satisfaction to service companies like Spoornet, has started to increase. To deliver higher value-added services and successfully compete in the transport industry, Spoornet must increase its level of service capabilities and service quality.

Locally and internationally the following market forces have been influencing the import/ export container market: customs regulations, terminal management, mergers and alliances, abnormal

container loads, safety regulations and conditions of acceptance and transportation of containers.

The following factors listed are currently influencing Spoornet's position in the import/ export container market and has been one of the major reasons for focusing on this division of Spoornet.

- Aging and declining rolling stock / equipment
- Limited resources
- Poor interface (operations) with logistics partners such as Portnet
- Obligation to transport empty containers
- Insufficient effort to change negative customer perceptions
- General lack of operational efficiency
- Increased customer complaints
- Poor customer satisfaction

As a result of these issues, increased customer dissatisfaction and deteriorating customer relationships are evident.

The research aims at assisting Spoornet understand the impact of poor service delivery on customer satisfaction and subsequently develop strategies to improve service quality. Improved service delivery will result in greater customer satisfaction, enhanced customer relationships and ultimately customer retention.

1.4 IMPORTANCE OF THE STUDY

Retaining a loyal customer base is far more profitable for a company than attracting new customers. Therefore service quality and customer satisfaction are the most heavily emphasized concepts in many management arenas. Improved service quality will result in greater customer satisfaction and customer loyalty and reduce the rapid loss of customers to road hauliers in the import / export market.

The import/export market plays a vital role in any country's economy. Spoornet as the only rail operator in South Africa has a major role and responsibility to perform in this arena. It was also stated that international trade is of the utmost importance and benefit to any country and by reducing costs involved herewith should improve the opportunity for trade. The importance/rationale of the problem is also to show that Spoornet (Transnet) although being a parastatal is also a leader in its own right. It was prepared to under difficult conditions commit

itself to the intermodal industry and further collaborate and co-operate with other role players in the industry, even regionally.

The 1990's, however ushered in fundamental changes of how companies operated, did business and competed. It is vital for Spoornet to realise these changes and adapt its capabilities accordingly in order to be successful. Important aspects to address are:

- Resource related issues and investment in the various areas, including information systems and technology
- Efficiency levels
- Marketing strategies
- Pricing and profitability strategies
- Organisational intelligence and decision making
- Value adding to customers
- Customer relationship management.

In an attempt to addressing the research needs, this study will focus on the challenges faced by Spoornet in surviving and managing in this dynamic environment. It is thus important for Spoornet to develop capabilities for greater productivity and enable and adopt new technology. In order to achieve success Spoornet must develop conditions that will support its activities in respect of infrastructure.

It is also the intent of this study to determine measurable categories of service and identify areas where improvement in service quality and customer satisfaction could be achieved in the import / export container market. It is envisaged that this would reverse current negative perceptions of customers regarding Spoornet's service delivery and sustainably grow Spoornet's import/ export activity participation.

1.5 THE PROBLEM STATEMENT

Is Spoornet's service delivery responsible for current levels of customer satisfaction in the import / export container market and how does this affect customer behaviour?

Increased customer complaints, a loss of rail business to road hauliers and negative media attention necessitate the need to understand the underlying problems that have resulted in this situation.

Despite the global growth of containerization, Spoornet continues to loose market share.

Spoornet plays a vital role in the South African economy by contributing to international trade. The extent to which Spoornet is effectively servicing the import/export market has crucial implications for the growth of both the import and export sectors of the economy.

By determining customer expectations of service from a transporter, it would serve as a guide to ensure that the service provided is of high quality and as a result attract and retain customers and prevent them from turning to road hauliers.

1.6 OBJECTIVES OF THE STUDY

- To determine the factors that contributes to current levels of customer satisfaction in the Import/Export Container Division of Spoornet.
- To evaluate the effectiveness of Spoornet's service delivery.
- To develop recommendations for improvements in service quality and customer satisfaction.

1.7 RESEARCH METHODOLOGY

According to Mouton (1996) the so-called conflict between quantitative and qualitative paradigms is not necessarily a 'real' conflict. At the methodical and technical level, most researchers accept that quantitative and qualitative tools are compatible and that the choice for their inclusion in a particular study is determined by the specific research problem. Mouton (1996) offers a defense view as well as a critic view and suggests that in the final analysis, one has to examine each case before drawing any conclusions about the respective roles of epistemological and ontological assumptions and the methodical and technical level. The research methodology adopted for this study is a qualitative approach together with a limited quantitative approach. Both approaches are addressed in greater detail below.

1.7.1 Qualitative Approach

This research was essentially conducted within a qualitative framework. A pivotal distinguishing characteristic of qualitative research is that the researcher also tries to understand people who will impact on the study, i.e. in terms of their respective definitions of the world. By using this approach an attempt will be made to understand how different role players within an organisation will determine the extent to which Spoornet effectively services their needs.

It is important to note that with qualitative research, design elements are usually worked out during the course of the study. A qualitative approach has the potential to supplement and re-orient our current understanding of Spoornet's effectiveness.

The qualitative approach employed is an exploratory investigation into the effects of improved service delivery on customer satisfaction levels. Exploratory techniques undertaken were secondary data analysis, expert interviewing to gain information from influential and well-informed individuals in the organization and experience surveys. Changes in service quality were evaluated in terms of the Servqual Model. The theory on service quality was analysed to determine the gap between where Spoornet is currently in terms of service delivery and customer satisfaction and where it should be. Identification of the gap will then result in recommendations to reduce or close this gap. It is the intention that this gap reduction will result in service excellence.

The qualitative research was conducted not only to uncover the critical service dimensions, but also to help design very specific and actionable scales applicable to the Import /Export Container Division and set priorities for improvement.

1.7.1.1 Data Collection

The objective of data collection is to produce reliable data, i.e. data must be consistent over time and place. According to Mouton (1996:146) there are a number of potential sources of error that could result in the production of unreliable data. These sources of error or observation effects have been classified into three categories, namely effects that are due to the researcher (researcher effects), those that result from the reactivity of the participant (participant effects) and those that follow from certain factors in the environment (context effects). With this as background the use of the following data resources will be made:

Primary Data: Previous studies on customer satisfaction at Spoornet and responses from Spoornet employees involved in service delivery

Secondary Data: This includes information obtained from books, journals and periodicals on customer satisfaction as well as information from Spoornet's data archives. In addition information from media reports and the internet was utilized in the study.

1.7.1.2 Expert Interviews

Interviews were undertaken with the different role players, i.e. senior management within the various Intermodal Marketing Companies at different designations as well as with Spoornet's senior management working in the Intermodal sector.

Interviews with the Operations Manager responsible for the movement of import and export containers through the Port of Durban was undertaken. Information regarding customer service policies and procedures was gathered. Discussions were held with personnel involved in the execution of service in order to assess their opinions of what skills are required for their jobs and whether or not they are sufficiently empowered to make decisions. It will also be ascertained if these employees feel a sense of ownership of the service delivery process.

1.7.1.3 Literature Review

A number of electronic journals and books were consulted in an effort to gain a review of the published literature in the areas of service quality, customer satisfaction and customer behaviour. Websites were also visited in order to gain input on customer satisfaction and service quality measurements. The service quality measurement identified for this study is the Servqual Model. Spoornet policy documents regarding customer service were consulted as well previous research on customer satisfaction conducted in different Business Units of Spoornet. Customer satisfaction surveys in the import / export market had not been undertaken by Spoornet.

1.7.2 Quantitative Approach

In terms of the limited quantitative approach, a non-experimental, descriptive and inferential method was employed for the study. A survey method was undertaken and data collected using written questionnaires that were administered to a limited number of respondents. The questionnaire was designed to gauge respondent's perceptions and expectations towards service quality at Spoornet. The survey method was chosen as it enables the researcher to gather data fast and efficiently.

1.7.2.1 Questionnaire Design

The survey method employed includes a structured Questionnaire. Questionnaires are generally used in business research and can be regarded as the simplest and most widely used technique for obtaining information from subjects (McMillan and Schmacher, 1993: 238). The questionnaire is a

self-reported instrument, which provides the researcher with personal information from the respondent (Wolf, 1998:478).

The questionnaire was developed after through comparison of questionnaires used in similar studies. The Servqual Model was used as a basis for questionnaire design. The questionnaire is designed to capture respondent's views on expectations of service and perceptions of the service provided by Spoornet. The questionnaire identifies the tangible and intangible aspects of the service that are important to customers. It identifies the importance of providing a reliable service and areas for improvement that will have the most impact on the quality of service provision. It also provides an indication of the degree of satisfaction on how Spoornet performs or renders services to its customers. The study measures services rendered by both the commercial and operations sides of the business.

Fifty questionnaires were administered to a limited number of personnel within the top five Intermodal Marketing Companies of Spoornet. Respondents were selected from various levels within the organization, enabling a cross- section of personnel to be interviewed. The questionnaire comprised 40 questions and the content was adapted from Zeithaml, Parasuraman and Berry (1990) Service Quality Model (Appendix 1).

The measurement instrument was pre-coded to enable the input of data directly from the questionnaire. The questionnaire focused on statements that required the respondents to evaluate their responses using the Likert scale (5 point). Respondents were requested to score each question on a scale of 1 to 5 where 1 represents low opinions of service and 5 high opinions of service. These multi-item scales are designed to capture the main variables of service quality, customer satisfaction and customer behaviour. Each item was scored on a 5-point scale (1- strongly disagree to 5 – strongly agree).

The questionnaire consists of three sections:

- SECTION A – consisted of demographic and behavioural information pertaining to respondents of the Intermodal Marketing Companies' use of Spoornet. The information gathered in this section was employed for statistical purposes to determine characteristics and dispositions of customers.
- SECTION B- consisted of 20 statements pertaining to customer expectations of a transport company.

- SECTION C- consisted of 20 statements pertaining to customer perceptions of Spoornet.

Each of Servqual's five dimensions was captured through four questions per dimension. The questionnaire comprises 20 questions instead of the original 22 developed by Servqual. The 5 dimensions were grouped as follows:

Tangibles	Questions 1 to 4
Reliability	Questions 5 to 8
Responsiveness	Questions 9 to 12
Assurance	Questions 13 to 16
Empathy	Questions 17 to 20

The questionnaire was administered individually to each participant. Time was taken to complete the questionnaire, which was then immediately collected. This ensured that questionnaires were appropriately answered as well as providing the assurance of their completion and return. The questionnaire was designed such that the respondent could complete it within ten minutes. The questionnaire developed assists in the assessment of various components relating to Spoornet's effectiveness.

1.7.2.2 Sample

The sample in this study consists of participants in five different organizations, at various levels in the respective organizations. The five organisations comprise the top five import/ export customers and are referred to as Intermodal Marketing Companies. These companies operate nationally with branches in all the major ports of South Africa and are also referred to as Third Party Logistics Providers. The population size of these Intermodal Marketing companies is approximately 400 personnel. A sample size of seventy-five, which represents 18.5% of the total population, was selected. A total of fifteen respondents from each company were randomly selected from all levels in the organization.

Convenience sampling was used for sample selection. Respondents were selected from the staff of the five Intermodal companies who had prior usage of the railway services. Seventy-five sets of questionnaires were handed to representatives (senior managers) of the five companies to be distributed to their staff who had used railway services before. Each company was allocated about fifteen questionnaires to be distributed, depending on its size. A total of fifty completed

questionnaires were subsequently collected from the Intermodal representatives. The majority of the sample was males with more than five years of experience as a customer of Spoornet. The sample represented varied levels of involvement with Spoornet as well as varied frequency of contact.

1.7.2.3 Statistical Analysis of Data

Statistical analysis of the raw data obtained from the completed questionnaires was undertaken. This is necessary to determine if the research questions of this study will be supported with empirical evidence. Descriptive statistics together with inferential statistics was employed to analyse the raw data. The statistical methods used to interpret the data were:

- Descriptive Statistics – these include frequency and percentages and measures of central tendency (mean and standard deviation).
- Inferential Statistics – include correlations and t-tests.
- Factor Analysis to test for the reliability and validity of the questionnaire using the Cronbach Coefficient Alpha.

1.7.2.4 Research Reliability and Validity

As research is always dependent upon measurement it is essential that every measuring instrument is reliable and valid. Validity refers to the extent to which an instrument measurement measures what it is intended to measure. Reliability is the extent to which a measuring device is consistent in measuring whatever it measures (Mulder, 1989). Relibity refers to the repeatability of a test's score on the same test on different occasions, or in different tests with equivalent items, or under different examination conditions. It also refers to the degree of correspondence between two sets of scores so that certain deductions may be derived from the results (Mulder, 1989).

Carman (1990) assessed the Servqual model in terms of its validity by utilizing factor analysis and the Cronbach alpha reliability statistic. Carman's conclusions were as follows:

- In terms of construct validity, the Servqual model did a "fair job".
- In terms of discriminant validity, he found that most of the dimensions recommended by Parasuraman et al (1985) were found.

Effort was made to ensure that the questionnaire used in this research was valid and met the criteria detailed. The ultimate goal of developing a reliable measuring instrument is to minimize the influence of chance or unrelated variables. The Cronbach Coefficient Alpha technique was used in this study to measure both the reliability and validity of the measuring instrument.

1.8 LIMITATIONS

- As Spoornet is the only rail utility in South Africa research on the rail industry in South Africa is non-existent. It is therefore not possible to benchmark Spoornet against other rail companies in South Africa. As a result, international rail companies will be used to benchmark Spoornet's service. This is, however, not an ideal benchmark standard as a result of considerable differences between first world and developing countries.
- Statistics with regards to customer perceptions of Spoornet as a service provider is currently unavailable.
- Information gained from the company's website would have a bias in favour of the company and its reliability is therefore questionable.
- Current negative perceptions of service by customers could bias responses.

1.9 STRUCTURE OF THE STUDY

Chapter Two – Literature Review

Chapter two looks at relevant literature and previous studies on service quality and customer satisfaction gained from secondary sources. Theories and models on service quality will be discussed, with focus on the Servqual model.

Chapter Three - Case Study

Chapter three provides a Case Study of Spoornet, and in particular the Import / Export Container Division. The Servqual model will be used as framework for this case study.

Chapter Four – Analysis and Findings

Chapter four presents an evaluation of the case study against the model adopted for this study. A gap analysis is undertaken. The evaluation reveals areas where the Container Division is performing well and areas where improvements are required. In terms of the limited quantitative

approach chapter four presents the results and analysis of the administered questionnaire.

Chapter Five – Conclusions and Recommendations

Chapter five discusses the findings of this study as well as the conclusions and recommendations. Recommendations will result in the narrowing or closing of the gap identified in chapter four.

1.10 SUMMARY

The proposed study will focus on the extent to which Spoornet is effectively contributing to the import/ export market in terms of its services it renders to the major Intermodal Marketing Companies, i.e. companies dealing with containerised traffic for the import/export market.

The latter part of the 20th century have seen dramatic changes in the way organisations do business, while advances in technology and increasing regulatory freedom have changed the rules of competition. To cope with and manage these transformations organisations are moving towards new business paradigms that allow their companies to work more closely with their traditional and new partners to adapt to the rapidly changing marketplace. As industries understand its markets and strategically respond to them, they need to continually adapt their capabilities.

In view of the above, the different capabilities required of Spoornet to meet these challenges require continuous adaptation. In determining the extent to which Spoornet is in a position to adapt its capabilities and its effectiveness in servicing the import/export market will thus be done in the context of the following areas:

- Spoornet's role in the South African economy and its relationship with other modes of transportation.
- Containerisation and Intermodalism
- Historical perspective of Spoornet (Transnet) with reference to:
- The advent and rationale of Intermodalism in South Africa
- Role and functions of the Intermodal Marketing Companies (IMCs) and Spoornet's relationships with them
- Challenges and opportunities for Spoornet in Intermodalism.

CHAPTER TWO

SERVICE QUALITY

2.1 INTRODUCTION

Service quality has become a strategic issue to many managers and has been the subject of an increasing amount of academic literature (Fisk, Brown and Bitner, 1993; Berry & Parasuraman, 1993; Buttle 1996). The need to understand and measure service quality is related to the growing recognition that it is more profitable to retain satisfied customers, than continually seeking to recruit new customers to replace lapsed ones.

Intense global competition and increasing customer expectations have transformed the nature of business practice such that companies place greater emphasis on service quality. Organisations have adopted a wide range of approaches to remain competitive. Manufacturing firms have implemented quality programmes such as total quality management to enhance productivity and competitiveness. Although these efforts may have different focuses and priorities to service industries, a common goal is to improve customer satisfaction. In contrast to the manufacturing sector, the service industry has long been criticized for lagging behind in both quality concepts and quality practices (Shetty and Ross, 1985). The service industry should be concerned with other factors in addition to sales promotion and cost reduction (Sheridan, 1993 in Chambers, 2002:72).

The difference between service quality in manufacturing industries and service quality in service related industries is that service quality is more difficult to quantify in service industries This is often the challenge for service providers. It is easier to measure service quality in manufacturing industries as the product is tangible.

The highly competitive nature of service industries in recent years has resulted in the need to measure service quality. As a result, numerous research projects have been conducted in the area of service quality, focusing on definitions of service quality as well as approaches to measure service quality. Understanding which service dimensions are important to customers are essential in order for service companies to render a quality service. Spoornet, as a service provider has realised that service quality is now essential to prevent the rapid decline of traffic currently conveyed by rail.

2.2 WHAT IS A SERVICE?

Services are generally defined as commodities that cannot be stored or disappear in use, or as activities that require personal contact. Kotler (1991:455) defines a 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. Its production may or may not be tied to a physical product."

The distinct characteristics of services are intangibility, perishability, heterogeneity of the product, and simultaneity of production and consumption (Sasser, Earl, Olsen and Wyckoff, 1978). Two economic units are required for a service to be produced – the consumer and the producer (Hill, 1987). While the consumer cannot retain the actual service after it is produced, the effect of the service can be retained. Managing a service operation requires the manager to understand the service concept, service delivery system, and service levels. As the consumer has a key role in the definition and evaluation of all three elements, it is imperative that service managers have a clear understanding of consumer expectations and perceptions (Sasser et al, 1978).

Unlike products services are intangible. With a service the focus is on the process of delivering the service. This involves two basic components: (1) Technical quality – the means of service delivery and (2) Functional quality – the how of service delivery.

1. Technical Quality: This includes the systems and infrastructure designed and created to organize delivery of the service. For example: computerized systems, machines technical solutions, and know-how.

2. Functional Quality: The customer normally goes through many interactions with employees in the creation and delivery of a service. Technical quality must be in place to facilitate such coordination and allow the employees to work together. Functional quality includes employee: attitudes, behavior, service mindedness, appearance, accessibility internal relations and customer contacts.

2.2.1 Service Characteristics

Service characteristics differ from products because of their intangibility, heterogeneity, inseparability and perishability characteristics. There differences between goods and services results in different management challenges for service businesses.

- **Intangibility**

This is regarded to be the fundamental difference between goods and services. Since services are performances or actions rather than objects, they cannot be seen, tasted or touched in the same manner as one can sense tangible goods (Zeithaml and Bitner, 2000). The intangibility presents some marketing challenges. Some of these challenges are that services cannot be inventoried and fluctuations in demand are difficult to manage. Services cannot be legally patented and competitors can easily copy new service concepts (Zeithaml and Bitner, 2000). Pricing is also a challenge as the actual costs of a unit of service are difficult to determine and price/quality relationship is complex.

As a result of the intangibility of services the following aspects are essential considerations:

Product life cycles can be short - Unlike manufactured items, which tend to a have relatively long product life cycle, service delivery systems often change. In many cases the changes are driven by technological development.

It is difficult to build brand loyalty - This is because in service businesses, copying is very easy, hence the need to be innovative constantly and come out with new service features. This is why some services can have a very short life cycle.

Company reputation is crucial - Company reputation is crucial in service businesses because consumers are unable to measure with any accuracy the quality of service they are getting.

- **Heterogeneity**

According to Zeithaml, Parasuraman, Berry (1985:34) this characteristic results in the potential for high variability in the performance of services as it depends on who provides them and when and where they are provided. Service quality may be subject to considerable variability, which makes standardization difficult. Unlike in a physical production process where quality control can be put into place and measured, in service marketing, the services are mainly conducted/ offered by people who have different attitudes and personalities. Customers are therefore likely to receive different levels of service from the same call center. The challenge therefore is to ensure consistent service quality. "The potential for variability is service quality emphasizes the need for vigorous selection, training and rewarding of staff in service organizations. Training should emphasize the standards expected of personnel when dealing with customers" (Jobber, 1998).

- **Inseparability**

Unlike physical goods, services have simultaneous production and consumption. The provider of the service is an integral part of the satisfaction gained by the customer. Service is produced and consumed at the same time. The way the providers of service conduct themselves has a crucial bearing on repeat business over and above technical efficiency. This provider – consumer interaction is a special feature of services marketing where both parties affect the outcome.

As a result of the inseparability / simultaneity of services staff must have both service delivery and marketing skills - The staff must not only be skilful at delivering the service; they must also have marketing skills. Marketing a service concept and the service delivery system are very closely linked because both occur at the same time. While you are delivering to the customer, you are actually marketing for future business.

Since customers must come to the place where the service is provided, each service facility has a limited geographic area it can serve - In a service business, unless you are involved in electronic service, which is becoming more pervasive in the economy, it is very difficult to deliver over a distance. The capacity offering must fit the market, otherwise the service will be unprofitable - Another key thing about simultaneous production and consumption is that balancing capacity with demand is absolutely crucial to profitability.

- **Perishability**

This refers to the fact that services cannot be stored. A customer service experience cannot be reclaimed and used or resold at a later time. This is unlike goods that can be stored as inventory or resold on another day. Demand forecasting and creative planning for capacity utilization are therefore important and challenging decision areas. Since services cannot be returned or resold, there is no need for strong recovery strategies when things go wrong (Zeithaml and Bitner, 2000). As there is no buffer from fluctuations in demand due to the characteristics of services, the challenge is to fit capacity to demand as best as possible. The business will only be successful once this is achieved.

2.3 THE SERVICE DELIVERY SYSTEM

According to Lovelock (1996) Service delivery is essentially concerned with where, when and how the service is delivered to the customer. According to figure 1, this system not only encompasses the visible elements of the service operating system – physical support and personnel, but also

entails exposure to other customers. A service business is seen as a system comprising service operations, where inputs are processed and the elements of the service product are created and service delivery where final "assembly" of these elements occurs and the product is delivered to the customer.

According to Lovelock (1996), parts of this system are visible to customers; other parts are hidden and are sometimes referred to as the technical core, which is sometimes unknown to the customer. The visible components of the service operations system relate to the service personnel as well as the physical facilities and equipment and are often referred to as the "front stage" or "front office". The "back stage" or "back office" refers to that part of the operation that is invisible to the customer. What goes on backstage is of little interest to the customer as they actually evaluate the production on those elements that they actually experience in the course of service delivery as well as the perceived service outcome.

For reasons of both operational efficiency and customer convenience people seeking services that do not require their physical presence at the service organization, are finding that the amount of direct contact with the service organization is being reduced. This means that the visible component of the service operations system is shrinking as the service delivery system changes and the service moves from higher to lower levels of contact.

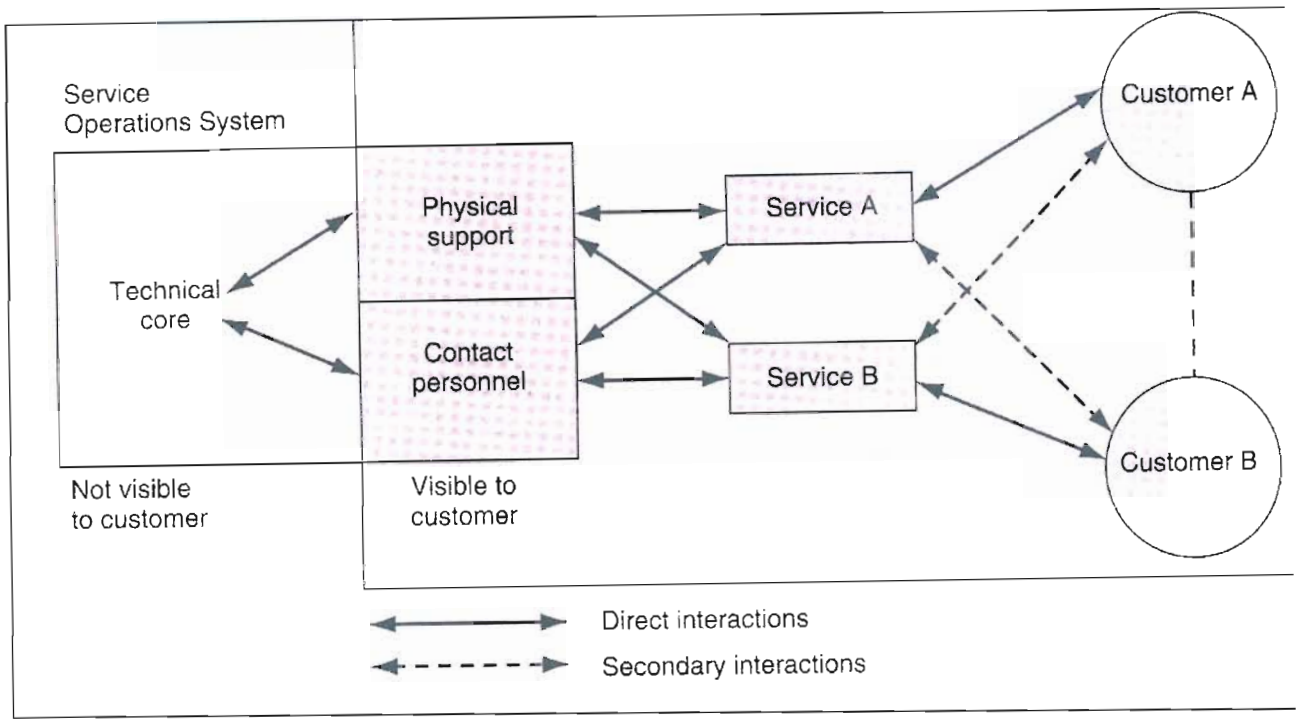
Electronic delivery often offers customers greater convenience than face-to-face contact. As customers may find the shift from personal service to self-service uncomfortable, implementing this change in the delivery system may require efforts to educate customers.

The proportion of the overall service operation that is visible to customers varies according to the nature of the service. High-contact services require customers to enter the "factory" although there may still be some activities, which they do not see. Medium-contact services, require a less substantial involvement of the customer in service delivery. As a result the visible component of the service operations system is proportionally smaller than for people-processing services. Low-contact services minimize customer contact with the service provider resulting in the bulk of the service operations system being located backstage. Front stage elements are normally limited to mail and telecommunications contact.

In all services, understanding and managing the service encounters that take place between customers and service personnel are essential to creating satisfied customers who will establish

long term relationships with the service provider (figure 2.1).

Figure 2.1: The Service Business as a system



Source : Adapted from Eric Langeard et al, *Services Marketing: New Insights from Consumers and Managers* (Cambridge, Mass.: Marketing Science Institute, 1981):52.

2.4 SERVICE QUALITY

The term "quality" is usually related to products because it is easier to define product quality. Hellriegel (2001) defines quality as "how closely and reliably a product satisfies the specifications to which it was built." However, in this research, we are measuring quality of services. "Service quality is a measure of how well the service conforms to consumer expectations. Delivering service quality means conforming to consumer expectations on a consistent basis..."(Lewis and Booms, in Parasuraman, Zeithaml, Berry, 1985).

Garvin, 1983(in Parasuraman, Zeithaml, Berry, 1988:15) defines perceived quality as the "consumer's judgment about an entity's overall excellence or superiority." Parasuraman et al (1988) define perceived quality as "a form of attitude related to satisfaction." This attitude results from comparison of expectations of service performance with perceptions of service performance. According to the Gap Model, perceived quality constitutes the degree and direction of the

discrepancy between service-user perceptions and expectations regarding the service (Parasuraman, et al, 1988).

Parasuramam et al (1985) state that service quality is the gap between consumer's expectations and their perceptions of how the service is performed. A common explanation of the difference between customer satisfaction and service quality is that service quality is a form of attitude, whereas satisfaction is a transaction-specific measure (Bitner, 1990; Bolton and Drew 1991: Parasuraman, Zeithaml, Berry 1998). The distinction between satisfaction and quality lies in satisfaction being seen as a transaction specific evaluation while quality represents a long run overall evaluation or attitude. The similarity, however, is that both satisfaction and quality depend on expectations.

Zeithaml et al (1990) define quality as a meeting or exceeding of customer expectations within an expectation-disconfirmation paradigm. This differentiation is however, inconsistent with Woodruff, Cadotte, and Jenkins's (1983) suggestion that expectation should be based on experience norms i.e. what consumers should expect from a given service provider. This distinction is important to managers as service providers need to know whether their objective need to have consumers who are 'satisfied' with their performance or to deliver the maximum level of perceived service quality.

Lewis and Booms (1983) however, state that service quality is a measure of how well the service level delivered matches customer expectations. Delivering quality service means consistently conforming to customer expectations.
Customers perceive services in terms of the quality of service and how satisfied they are with their past experiences. Satisfaction is influenced by perceptions of service quality, product quality and price as well as situational and personal factors.

2.4.1 Determinants of Service Quality

According to Parasuraman et al (1985) the following ten dimensions determine service quality.

Tangibles:
Tangibles include the physical evidence of service such as appearance of physical facilities, equipment, personnel, printed and visual materials.

Reliability: Reliability relates to the consistency of performance and dependability. It means that the firm honours it promises and performs the service right the first time. Essentially it is the ability to perform promised service dependably and accurately.
Responsiveness: Responsiveness relates to the willingness to help customers to provide prompt service. It focuses on the timeliness of service.
Competence: Competence means the possession of required skill and knowledge to perform the service. It includes knowledge and skill of contact, operational and support personnel as well as the firm's research capability.
Courtesy: Courtesy involves politeness, respect, consideration and friendliness of contact personnel. It includes consideration for consumer's property and neat and clean appearance of public contact personnel.
Credibility: Credibility involves trustworthiness, believability, and honesty of the service provider. It entails having the customer's best interests at heart. Company name, company reputation and personal characteristics of contact personnel contribute to credibility.
Security: Security is freedom from danger, risk, or doubt and involves physical safety, financial security and confidentiality.
Access: Access involves approachability and ease of contact. It means that the service is easily accessible by telephone, limited waiting time to receive service, convenient location of service facility and convenient hours of operation.
Communication: Communication means listening to customers and acknowledging their comments; keeping customers informed in a language they can understand and listening to them. It involves explaining the service, explaining how much the service will cost, explaining the trade-offs between service and cost and assuring the consumer that a problem will be addressed.

2.4.2 Customer Perceptions of Service Quality

Several factors influence the customer's perception of the quality of service offered. These factors are as follows:

- **Service Quality Dimensions**

Zeithaml and Bitner (2000) contend that research suggests that customers do not perceive quality as a uni-dimensional concept i.e. customers' assessments of quality include the perceptions of multiple factors. It has been suggested that eight dimensions of quality be applied to all goods and

services viz. performance, features, reliability, conformance, durability, serviceability, aesthetics and perceived quality. These dimensions represent how customers organize information about service quality within their minds.

- **Reliability**

This is the ability to perform the required service dependably and accurately and this seems to be the most critical of the dimensions. Reliability refers to the ability of the organization to deliver on its promises.

- **Promises**

This refers to the willingness of the service provider to help the customer and to provide prompt and efficient service. Customers do not like to wait to receive assistance for a lengthy period.

- **Assurance**

This refers to the employee's knowledge and courtesy and the ability of the firm and it's employees to inspire trust and confidence. Customers need to have the assurance that they are in good hands and that their interests are going to be served well.

- **Empathy**

This refers to the ability to get into the customer's shoes and see things from their point of view. This relates to the ability of a firm to understand the customer's perspective, and give them a good, personalized service. Good account management can take care of this side of the service game.

- **Tangibles**

These refer to the appearance of the physical facilities, equipment, personnel and communication materials. These are the physical representations or images of the services that customers, particularly new customers, will use to evaluate quality. Tangibles are often used by service companies to enhance their image, provide continuity and signal quality to customers. Therefore in order to understand customers' perceptions, it is important to conduct market research. In today's fiercely competitive business environment, customer loyalty is a key success factor. In many industries it is practically impossible to make a difference with the quality and type of product or service offering. Some businesses have become commoditized and once that happens, it is easy to get caught up in the downward spiral of perpetual discounting and fighting for a larger share of the market. Differentiating of product is rarely possible while differentiating on price alone can spell disaster, unless the company is huge and can command powerful economies of scale (Hoyer and

MacInnis, 2001). It is therefore important to always feel the pulse of customers in order to know what they expect and meet their needs and expectations.

In 1986, Jan Carlzon, the former president of Scandinavian Airlines wrote a book, "Moments of Truth". In this book, Carlzon defines the moments of truth in business as "anytime that a customer comes into contact with any aspect of a business, however remote, is an opportunity to form an impression". The moments of truth need to be managed well, as they contribute significantly to the building of long- term customer loyalty and total customer satisfaction.

2.4.3 Management commitment to Service Quality

This refers to the extent to which management views service quality as a strategic goal. The following issues are important considerations (Rapert and Wren,1998).

- Do internal programs exist for improving the quality of service to customers?
- Does the company emphasize its sales goals as much as or more than it emphasizes serving customers?
- Are managers who improve the quality of service to customers more likely to be rewarded than other managers?
- Are resources committed to departments to improve service quality?
- Are all levels of management committed to providing quality service to its customers?

The absence of total management commitment merely widens the gap. Focus on other company performance objectives such as short-term profit and cost reduction, may receive greater emphasis than service quality. Management commitment to service quality is essential in ensuring customer satisfaction.

2.4.4 Benefits of Service Quality

Some of the major benefits of delivering service quality are:

- Customer retention – this means "repeat business."
- Referrals – satisfied customers are happy to generate positive word-of-mouth.
- Avoidance of "price" competition – if customers see your organization as the same as others, then your service is essentially undifferentiated or like a commodity. Differentiation is a strategy upon which to effectively compete. Price strategy is another way to compete, however

this may not always be possible or desirable. Attaining service quality allows competition based on a differentiation strategy.

- Retention of good employees – employees like to work for a "quality" organization.
- Reduction of costs – when quality is achieved, costs of correcting problems (after they have occurred) is reduced. Since a focus on quality stresses preventative maintenance, then these costs are reduced. In addition, many other costs are reduced such as lowing employee turnover and the cost of having to motivate uninspired employees (Kotler, Bowen, and Makens, 1996: 362 - 364).

Services are unique in the sense that they are intangible and, thus, customers must trust the organization before they purchase. With services, quality and perception of quality is essential. Apart from the benefits mentioned above service quality enables the organization to compete with a "differentiation" strategy against competitors.

2.5 FEATURES OF CUSTOMER SERVICE

A number of components of customer service impact on the delivery of a service and the customer's perception of the quality of that delivery.

2.5.1 Customer Expectations

As expectations are the standards against which customers evaluate service quality, it is important to understand the nature of customer's expectations. Customer expectations are beliefs about service deliveries that are used as standards against which performance is judged (Zeithaml and Bitner, 2000). It is therefore critical for service marketers to be knowledgeable about customer expectations.

According to Zeithaml and Bitner (2000), customers hold several different types of expectations about service. There is a level of service that a customer hopes to receive i.e. that level at which a customer believes a service should be. This is called desired service. However, customers also realize that there should be certain constraints in achieving desired service, and therefore will accept the lower expectations of the service termed adequate service. Adequate service represents the bottom level of performance acceptable to the customer.

They further assert that one of the characteristics of services is that they are heterogeneous in that service may vary across providers, across employees from the same provider and even within the

same service employees. The extent to which customers recognize and are willing to accept variation is called the zone of tolerance. This is the range between the desired and the adequate service when performance falls outside the range in either a positive or negative way. It is important to note that the tolerance zone fluctuates within the same customer depending on the customer's circumstances at a given time e.g. a customer who is pressed for time would want immediate service whereas those that are not in a hurry can stretch their patience for longer.

Given an environment where service may be over-delivered but customers are satisfied, it is tempting to think that there are no problems. However, according to Shroer (2003), such thinking may create a breeding ground for unrealistic expectations. An expectation, the right of customers to expect some level of service based on an express or implied promise, is quite different from wishful thinking, which expresses rather what the consumers would want in the ideal situation. Service itself, however, moves from wishful thinking to an expectation when patrons of a service believe that their wish will come true on a regular basis. Undefined service boundaries take a toll beyond individual moments of service. Staff may over-deliver one patron at the expense of others. Staff time can be diverted unconsciously from activities that are a part of the strategic plan. Patrons may receive different standards of service as staff interprets the requirements of the service differently. An unhealthy dynamic can also develop when an employee with a particular expertise shows off. Staff can start to profile patrons, shying away from those that seem most demanding. Worse still, a new floor for service standards can emerge from unrealistic expectations. Long-term staff are likely to burn out from the pressure of working with no boundaries.

Therefore, when dealing with customer expectations, addressing the problem is by no means optional. Service providers must either meet them or change them. An initiative to reconstruct customer expectations should take back control of the service environment and use staff more efficiently. The first is to conduct a zero-based review of services. This often yields surprises, especially when thorough and candid. The management team and staff then determine what services to offer. Staff are engaged throughout the process. To build staff consensus, top management commitment is essential.

Throughout the entire process, 'out of the box' type thinking is essential. The very first step is to gauge exactly what services are essential to provide. An organization need not provide every conceivable service to every customer. The core offering needs to be decided on as well as the customer at which the service is being targeted. Perhaps a partnership with other firms that the

company is able to outsource non-essential services can be set up as well as standards that allow staff to be trained to deliver services to objective criteria. Lastly, the team needs to evaluate and update service delivery to ensure subsequent customer satisfaction efforts are coherent. Guaranteeing success requires a willingness to change as mission and customer needs shift.

Patrons are already trained to expect current levels of customer service or to ask for more, regardless of the impact around them. The challenge now becomes actually re-train customers. A way proposed by Shroer (2003), is referred to as a Significant Emotional Event. This type of event shakes up the paradigm of rules, opening a window for a new context. The announcement of a major plan to review and restructure all staff services may serve as such an event. Another strategy proposed by the same focuses on the entire organization and all its users. Tactically, this emphasizes that the reconfigured services are designed to ensure that all customers are well and helps patrons accept the change to come. A system of services with standards, boundaries and inherent flexibility will help service organizations emerge as being more customer service effective than the organization was previously perceived.

2.5.2 Factors Influencing Customer's Expectations of Service

Service expectations are formed by uncontrollable factors, from the experience of customers with other companies and their advertising to a customer's psychological state at the time of service delivery. What customers expect is as diverse as their education, values and experiences. The same advertisement that shouts 'personal service' to one person tells another that the advertiser has promised more than they can deliver (Zeithaml and Bitner, 2000).

2.5.2.1 Sources of Desired Service Expectations

Two of the largest influences on desired service level are personal needs and philosophies about service. Personal needs are states that are essential to the physical and psychological well being of the customer and are pivotal factors that shape the desired levels of service. Enduring service intensifiers are individual stable factors that lead the customer to a heightened sensitivity to service. One of these is when another person of a group of people drives customer expectations. In a business context, customer expectations are driven by the expectations of their own customers. Another enduring service intensifier is personal service philosophy i.e. is the customer's underlying generic attitude about the meaning of service and the proper conduct of the service providers. Today's customer is generally informed and has defined expectations.

2.5.2.2 Sources of Adequate Service Expectations

These factors tend to fluctuate more than the somewhat stable factors that influence desired service. These are:

- Transitory service intensifiers
- Perceived service alternatives
- Customer self perceived service role
- Situational factors
- Predicted services (Zeithaml and Bitner, 2000)

Transitory Service Intensifiers

These are temporary, usually short-term individual factors that make a customer more aware of the need for the service.

Perceived Service Alternatives

These are other providers from whom the customer can obtain service. If customers have a multitude of alternatives from which to choose, their levels of adequate service are higher than those of customers who believe it is not possible to get better service elsewhere. Companies today operate in an environment in which competition is intensive as there are many substitutes that customers can switch to with low barriers to entry.

Customer's Self Perceived Service Role

A customer also has a role to play in service delivery through explicit explanation of what kind of service they expect. If the value-added services are not specified, it may be assumed that the customer does not need them. This assumption may however, not be correct. Customer's zones of tolerance seem to expand when they sense that they are not fulfilling their roles. On the other hand, when customers believe that they are doing their part in the delivery, their expectations of adequate service are heightened.

Situational Factors

These are the service performance conditions that customers view as beyond the control of the service provider. Situational factors temporarily lower the level of adequate service, widening the zone of tolerance. As an example computer systems being offline may prevent call center staff from adequately dealing with customer requests.

Predicted Service

This is the level of service that the customer believes that s/he is likely to receive. Predicted service is an estimate of the service that the customer will receive in an individual transaction rather than in the overall relationship with the service provider.

2.5.3 Sources of Predicted and Desired Service

According to Zeithaml and Bitner (2000) the sources of both desired and predicted service are as follows:

Explicit Service Promises

These are personal and non-personal (advertising, brochures inter alias.) made by the organization to the customers. These explicit promises are completely within the control of the service provider. Promising what can be delivered is an appropriate means by which customers' expectations can be measured. However, some companies do over-promise in order to obtain business.

Implicit Service Promises

These are service related cues other than explicit promises that lead to inferences about what the service should and will be like. In general, the higher the price, the more a customer is likely to expect from a service.

Word of Mouth Communication

The effect of word of mouth communication is very important. Statements said by other parties other than by the organization influence both predicted and desired service word o mouth tends to be very important as an information source as it is regarded as unbiased.

Past Experience

A customer's past experience with a particular organization will influence his/ her predictions/ desires. Comparison can be drawn with organizations within the same industry. At the end of the chapter is a model illustrating customer expectations and the forces that influence and the forces that influence them. The model re-iterates what has already been explained.

2.6 CUSTOMER SATISFACTION

Satisfaction is "a psychological state which results when emotion surrounding disconfirmed expectations is coupled with the service-user's prior feelings regarding the consumption experience" (Oliver in Parasuraman et al, 1988.). Incidents of satisfaction, over time, result in a perception of high quality (Parasuraman, Zeithaml, Berry, 1988).

Gardial (1992) suggested that while satisfaction describes the customer's reaction to the value received from a particular service offering, customer value describes the nature of the relationship between the services and those that receive it. Adding value is critical to the understanding of the relationship. Relationships that are not perceived as being mutually beneficial are terminated. The importance of value to the service experience may explain the use of quality as another measure of service effectiveness.

According to Shemwell (1998) satisfaction was found to significantly reduce complaint behaviour. Customer satisfaction is conceived as one element of an overall model of customer behaviour that evolves over time (Beardon and Teele, 1983). Customer loyalty as demonstrated in the form of repeat business, has been shown to be a key determinant of the success of many service companies (Reiccheld and Sasser, 1990). There are 2 dimensions to the customer expectation construct: The level of service desired by the customer and the level of service predicted by the customer (Anderson, 1973; Swan, 1981.)

Zeithaml, Berry, Parasuraman (1993) argued that desired level is the level of service that the customer believes can and should be delivered and adequate service is that level which the customer considers to be acceptable. While high levels of customer satisfaction does not guarantee loyalty, dissatisfaction will cause customers to take their business elsewhere. Such customers will be less likely to return in the future or if they do, it will be at a lower incidence than was previously experienced. The customer's experience of the firm is likely to be multiplied through interactions with other prospective customers via word of mouth. When customers are satisfied with the service they receive, they influence the expectations of other customers (potential customers), with whom they interact. However, Sasser et al (1978) found that when customers where dissatisfied they were even more likely to spread the word to potential customers.

Customer satisfaction is a key component of total quality management programmes, both in the

application of satisfying the customer as well as using surveys to determine the customer's perception of quality. It is here that internal customers must work closely with each other to ensure prompt delivery, quality product, accurate billing and other related activities. If synergy is not achieved across all areas internally, the external customer is affected negatively.

Customer satisfaction is a well-known and established concept in areas such as marketing, consumer research, economic psychology and economics. Marketing practitioners have placed importance on the issue of customer satisfaction having realized that the key to customer retention is through customer satisfaction. After attracting and engaging customers, it is important to retain them.

Zeithaml and Bitner (2000) have defined customer satisfaction as follows:
Satisfaction is the consumer's fulfilment response. It is the judgement that a product, service feature or the product or service in itself, provides a pleasurable level of consumption related fulfilment.
Satisfaction is therefore the customer's evaluation of the product or service in terms of whether or not that product or service has met their needs and expectations. Failure to meet needs and expectations is assumed to result in dissatisfaction with the product or service. Kotler (2000) contends that research has indicated that a highly satisfied customer:

- Stays loyal longer
- Buys more as the company introduces new products and upgrades existing products
- Pays less attention to competing brands and is less sensitive to price
- Talks favourably about the company and it's products
- Offers product or service ideas to the company
- Costs less to serve an existing customer than a new customer because transactions become routine.

Customer satisfaction can be approached in two different ways according to the research by Davis, Heineke, (1998). These are:

- Satisfaction as a function of disconfirmation
- Satisfaction as a function of perception

2.6.1 Satisfaction as a Function of Disconfirmation

This refers to the difference between customer perceptions and expectations. Customer expectations of service are set prior to the customer's first encounter with the service firm via advertising and word of mouth as well as after a previous encounter with the firm (a result of personal experience). There are also two dimensions to the expectation construct according to Anderson (1973). According to their research, high customer satisfaction results when performance is greater than or equal to the customer's desired service level i.e. the service is performed better than or equal that desired by the customer. Customer satisfaction is also likely to occur where performance is less than the customer's desired service levels but greater than or equal to the predicted service level i.e. the service is performed as well as or better than or the customer predicted but poorer than the customer desired or expected. Customer dissatisfaction occurs where performance is less than both the customer's desired and predicted levels of service i.e. the service is performed poorer than the customer desired or expected.

Zeithaml et al (1993) have argued that desired service is the level of service a customer believes can and should be delivered and that adequate service is the level of service the customer considers acceptable.

2.6.2 Satisfaction as a Function of Perception

According to the research conducted by Goode and Moutinho (1995) suggest that standards other than expectations need to be explored when dealing with customer satisfaction issues. They propose that satisfaction also depends very heavily on the customer's perception of service performance rather than purely on the disconfirmation between perception and expectation. Perception refers to the customer's perception of actual performance. This implies that perception and 'objective' actual performance are not one in the same. Parasuraman, Zeithaml, Berry (1994) argue that while perception alone may be a better predictor of satisfaction, it does, however, offer a less than adequate understanding of the underlying phenomena than the disconfirmation model.

2.6.3 Customer Satisfaction Measurement

There are many factors that contribute to a customer's satisfaction with the level of service offered. The overall end experience of the experience can be measured in terms of satisfaction. The use of a single global indicator of a customer's reaction to the service experience appeared to be the most common measure of customer satisfaction. The appeal of using a single indicator, both the validity and the reliability of single measures has been questioned. According to Davis et al (1998) a single

measure's validity (whether the measure represents the construct it is intended to represent) is often suspect when the construct is complex. Reliability refers to the robustness of answers: whether respondents are likely to respond to a question consistently. The reliability of a single indicator of customer satisfaction is similarly suspicious. A more valid and reliable measure of customer satisfaction can be obtained with a customer survey instrument that uses a multi-item, specific approach. With this methodology, each customer is asked a series of different questions relating to the construct of interest (in this case satisfaction). Thus several measures are obtained which can then be combined through averaging or factor analysis into a single measure or index. A survey instrument that incorporates the multi-item or specific approach should be superior to an instrument that uses a single item/ global technique in terms of both reliability and validity.

Assuming that the customer is capable of evaluating the service performance, the result is compared to expectations prior to purchase or consumption. Any discrepancy leads to disconfirmation. Positive disconfirmation increases or maintains satisfaction and negative disconfirmation creates dissatisfaction. Expectancy disconfirmation (Ilgen, 1971) consists of two processes viz. the formation of expectations and the disconfirmation of those expectations. Perceived performance is influenced by the consumer's perception of quality, marketing mix, brand name and company image. Decision research suggests that positive and negative disconfirmations weigh differently on satisfaction. Losses tend to be perceptually greater than gains of equal amounts (Kahneman and Tversky, 1979). According to their research, negative disconfirmation has more of an impact on satisfaction than positive disconfirmation at the micro-level. Based on such research, we can make the assumption that customer satisfaction is believed to have a positive impact on customer loyalty.

Corporate image can be defined as the perceptions of an organization reflected in the associations that are held within the memory of the consumer (Keller, 1993). It is an important factor in the overall evaluation of the service and the company. Apart from image as the function of the accumulation of purchasing/ consumption experience over time, most organizations also provide complex and noisy informational environments in order to attract new customers and keep existing customers. In the Perceived Quality Model, Gronroos (1988) argues that perceived quality is a function of expected quality that is generated market communication, image, word of mouth, and customer needs; and experienced quality that is generated from technical quality and functional quality.

A good corporate image stimulates purchase from one company by simplifying decision rules. Therefore corporate image becomes a function of attitudes and beliefs with regards to awareness and recognition, customer satisfaction and consumer behaviour. It is assumed to have an impact in the customer's choice of company when service attributes are difficult to evaluate. Corporate image is established through communication and experience. When customers are satisfied with the services rendered, their attitudes 'positive impact on customers' perceptions of quality, value, customer's satisfaction judgement and customer loyalty.

Customer loyalty expresses an intended behaviour related to the service or the company. This includes the likelihood of the future renewal of service contracts, how likely the customer is to change patronage and the likelihood of the customer providing positive word of mouth. If real alternatives exist and if switching barriers are low, management discovers the organization's inability to satisfy its customer's via two feedback mechanisms viz. exit and voice (Hirschman, 1970). Exit implies that customers stop buying the company's services while voice refers to customer complaints expressing the customer's dissatisfaction directly to the company. These have an impact on the long-term revenue of the company. Customers may also be loyal because they are satisfied and thus want to continue the relationship. History has proven that most barriers to exit are limited with regard to durability. Companies tend to consider customer satisfaction as being the only viable strategy in order to keep existing customers. Beardon, Teele (1983) argue that repurchase intention and willingness to provide positive word of mouth are indications of customer loyalty. Customers with a low degree of service expertise are less capable of evaluating various aspects of the service.

2.6.4 Impact of Service Variability on Customer Satisfaction

Variability or heterogeneity can be described as one of the main characteristics of services according to Gronroos (2000). They have established a number of sources for such variability one of which lies within he variability of the perceptions between the customers themselves. This source is embedded in the fact that not only do we perceive facts as they are, but also as we are. We are all different to some extent. For example, variability may be practically zero when it comes to the performance of the supplier, whereas two customers could perceive differences due to their different expectations, knowledge or familiarity. It can also be a result of the comparison with the services offered by other providers or even variability in service within the same organization at different points in the day.

Variability in the quality of service provided may have implications for repeat business even when

dealing with long standing customers whose loyalty has trust and loyalty has been established. A repeat purchase customer who patronizes the same service provider over time is likely to experience both good and bad service performance since services are inherently variable. One way for the provider to deal with the variability is to target variables that act as 'forgivers' i.e. is variables may reduce the negative impact of service variability. Trust may be regarded as a potential 'forgiver' and may be defined as the customer's willingness to accept vulnerability due to the belief in the exchange partner's reliability. It assumed that a high level of pre-encounter trust results in forgiving attitude among customers who are subject to poor performance encounters with the provider. However, it is important that the service provider does not take this level of trust for granted when performance is below expectations.

2.6.5 Impact of Waiting Times on Customer Satisfaction

Customer waiting time for a service typically represents the first direct interaction between customers and most service delivery processes. Therefore the importance of properly managing waiting times is of paramount importance to most service based organizations. In recent years, most service managers have made concerted efforts to reduce customer waiting times and as far as possible totally eliminated waiting by improving processes and or by adapting faster service technologies. Customers' reactions to waiting in line, whether good or bad can colour the customer's perception of the organization and the organisation's offerings as well as the service delivery process on the whole. In a study conducted by Chebat (1994), of bank customers, the evidenced supported the notion of a 'halo effect' concluding that a customer's evaluation of the service quality was affected not only by the end service received but also by the service delivery process itself. According to their research, waiting time forms an important component of this process. It is therefore critical that is situations where waiting is inevitable, that service managers attempt to provide a high level of satisfaction with the waiting portion of the service experience.

Maister (1995) was one of the first to develop a framework that identified the factors affecting customer satisfaction with waiting. The framework identified situations in which waits were perceived either more positively or more negatively as a result of the circumstances of the wait. Although Maister's model was conceptual rather than the result of structured empirical study, it has been widely accepted because of its strong face value. The fundamental premise of the Maister model is that it is the perception of the wait that determines satisfaction rather than the actual waiting time. Davis and Vollmann (1990) supported this notion in a study of consumer waiting times and levels of in a fast food restaurant. Customers were asked immediately after the

completion of the counter transaction to complete a questionnaire. The study demonstrated that for a given waiting time, there were significant differences in the levels of customer satisfaction depending on the time of day and how busy the stores were when the customer visited them. They found that customers tended to be more impatient at lunchtime and when their lunch break was limited than at dinnertime when they could eat more at their own leisure. They also found that customers tended to be more tolerant of waiting in line when the stores were busy as there was an identifiable reason for the wait, in comparison to when there were fewer customers and customers were unable to rationalize the length of their wait. It was also one of Maister's (1995) propositions that customers tend to be more dissatisfied with a given wait prior to making their first contact with a service provider than they are with subsequent waits within a single service encounter.

2.6.6 Impact of Corporate Image on Customer Satisfaction

In today's competitive markets, competing companies within the same industry are becoming increasingly similar. Differentiation through the delivery of services is therefore becoming increasingly difficult. Lovelock (1984) claimed that corporate image only plays a secondary role in customer choice decisions unless competing services are perceived as virtually identical on performance, price and availability. One would expect that corporate image under current market conditions would play an important role in both attracting and retaining customers. Oliver (1980) argues that customer loyalty i.e. re-purchase intentions, willingness to provide positive word of mouth etc. is a function of customer satisfaction, which in turn, as discussed earlier is a function of cognitive comparison of expectations prior to consumption and actual experience. Customer dissatisfaction or satisfaction requires experience with the service, and is influenced by the perceived quality and the value of the service according to Anderson (1994). Due to the transaction driven nature of the satisfaction experience, corporate image can be viewed as the cumulative effect of customer satisfaction or dissatisfaction. When services are difficult to evaluate, corporate image is believed to be an important determinant of the perception of quality, customer's evaluation of satisfaction with the service and customer loyalty. This perception of value is influenced by differences in monetary costs, non-monetary costs, customer tastes and customer characteristics (Bolton and Drew, 1991).

2.6.7 Customer Satisfaction Conclusion

The achievement of customer satisfaction within the service industry is of paramount importance and can be regarded as being a factor for success in ensuring customer retention, the ultimate goal for the service operation. This is due in part to the fact that it is more cost efficient to retain and

keep the existing customer base happy than setting out to attract new customers. Therefore within the field of customer satisfaction research is the field of investigation into those aspects of customer service that aim to meet or exceed customer expectations and perceptions of the quality of service offered by the organization. According to the expectation-disconfirmation paradigm discussed earlier, positive disconfirmation increases or maintains satisfaction and negative disconfirmation

2.7 CUSTOMER BEHAVIOUR

There are three possible behavioural consequences of customer satisfaction viz. word of mouth, feedback to the supplier and loyalty.

2.7.1 Word of mouth

Word of mouth is the extent to which the customer informs friends, relatives and colleagues about an event that has created a certain level of satisfaction. However, the form of the relationship may be different at differing levels of satisfaction. Hart et al (1990) claim that their research suggests that customers who have had bad experiences tell approximately eleven people about it whereas those who have had positive experiences only tell 6 thereby introducing a negativity bias (where negative events produce a stronger response than positive events). However, other researchers e.g. Holmes and Lett (1977) found that customers with positive experiences were more likely to communicate their feelings to others. One reason that they suggested is that pleasant items are processed more efficiently and accurately by human perceptual-cognitive structures. Fornell and Westbrook, (1984) argued that individuals have a general propensity to strive for interpretation in positive rather than negative terms. When we are faced with events that challenge positive conceptions, we try and re-interpret, distort or minimize the negative effects. We may even respond with denial which serves to obliterate the memory of the negative experience altogether (Taylor 1991).

2.7.2 Feedback to the supplier

Feedback to the supplier is defined as the extent to which the customer provides feedback to the supplier who has created a certain level of satisfaction e.g. complaints aid the supplier in identifying the areas where improvements can be made and compliments may suggest the areas where current performance may not need immediate improvements. An assessment has been made by Kotler (1994) where he has discovered that the propensity among dissatisfied customers to

forward complaints to the supplier is low. He argues that only about 5% of customers complain. Feedback is a class of behaviour that deals with the customer's transmission of information. Positive and negativity biases may occur. Negativity bias can be dominant where the transmission of negative feedback may be perceived by the customer as offering a higher potential for compensation than the transmission of positive feedback. This bias also increases given the proliferation of customer satisfaction guarantees, which encourage complaining behaviour. This potential for a negativity bias may be offset by the length of the customer-supplier exchange and the extent to which it involves interpersonal interaction at several points in time between the customer and the representative of the supplier. A positive bias may even lead to situations where satisfied customers provide the supplier with complaints, which are formulated as suggestions on how the supplier may improve the business.

2.7.3 Loyalty

Loyalty refers to the extent to which the customer intends to purchase again from the supplier who has created a certain level of satisfaction. Effects of customer satisfaction are different depending on the level of satisfaction. Zeithaml et al (1996) suggest a zone of tolerance captures the range of tolerance within which a supplier meets customer expectations. This zone is bound by a lower end of adequate service and an upper end of desired service. Service below the zone may be perceived as highly dissatisfying and service above the zone is highly satisfying. Zeithaml et al (1996) found that the service quality-loyalty relationship changes depending on the customer's position in relation to the zone of tolerance.

2.8 A MODEL OF SERVICE QUALITY - SERVQUAL

Measuring customer satisfaction is a critical requirement for many organizations. The Servqual Model is a very useful process for measuring the overall customer satisfaction of an organization. Originally developed by leading customer satisfaction researchers Valarie Zeithaml, A. Parasuraman and Leonard Berry (Delivering Quality Service, 1990), the Servqual Model is an invaluable tool for organizations to better understand what customers value and how well their current organizations are meeting the needs and expectations of customers. It is an instrument designed to measure customer's perceptions of service quality compared to their expectations. Servqual provides a benchmark based on customer opinions of an excellent company, on the importance ranking of key attributes, and on a comparison to what employees believe customers feel. It provides detailed information about:

- Customer perceptions of service (a benchmark established by the company's own customers);
- The company's performance levels as perceived by customers;
- Customer comments and suggestions;
- Impressions from employees with respect to customers' expectations and satisfaction.

Servqual has proven to be a simple yet effective tool for many organizations. Since its introduction in 1988, servqual has been used to study service industries such as health care, banking and other professions.

Servqual is useful for measuring expectation and perceptions of existing customers. Its conceptual basis means that it can be very useful in supporting and gaining understanding in the field as to what service quality actually is. The dimensions help staff understand the components and break down quality into areas that they can rectify.

The figure (2.3) shows the "GAP" model of service quality from Parasuraman et al (1996). This model offers an integrated view of the consumer-company relationship. The gap analysis skills staff at all levels to see where customers are dissatisfied and allows focused action plans to be developed. Ongoing use of Servqual allows the monitoring of the success of the plan.

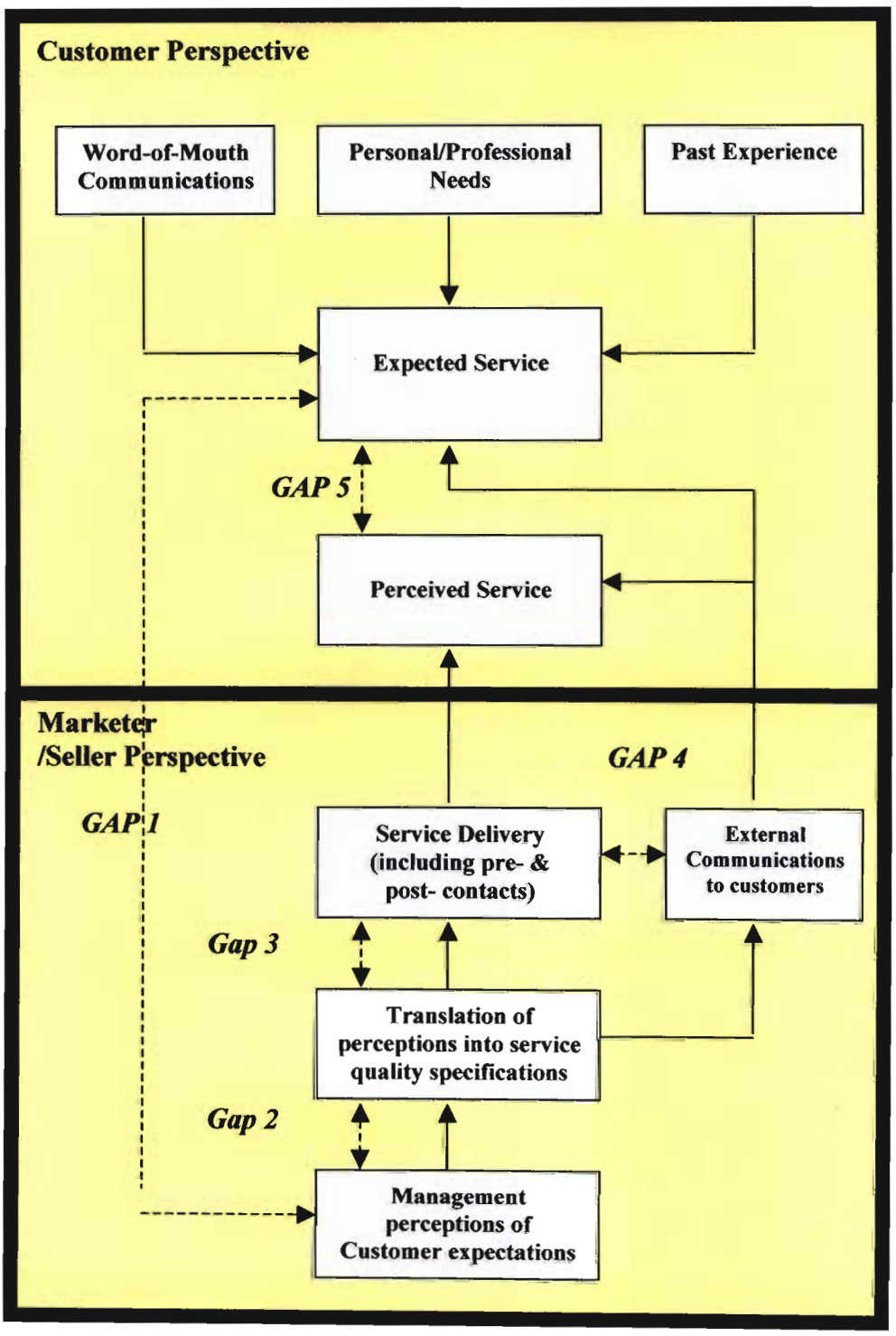


Figure 2.2: A Gap Model of Service Quality

Source: Adapted from Kotler, P, Bowen, J and Makens, J. (1996). Marketing for Hospitality and Tourism. Upper Saddle River, NJ: Prentice Hall, p.358.

2.8.1 The Gap Model for Measuring Service Quality

Zeithaml et al (1993) explored the gap between expectations and perceptions to better understand expectations as they pertain to customer assessment of service quality and to extend the theoretical work that exists in the customer satisfaction literature. The Gap Model is a systems approach to understanding how clients evaluate services and how service quality is constructed by the provider of the service. The model focuses on "gaps", which represent the relationships between systems. It is these gaps that are measured in order to measure service quality. The wider these gaps or discrepancies, the poorer the quality of service is likely to be. There is one gap on the client side, used to determine how the client evaluates the service, and four gaps to measure the internal organizational system relationships that determine service quality. The gap on the client side is the discrepancy between the client's service expectations and what they perceive they received (Parasuraman, Zeithaml, Berry, 1990). The four gaps on the provider side are as follows:

- The gap between client expectations and management's perception of client expectations.
- The gap between management's perception of client expectations and service quality specifications.
- The gap between service quality specifications and services actually delivered.
- The gap between the service delivery and what is communicated about the service to the clients (Parasuraman et al, 1990).

Based on their study, the gap between customer expectations and perceptions as proposed by Parasuraman et al (1985) can be conceptualized to reflect two comparison standards: desired service which reflects what customers want, and adequate service which indicates the standard that customers are willing to accept. The comparison between desired service and perceived service or the level of service customers believe is likely to occur, called perceived service quality (PSQ) is the perceived service superiority gap. The comparison between adequate service and perceived service, called PSQ Gap 5B, is the perceived service quality adequacy gap. The smaller the gap between desired service and perceived service, the higher the perceived superiority of the firm. The smaller the gap between adequate service and perceived service, the higher the perceived adequacy of the service.

The focus of the Gap Model is quality as defined by the client. It is based on substantial research amongst a number of service providers. In common with the Grönroos model it shows the perception gap (Gap 5) and outlines contributory factors. In this case expected service is a function

of word of mouth communication, personal need and past experience, and perceived service is a product of service delivery and external communications to consumers.

However, the GAP model goes further in its analysis of these key contributory factors. It not only provides a more rigorous description of the contributory Gaps, it lists key drivers for each gap and generic breakdown of each of these drivers. These are illustrated in summary form below.

This level of detail allows powerful analysis of the contributory factors to a perception gap at a practical level. The model shows the importance of marketing, business leadership quality and HR systems in the management of the expectation gap.

2.8.2. Explanation of Gaps

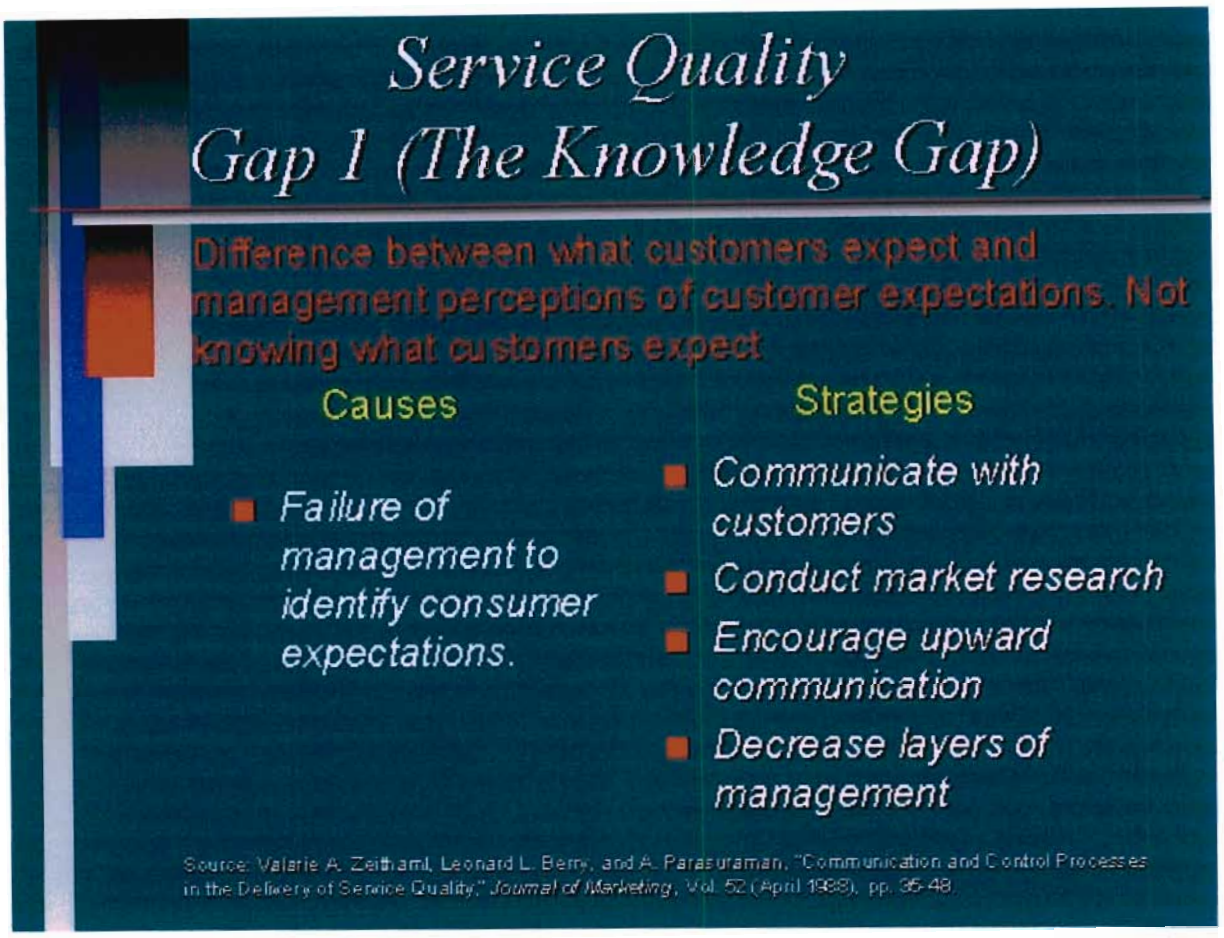


Figure 2.3 – Gap 1 (The Knowledge Gap)

- **Gap 1 refers to the gap between consumer expectations and management perception of these expectations.**

Management may think that they know what the consumer wants and proceeds to deliver this when in fact consumers may expect something very different.

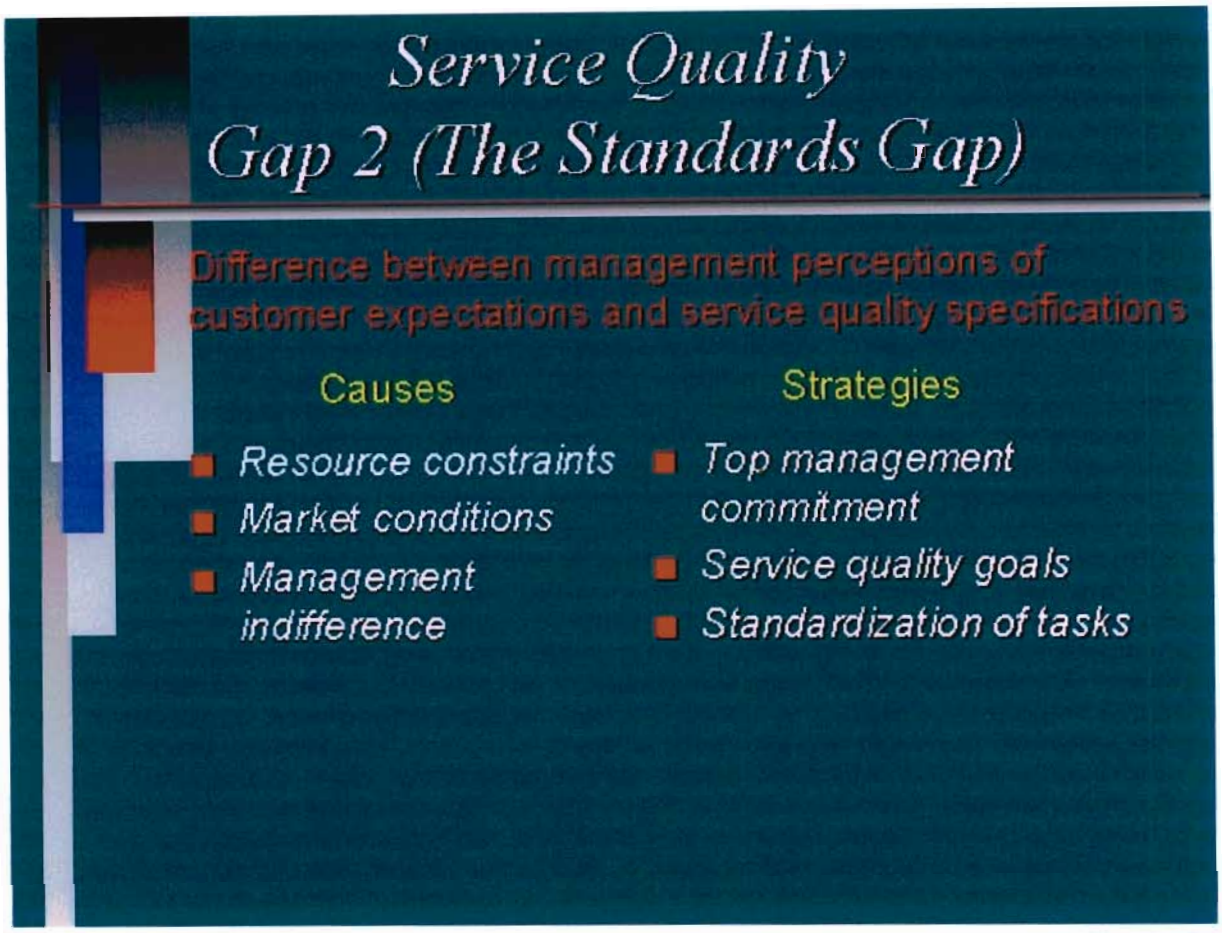


Figure 2.4 - Gap 2 (The Standards Gap)

- **Gap 2 refers to the gap between management perception and service quality specifications.**

  Management may not set quality specifications or may not set them clearly. Alternatively, management may set clear quality specifications that may not be achievable.

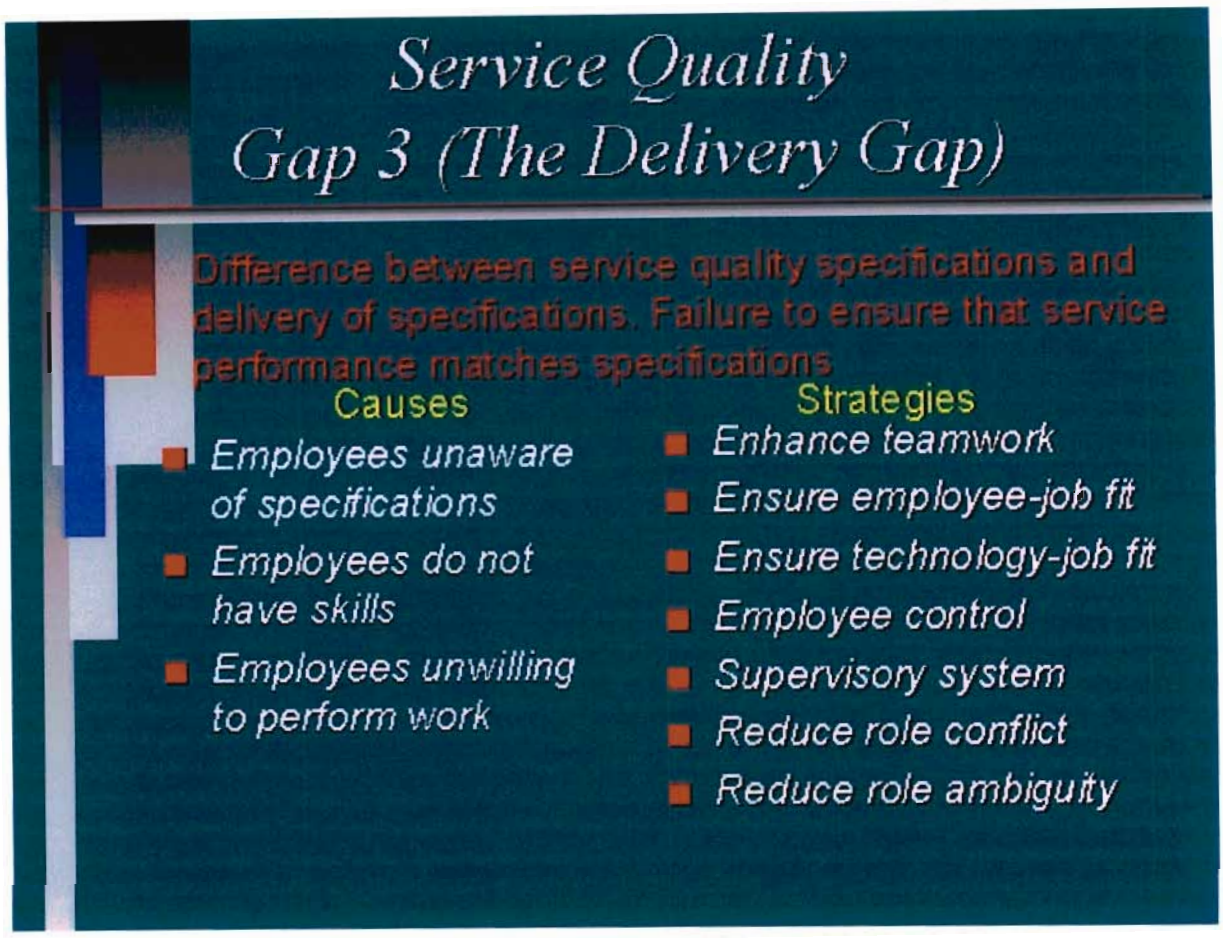


Figure 2.5 - Gap 3 (The Delivery Gap)

- **Gap 3 refers to the gap between service quality specifications and service delivery.**

Poor management can lead to a service provider failing to meet service quality specifications. This could be due to human error or a mechanical breakdown of or facilitating or support goods.

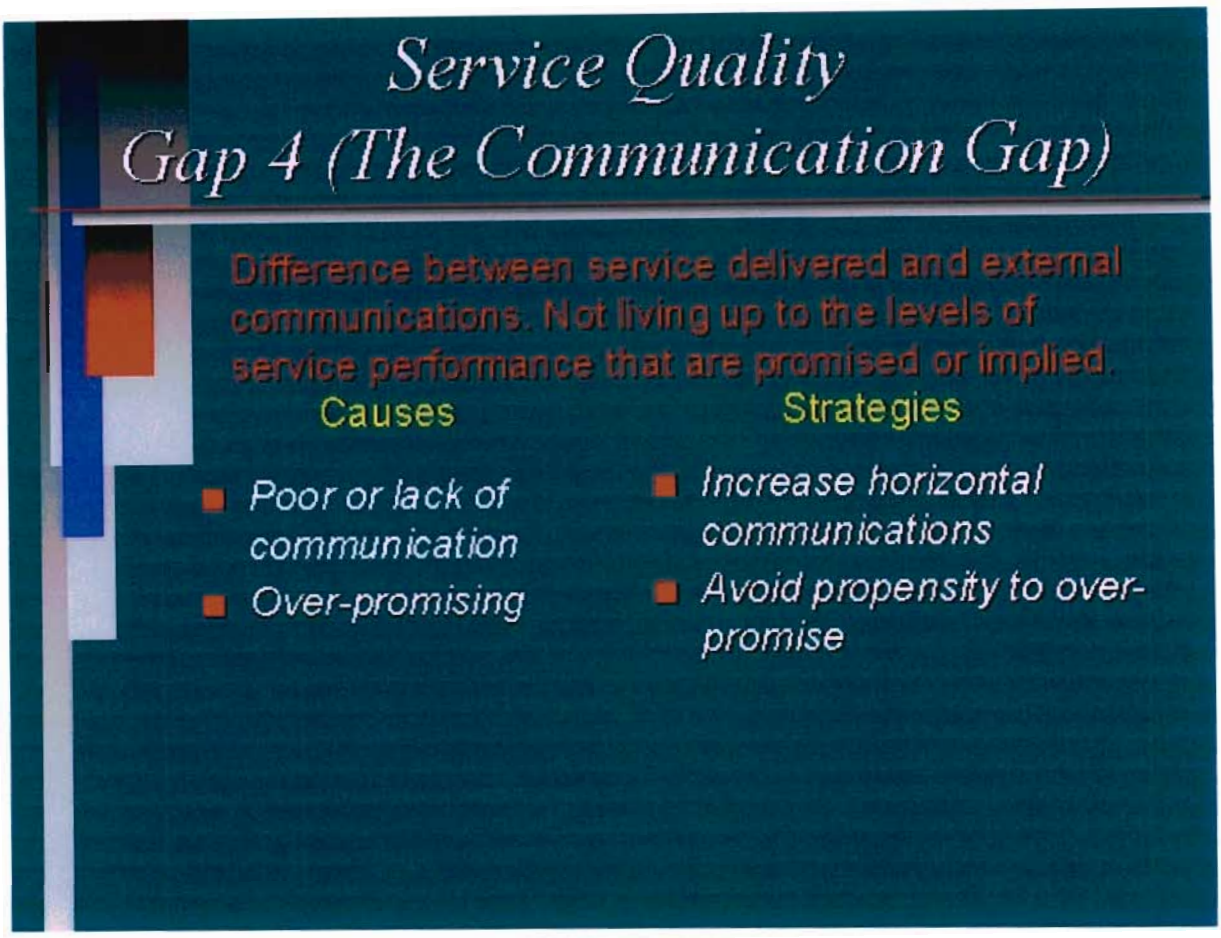


Figure 2.6 - Gap 4 (The Communication Gap)

- **Gap 4 refers to the gap between service delivery and external communications.**

There may be dissatisfaction with a service due to the excessively heightened expectations developed through the communication efforts of the service provider. Dissatisfaction occurs where actual delivery does not meet up to expectations held out in an organization's communications.

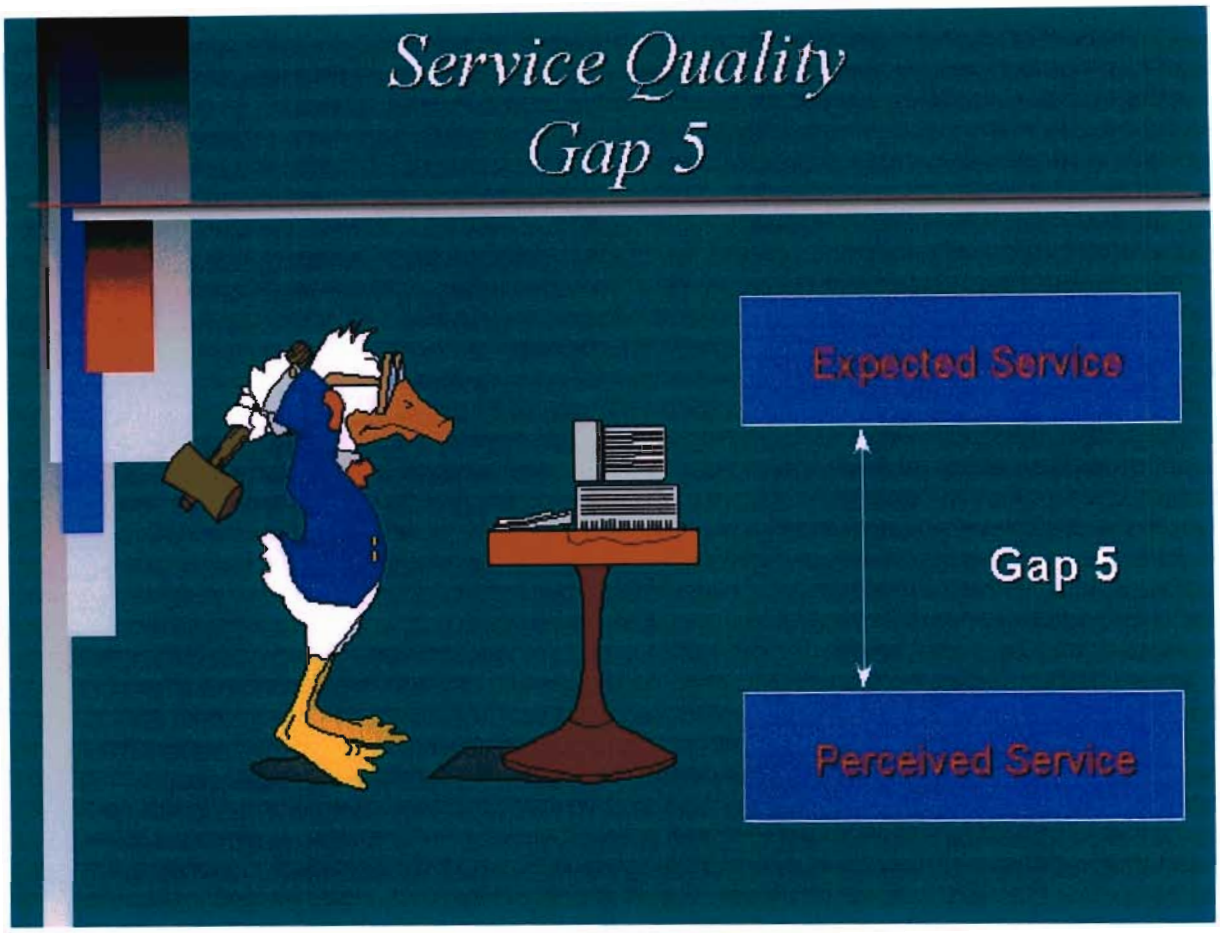


Figure 2.7 - Gap 5 (The Difference between Expected Service and Perceived Service)

- **Gap 5 refers to the gap between perceived service and expected service.**

  This gap occurs as a result of one or more of the previous gaps.

2.8.3 The Servqual Instrument

Parasuraman et al (1985) developed a twenty- two item instrument named Servqual based on the Gap Model, for measuring service quality. Servqual is quantitative, structured, and uses a seven-point likert scale. Servqual is based on research that found that there are ten attributes involved in the service-user's development of their expectations and their perceptions of service quality. These ten attributes were grouped into five dimensions of service quality, namely: reliability, responsiveness, empathy, assurance and tangibles (Parasuraman et al, 1985).

The intent of the instrument was to provide a tool for assessing customer perceptions of service quality in service and retailing organizations. Perceived service quality is the degree and direction of discrepancy between customers' perceptions and expectations. Customer perceptions are subjective assessments of actual service experiences. Customer expectations are the standards or reference points for performance against which service experiences are compared and are often formulated in terms of what the customer believes should happen.

Initially, the scale generated two scores, from which a difference-score was calculated in order to measure the service-user gap. These two scores were for service-user expectations of service quality and for service-user perceptions of service quality. The size and direction of the gap would show the level of consumer satisfaction with the services (Parasuraman et al, 1990). In an early study, scores for perception of service quality were uniformly lower than expectation scores. Lower perceptions than expectations are supposed to indicate that service-users were not satisfied with the service quality, yet service-users gave overall quality ratings as "good" or "excellent", indicating that overall, they were satisfied with the service quality. The authors hypothesized that perhaps these single point scores of expectations reflect desired levels of service quality and perhaps service-users are aware that their expectations might be too high and they would have been satisfied with less (Parasuraman, Zeithaml, Berry, 1986). This study and other theory operationalizing the concept "expectations" led to the authors extending their operationalisation of service-user expectations to encompass the range between the minimum level of service quality that service-users will accept and the level of service quality that they desire. This range is called the Zone of Tolerance (Parasuraman et al, 1994).

The importance of the zone of tolerance is that it provides more information and allows greater certainty in drawing the conclusion as to whether or not the service-user is satisfied with the service (Parasuraman et al, 1994). In the context where a service-user has high expectations and

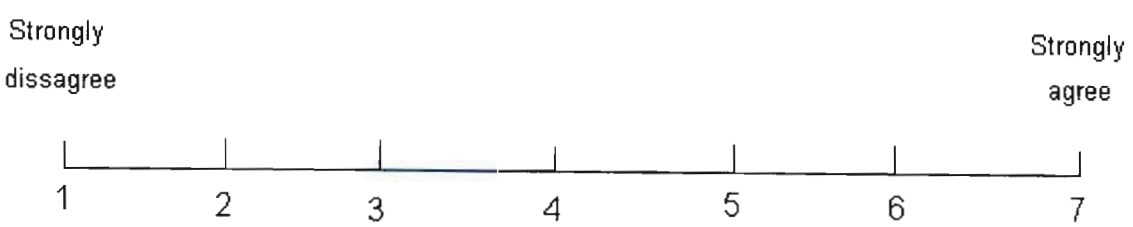
their perceptions fall below their expectations, one might assume that they are dissatisfied with the service.

Servqual provides management and key players with feedback about the organisation's ability to provide quality service. The results of a service quality audit assist management to identify service strengths and weaknesses (gaps). The Servqual instrument measures the gap between customer's expectations for excellence and their perceptions of actual service delivered, so service providers can understand both customer expectations and their perceptions of specific services. The benefit to the organisation is that specialist groups such as marketing and human resources are able to support the business plan's focus on customers by continuously listening to the customer - using a service quality information system - and making needed changes to the five key drivers that influence customers' perceptions of service quality

The instrument consists of twenty- two paired items covering the five dimensions of tangibles, reliability, responsiveness, assurance and empathy. Four or Five questions per dimension are recommended. Paired questions were preferred as opposed to a single question as it was felt that this had greater sensitivity and greater practical usage. Respondents are asked to score statements on a Likert scale ranging from 1 to 7 (strongly disagree to strongly agree). This scenario is illustrated as follows:

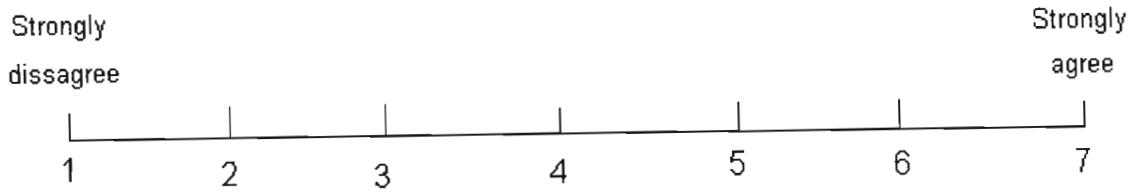
Expectation

Banks should have knowledgeable staff

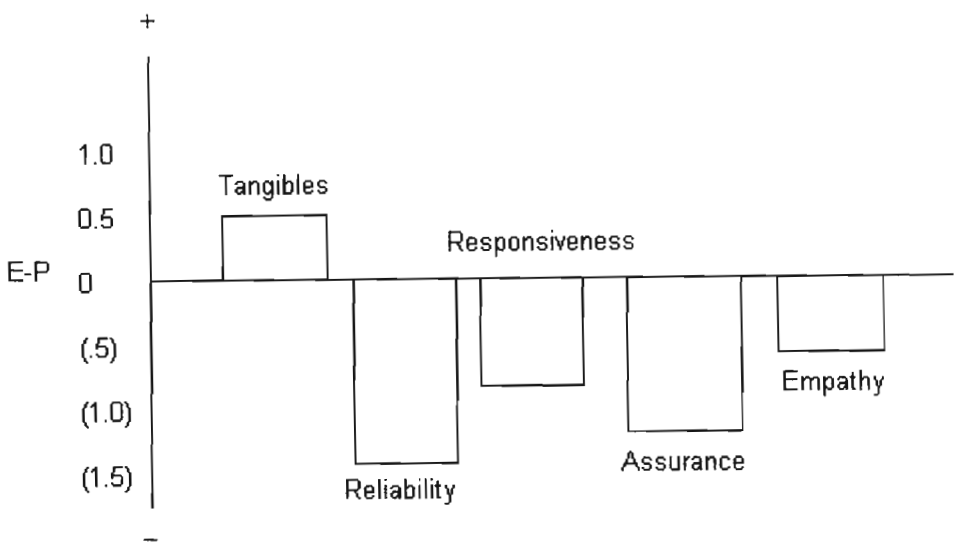


Perception

Bank XYZ has knowledgeable staff



For each question it is possible to establish a gap and its size between expectation and perception. This is reflected in the graph below.



In addition, the survey asks for respondents evaluation of the relative importance they attach to each of the dimensions of quality, any comments they would like to make about their experiences of the service and their overall impression of it. Respondents are also asked for additional demographic data.

Respondents are first asked to provide the level of service expected from a service firm on the twenty- two item expectations scale. Perceived service quality is obtained by subtracting the expectation rating from the perception rating for each of the items. Apart from this analysis, Servqual results can be used to identify at which components or facets of a service the company is particularly good or bad. It can be used to monitor service quality over time, to compare performance with that of competitors or to measure customer satisfaction with a particular industry.

The Servqual instrument may be used individually or may be averaged across the twenty – two pairs of items to obtain an overall service quality score. The Servqual instrument prevails as one of the most widely used approaches to measure service quality and has been used in a variety of service scenarios across the world.

2.8.4 Servqual Dimensions

Servqual examines five dimensions that have been consistently ranked by customers to be most important for service quality, regardless of service industry. The dimensions represent how the customers organize information about service quality in their minds. The number of dimensions that influence customer perceptions varies from service encounter to service encounter. Sometimes customers use all of the dimensions to determine service quality perceptions and other times consider a limited subset of the dimensions.
These dimensions include:

Tangibles	The appearance of physical facilities, equipment, personnel and communication materials.
Reliability	Ability to perform the promised service dependably and accurately.
Responsiveness	Willingness to help customers and provide prompt service.
Assurance	Knowledge and courtesy of employees and their ability to inspire trust and confidence.
Empathy	Caring individualised attention the firm provides its customers.

Servqual measures quality along the 5 service quality dimensions detailed above. It initially consisted of seven dimensions but was later revised to five dimensions. The first dimension is the tangibles dimension. It contains statements on equipment, communications materials, neatness of employees and physical facilities. Reliability is the second dimension and deals with promises, error-free records and sincerity in solving problems. The third dimension, responsiveness, is about the willingness to be prompt and helpful in service delivery. The assurance dimension deals with safety, trust, confidence and courtesy. The final dimension, empathy, contains statements on

attention, opening hours and needs.

2.8.5 Servqual Questionnaire Construction

Detailed are the types of questions asked and measured against each of the Servqual dimensions in a typical Servqual questionnaire.

Quality Dimension	Samples of questions to ask
Tangibles: Appearance of physical facilities, equipment, personnel, printed and visual materials	• Are facilities attractive? • Is staff dressed appropriately? • Are written materials easy to understand? • Does technology look modern?
Reliability: Ability to perform promised service dependably and accurately	• If a response is promised in a certain time, does it happen? • Are exact specifications of client followed? • Are statements or reports free of error? • Is service performed right the first time? • Is level of service same at all times of day and for all members of staff?
Responsiveness: Willingness to help customers to provide prompt service	• When there is a problem, does organization respond to it quickly? • Are staff willing to answer client questions? • Are specific times for service accomplishments given to client? • Are public situations treated with care and seriousness?
Competence: Possession of required skill and knowledge to perform service	• Can staff provide service without fumbling around? • Are materials provided appropriate and up to date? • Can staff use the technology quickly and skilfully? • Does staff appear to know what they are doing?

Courtesy: Politeness, respect, consideration and friendliness of contact personnel	• Does staff member have a pleasant demeanour? • Does staff refrain from acting busy or being rude when clients ask questions? • Are those who answer the telephone considerate and polite? • Do staff observe consideration of the property and values of clients?
Credibility: Trustworthiness, believability, honesty of the service provider	• Does service organization have a good reputation? • Do staff members refrain from pressuring the client? • Are responses given accurate and consistent with other reliable sources? • Does the organization guarantee its services?
Security: Freedom from danger, risk, or doubt	• Is it safe to enter the premises and to use the equipment? • Are documents and other information provided for the client held securely? • Are use records of clients safe from unauthorized use? • Can client be confident that service provided was done correctly?

Access:
Approachability and ease of contact.
	• How easy is it to talk to knowledgeable staff member when client has a problem?
	• Is it easy to reach the appropriate staff person
	  ○ in person?
	  ○ by telephone?
	  ○ by email?
	• Are service access points conveniently located?

Communication: Listening to customers and acknowledging their comments; Keeping customers informed in a language they can understand.	• When client contacts service point, will staff person listen to their problem and demonstrate understanding and concern? • Can staff explain clearly the various options available to a particular query? • Do staff avoid using technical jargon when speaking with clients? • Does staff member call if a scheduled appointment will be missed?
Understanding the Customer: Making the effort to know customers and their needs.	• Does someone on staff recognize each regular client and address them by name? • Do staff try to determine what client's specific objectives are? • Is level of service and cost of service consistent with what client requires and can afford? • Are service providers flexible enough to accommodate to client's schedule?

Adapted from SERVQUAL, an instrument for measuring quality service developed by Zeithaml, Parasuraman & Berry and described in their book, *Delivering Quality Service; Balancing Customer Perceptions and Expectations*, Free Press, 1990

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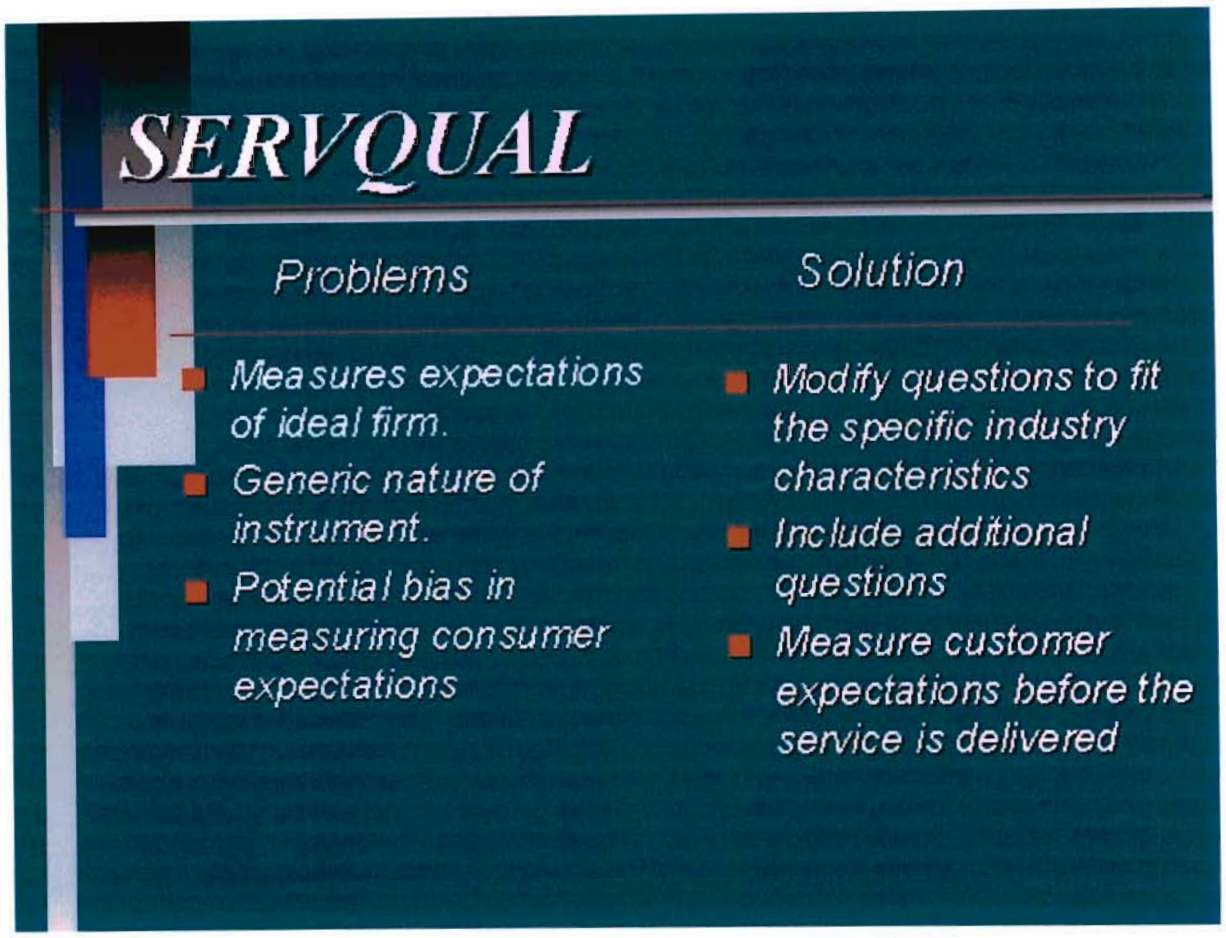
2.8.6 Problems with Servqual

Despite the fact that Servqual is an excellent instrument for measuring service quality, it does however have potential problems of which managers must be aware. Understanding these problems may prevent service companies from misinterpreting the results and developing inappropriate marketing plans (Mudi and Cottam, 1999).

The three major problems associated with Servqual instruments and possible solutions are detailed in figure 2.8.



Source: Servqual Diagrams (2002), Rowan University, New Jersey

Figure 2.8 - Servqual Problems and Solutions

2.8.7 Critiques on Servqual

Servqual is not without its critics. The dimensionality and reliability of Servqual has been the subject of many subsequent studies (Carman 1990; Cronin and Taylor 1992; Babakus and Boller 1992; Cronin and Taylor 1994; Van Dyke, Prybutok, and Kappelman 1999). Since the inception of the original instrument, Parasuraman, Zeithaml, and Berry (1991; 1994) and other researchers have published numerous refinements, reassessments, and rebuttals to criticisms.

One of the foremost limitations of Servqual is that it measures service-users' perceptions of functional quality and not technical quality as well. Functional quality is *how* the service is rendered and technical quality is *what* service is rendered (Babakus and Mangold, 1992).

Byttle (1994) suggests that these criticisms can broadly be split into two categories:

- Academic

- Practical

Academic criticism includes some of the differences made between perceived quality and objective quality and claim that the instrument does not measure true perceived quality. Doubts have been cast on the relevance of expectations (Cronin and Taylor, 1992). The instrument is said to lack imperial stability and therefore the results are not reliable. In other words scores given by respondents vary based on factors outside the scope of the instrument e.g. were respondents happy or sad and effect of weather conditions. The scores obtained may be different a couple of weeks later. This therefore questions the claim of its attitudinal and bigger behaviour relevance. Cronin and Taylor (1992) stated that service quality can be conceptualized as "similar to an attitude" and can be operationalised by the "adequacy-importance" model. They maintained that "performance" instead of "performance-expectation" determines service quality and developed an alternative measurement tool, Servperf, which concerns only performance. Research showed that in their empirical study, Servqual appeared to have a good fit in only two of the four industries examined, whereas Servperf had an excellent fit in all four industries.

The interdependence of the variables means that scores in one division influence scores in another. At a practical level the instrument can be difficult to administer - it is long and if additional information is required e.g. problems, demographics etc the length can impact response. Some of the questions are quite vague and practitioners as well as controllers find understanding the meaning difficult. The instrument only has value for existing and possible lost customers, it does not help in understanding potential customers and their views.

Other criticisms of Servqual relate to the validity of the five dimensions that the authors claim are used by service-users to evaluate service quality. Another debate regarding the Servqual scale is the difference-score, rather than direct measurement of service-user perceptions of quality. Critics claim that direct measurements will be pyschometrically superior and less biased (Parasuraman, Zeithaml, Berry, 1993, 1994). Brown (1993) argued that calculation of a difference score in the Servqual measure could lead to several psychometric problems and suggest that a non-difference score measure would be more desirable. Their empirical investigation indicated that:

- The reliability of Servqual has below that of non-difference score measure;
- Servqual could not achieve discriminate validity but a non-difference score displayed better discrimination validity;

- Variance restriction effects were exhibited in using Servqual;
- A non-difference score measure outperformed Servqual on other psychometric considerations while requiring subjects to respond to only half as many items.

The Servqual authors refute these arguments, claiming that it is necessary to evaluate expectations, that the five dimensions are valid, and that the difference-score has not been proven to be unreliable and biased (Parasuraman et al, 1994).

2.8.8 Servqual Summary

Selber and Streeter (2000) argue that although the Gap Model and Servqual were developed in a profit organisation setting, they are relevant to the contexts of non-profit welfare service organizations as well. They argue that the model is easy to use, comprehensive in its understanding of quality and facilitates standardization of quality of services and benchmarking. This approach to understanding client evaluations of service quality gives the service-provider more information about the client than if client perceptions alone were to be measured. Another reason why this model is so relevant to services is its focus on client needs as identified by the clients themselves. The model is holistic and relational, linking all areas of the process of service delivery and reception. Unlike other methods used to measure service quality, none except Servqual has received extensive empirical testing.

Despite criticism Servqual remains a popular and well-used measurement tool across many service industries. If Servqual is to be applied successfully then the weaknesses must be understood.

2.9 INTRODUCTION TO CONTAINERISATION

Containers are the most obvious elements of international shipping. They are seen everywhere; moving along the motorways, in the factory loading bay and stacked on specialist trains. But containers were the units that became the common factor in a revolution, which spread across the world of cargo liner shipping in the 1960s and 1970s, and totally changed the face of the maritime industry.

Before containerisation, cargo was loaded onto a truck piece-by-piece and driven to a port where each piece would be individually unloaded and then hoisted onto the ship. This was a cumbersome process and was time consuming. Ships often needed to be in port for 10 days to complete the

process of unloading and loading. With increasing global trade a more efficient and effective means of transport was needed.

The container / intermodal revolution is generally traced back to experiments by Malcolm McLean (then of the McLean trucking company and later SeaLand) in 1956. The first experiments involved loading some 35-foot highway trailers onto a vessel (the "Ideal X") rather than unloading the contents of the trailer and loading these on the vessel by traditional cargo sling methods. McLean's experiment quickly showed that there was no need to take the wheels along and that more efficient stowage and handling methods were available if only the box part of the trailer was hauled aboard ship. This led to the separate container and chassis units-and to the standards for container size and handling hardware that are still in use today.

Containerisation is the technique or practice of stowing freight in reusable containers of uniform size and shape for transportation. The freight may sometimes be oddly shaped and in different quantities but when stowed and shipped in containers, it can be handled as a single piece thus making it a lot easier to transport. This reduces the time and costs involved. With the arrival of containerization, shippers began packing their goods into containers and delivered them to the port container yard for shipment. The vessels calling at the port could unload and load containers and sail within a day to two depending on the number of boxes to be handled.

Containerisation also enables intermodal transport, i.e. the total movements from the origin to the destination, using different modes en route like roadways, railways, shipping and airlines. It could be either a combination of several or even just two of these modes.

2.9.1 Container Descriptions

According to the International Standards Organisation (ISO), a freight container is "an article of transport equipment intended to facilitate the carriage of goods by one or more modes of transport, without intermediate loading". Containers come in different types and shapes. The ISO recommended lengths are ten foot (ft); twenty ft, thirty ft and forty ft, but the most common containers are the twenty ft and the forty ft container. These sizes are multiples of the cargo pallets on which most goods are loaded into containers.

Like highway trailers, containers come in many variations. The configurations include simple boxes with end door only and no insulation; insulated; insulated and equipped with temperature

regulating equipment (heating/cooling). Temperature control equipment can be internally or externally mounted and use either on-board or external energy sources. Some special-purpose containers have side as well as end doors. It is also possible for containers to have top doors/hatches. Some containers have adjustable vents for air circulation, but without any mechanical heating/cooling equipment.

Two special variations are the tank container and the flat rack. Tank containers consist of a cylindrical tank mounted within a rectangular steel framework with the same dimensions (usually twenty or twenty - eight ft) as other containers. These tanks are intended for use for either liquids or bulk materials. Due to the weight of liquids and most bulk cargoes, larger sizes are not used for tank containers.

Flat racks are open-sided platforms, usually with end bulkheads, with the same footprint as basic containers. A collapsible flat rack is one where the end bulkheads can be folded down when the flat rack is stored or shipped empty. Flat racks are used for heavy machinery and are typically carried below decks on ocean legs of their movement.

Containers that are described as twenty ft are normally actually nineteen ft eleven inches. This simplifies getting two twenty ft containers into the same space as a forty ft container. The framework of containers is normally steel. The exterior sheathing may be either steel or aluminum. Interior sheathing may consist of plywood or composite materials. In 1995 testing began for containers made of space-age composites. Though more expensive than metal-sheathed containers, the composite-sided containers are lighter and are expected to have a longer useful life than metal containers.

2.9.2 A Theoretical Perspective of Containerisation

Locklin, in his book Economics of Transportation, discusses transport coordination with specific reference to containerised cargo. More specifically he describes the uses and advantages of multimodal transport coordination such as through routes and joint rates by water and rail lines. This "coordinated service" he called Intermodalism. However, much of today's usage has limited it to applying to containers designed and used to move goods via different modes of transportation.

In, Containerisation is established in Southern Africa, an article appearing in the Freight Traders Weekly, Marsh (1980) looks at the progress of containerisation within the transportation system of South Africa and examines the further improvements still to be developed and gives an

authoritative assessment of what the future holds for the container industry. He describes the advent of containerisation in South Africa in the short period of time it took to take off as a "near miracle".

In a foreword he mentions that government should forge an overall transport policy as transportation in its different forms is closely related to commerce and industries. He also refers to the fact that a sound and sustainable economy in South Africa depended much on the readily availability of an efficient transportation network at reasonable costs.

Loubser (1980) in this article gives some thoughts and guidelines on containerisation and shows the increase in this market through the ports, i.e. a growing market which on average initially had volumes of 10000 twenty equivalent units (teus/6m containers) per month which three years later increased to 485000 per month. He also looks at the reasons to why the then South African Railways (now Spoornet) had to invest in a large cartage fleet which was invariably under-utilised outside normal working hours and thereby negated its efforts to keep costs low.

He was of the opinion that due to containerisation's door-to-door service there should no longer be fears that port congestion or any other transportation bottlenecks would hamper the upturn in the economy. He also suggests that since South Africa has joined the club of industrialised countries more and more goods would be shipped both ways and more specialised equipment would become essential.

Groenewald (1980) gives a historical perspective on South African Railways and Harbour's unique achievement with regard to containerisation but also refers to the period prior to this as one of uncertainty. He also notes that while a decision was not as yet made, the Ports Authority prepared itself for the possible advent of containerisation although physical planning could only commence when this decision was eventually made. The author further refers to the fact that the different harbours had its own set of variables that dictated the best operational system. An important innovation brought by containerisation was the visual display unit (VDU), which was the output source for a countrywide container computer controlled and tracking system. This was run from a central computer in Johannesburg with communication cables linking the central computer with minicomputers situated in the different container terminals around the country.

The article also refers to the Conference Lines Shipping (Transport) Service between Southern Africa and Europe as second to none in the regularity of its service, speed of delivery and overall efficiency. He further states that none of this would have been possible without the co-operation

and efficiency of the SAR&H and asserts that the company is always trying to improve procedures in conjunction with rail and port management. Reference is also made to the South African government's restrain on rates for containers, which he views as clearly demonstrating the positive attitude shown by SAR&H.

While the statistics are impressive the volumes were well below the original throughput forecasted for the depots built. He also suggests that the regional distribution of the containerised traffic posed a problem. It lead to the relative poor utilisation of the facilities in Cape Town and Johannesburg and while throughput out of the Durban facility has been exceptionally high with much of the Johannesburg area traffic being consigned to and cleared in Durban.

Hill (1999) gives a theoretical framework of globalisation and addresses the important issues of the global trade and investment environment; the strategy and structure of international business as well as business operations more specifically with regard to exporting, importing and counter trade.

Gibsons (1997) provides an analogy for transformation as "Preparing for the tomorrow" and suggests that as we prepare to drive off the road and into unfamiliar terrain that lies ahead, it becomes clear that we are going to require a new kind of vehicle, some very different driving skills and a whole new sense of direction; but, even more fundamentally, we will need to challenge all our personal and organisational assumptions about the world we are heading to – the very world of the twenty-first century.

Senge (1993) reminds us that as we approach the 21st century there are three distinct driving forces, any one of which would probably be sufficient to bring about significant change in management and organisations. But what is important is that the operation of these forces together is what will bring about profound change. Firstly, there is technology. This is followed by globalisation, which cannot be divorced from technology. Thirdly which is the hardest to name and yet probably the most challenging, concerns the unprecedented growth of total material throughput due to all industrial activity on a global scale, the consequent stress on the natural system, and the increasing complexity and interdependence.

Gilfillan (2000) defines e-business enablement as "the ability of organisation to conduct the full spectrum of business activities electronically". The systems are open, integrated and spans organisational boundaries. This type of organisation has no boundaries in its definition and use of its systems. Like Maslow's hierarchy of needs, the e-business enablement has 5 levels moving

from lowest to highest, i.e. standalone; connected; integrated; structured and enabled.

Matthewman (2000), shows that a high level of education is needed to ensure that e-commerce becomes a strategic issue which becomes even more vital with regard to regulating trade and customs, sharing transport, power and telecommunications infrastructure, to link separate entities seamlessly.

2.9.3 Comments of Container Users

This survey (Container Handling Procedures at Matshapa, 1993) looks at the different views different customers had on containerization. The following are some of the comments:

"The box is a million times better than break bulk. We find the containers to be far faster and follow a policy of only using conference lines. As a result a have been able to negotiate lower insurance premiums..."

"Containerisation was largely thrust upon us. We didn't have much choice but to go along. ...The transit time between Durban and the inland terminal is too long. If the terminal was run by private enterprise containerisation would be far more attractive".

"...containers had been found to be highly effective in door-to-door delivery. It is a bit expensive but extremely efficient".

"We find that the box offers a definite cost advantage".

"Containerisation has only served to increase the time taken to move freight around. ... We have noticed a cost reduction as far as packaging is concerned".

"Since the introduction of containers we have noticed a massive drop in claims for pilferage and damage. ... Containers are not really more expensive than break bulk since one saves on the inland freight. I would never dream of going back to break bulk".

"I would never return to break bulk. We have experienced a very advantageous reduction in the way of insurance premiums. ... I find containers to be very, very reliable".

"The greatest holdup appears to be in the inland terminal where the South African Railways does not seem to be able to process the containers fast enough".

"The main problem appears to be the congestion experienced by the SAR at the inland port.

"I would say that the box is more convenient in every way" (In comparison with break bulk).

2.9.4 Containerisation Concluded

In the year 2000, the container trade recorded a massive 200 million units and the traffic is estimated to grow at an average rate of five per cent per annum over the next ten years. It might even double by 2010. This has to a large extent been spurred by the growth of many Asian countries, most notable among them being China, Japan, Korea and Malaysia.

Containerisation has been the catalyst for the development of intermodalism – the secure and comparatively cheap transfer of merchandise in containers from ship to road to rail. In today's competitive marketplace, it has enabled organizations to create and deliver value to customers through logistics efficiency and effective management of the supply chain. This in turn enables the achievement of cost reduction and service enhancement.

The container revolution effectively abolished all the expensive and time-consuming handling that was done to goods, in and out of lorries, trains and warehouses. Loaded into a twenty ft or forty ft container at the point of origin and sealed, the goods will not be seen again until they are delivered to their final destination. To handle the containers and speed them on their way, a whole logistic system has been developed which include specialist road and rail transport, ground handling equipment, like straddle carriers and huge gantry cranes in the port terminals as well as the containerships. The expanding containerisation of world trade and its steadily growing offshoot, intermodalism, have radically changed today's business environment and become indispensable to the commercial world.

CHAPTER THREE

CASE STUDY OF SPOORNET

3.1 INTRODUCTION

Spoornet, a division of Transnet, is a South African company with the Vision of being a World Champion in transport and logistics solutions, contributing to the ideals of South Africa, and to be a driving force behind Africa's economic renaissance. This is achieved by utilising extensive knowledge and experience of freight logistics, arrival time management and value added services. Spoornet positions itself as the reliable business partner every company needs to deliver their commodities on time with customer satisfaction as its primary concern.

Spoornet is one of the founding members of SARA (Southern African Railway Association) and also plays a leading role in Africa. The Association focuses on operational efficiency among railways of the Southern African region. SARA represents: CFB (Benguela Railway in Angola), Botswana Railway CFM (Mozambique Railway),Malawi Railway, TransNamib, Swaziland Railway, Tazara (Tanzania/Zambia Railway Authority), Zambia Railway and NRZ (National Railways of Zimbabwe).

Spoornet's services have developed to offer more than railhead to railhead transport. Its total

service provision includes:

- Feeder services
- Warehousing Inventory management
- Interactive and visible Information systems
- Freight insurance handling
- Customs/excise
- Logistics audits
- Supply chain management.

3.2 DEVELOPMENT OF SPOORNET

This summary highlights some of the key contributions to the foundation of Spoornet as it is known today.

1910 Cape Government Railways, Natal Government Railways, Transvaal Government Railways and the Ports of those provinces combined to form South African Railways and Harbours (SAR&H)

1912 - 1925 Period of major railway and harbour construction of infrastructure such as Electrification of lines, Locomotive and rolling stock development, Expansion of rail network, Harbour expansions First road transport operations.

1934 Incorporation of SAA into SAR&H.

1965 Incorporation of pipelines into SAR&H.

1981 Government agreed that SAR&H should restructure along business lines. Old SAR&H became a state business enterprise, South African Transport Services (SATS) on 1 April 1981.

1985 - 1987 Internal restructuring of SATS into a multimodal transport organisation comprising railway, harbour, road transport, aviation and pipeline operations.

1990 SATS became Transnet Limited - incorporated as a company on 1 April 1990 with the State as sole shareholder. Spoornet became one of the major divisions of Transnet. At the same time, the rail commuter assets were transferred to the South African Rail Commuter corporation (SARCC). Spoornet operated this service on contract for the SARCC.

1992 PX parcel services business unit of Spoornet ring-fenced and became a separate division of Transnet (totally removed from Spoornet). This involved the transfer of 13 343 employees from Spoornet to PX.

1997 Metro created as a division of Transnet responsible for operating rail commuter services This

involved the transfer of 10 285 employees.

1999 Spoornet currently operates three major freight divisions; General Freight Business (GFB), Orex and COALlink. Spoornet also operates Mainline Passenger Services and the luxury Blue Train.

3.3 COMPANY BACKGROUND

Spoornet, the largest railroad in Southern Africa has 33 000km of single track, 3 600 locomotives and 143 000 wagons. It is a South African company that operates in both freight logistics and passenger rail transport markets in Southern Africa. It is the largest division of Transnet, a state owned company with amongst others, port management, pipeline, road haulage and air carrier divisions. Transnet was established in 1990 as a result of government policy to commercialise its transport business interests and deregulate the transport industry in South Africa.

Spoornet is the largest heavy haulier and transporter of general freight in the Southern African region. Spoornet's background is one of a common carrier with a monopoly of traffic moving by rail. Spoornet's recent past has been characterized by the need to meet the challenges placed by its markets, customers, competition and shareholders. To achieve this Spoornet has and must continue to perfect the move from being a rigid railway transport company to a flexible and customer oriented service company.

Spoornet is a centralised company comprising three major divisions, namely, Heavy Haul, Mainline Passenger Services and General Freight Business. Heavy Haul is made up of Coal Link and Orex that specialise in the movement of coal and ore, two major South African export commodities. Mainline Passenger Services plays a major role in the transport and hospitality industry by providing a service to the South African and international traveler.

General Freight Business, the focus of this study, is grouped into six industry based business segments, which form mining, heavy manufacturing and light manufacturing divisions. This service includes solutions for such industries as, mining and mineral, steel, wood, grain and containers. The Segmentation logic was applied to identify these six market segments and is closely aligned with the relationship marketing philosophy. This meant that the segmentation had to provide for one interface (Key Account Manager) for one customer. The Intermodal Sector that focuses on the movement of import/export containers is one of these segments. This division focuses exclusively on the transport of import and export containers moving to and from the various Ports of South Africa, including City Deep which is the largest inland port in the Southern

Hemisphere. This service requires absolute predictability, consignment care, responsive customer service, reliable service delivery, quality commercial processes and enhanced customer value in order to retain and grow the customer base. Increased customer dissatisfaction, with service quality, in recent years has, has prompted this study.

As rail is a fixed cost business with very expensive infrastructure the traditional rail traffic that Spoornet is good at moving includes Base loads with no shunting, large parcel size, even flows, long distances and economies of scale. Rail as a mode of transport is largely inflexible and inconsistent as a result of complex planning and operations procedures. It then becomes difficult to serve the very time sensitive import/ export container market.

Since the mid 1980's, the Southern African road transport industry has grown considerably with the number of road operators increasing from less than 400 in 1998 to nearly 4000 today. With fairly low barriers to entry, as well as poor road policing, overloading, very little quality control, predatory practices and cutthroat competition, road has become a major competitor. This had made freight transport by road highly attractive to light manufacturing industries, and more recently heavy manufacturing.

In line with industry forces, Spoornet has committed itself to a vision of world-class freight logistics and has accepted the challenge of becoming a leader in this field, fulfilling its responsibilities to South Africa. To achieve this, Spoornet has to sustain its heavy haul leadership and, at the same time, reposition its freight transport services.

3.3.1 Two –Stream Spoornet

Spoornet initiated a re-engineering programme in 1996 called Two Stream Spoornet (TSSN). This programme was designed to eliminate duplicated work effort and inefficiencies associated with geographical and commodity segmentation. The TSSN philosophy essentially brings the predictable service and FLS concepts together. TSSN is based on the core business of the production of a logistics capability and the marketing of that capability (two streams). Spoornet business processes focus on these two core elements. Although the business stream of the TSSN is responsible for marketing (sales, customer relations and after sales service), it is intended that the production stream and all support services have customer orientation as the primary goal. While this is the intention it is noted that there is currently a lack of customer focus by the various operations / production departments which results in inflexibility in service execution and

subsequent customer dissatisfaction.

In the late 1990's customers began demanding differentiated services, negotiated pricing, and guaranteed services to be delivered reliably and predictably. Other factors that necessitated the move to improve service quality were increased global participation, and direct shipments for exports instead of transporting only traditional rail traffic.

This means that today the railroad finds itself competing with an industry in the midst of a shake-out where only a few of the largest blue chip players have a long term view of the role of transport in the economy and understand the world wide move from basic transport to integrated freight logistics solutions with emphasis on operational efficiency and service quality across the entire supply chain.

3.4. FREIGHT LOGISTICS SOLUTIONS

Spoornet provides freight logistics solutions to meet and deliver on customers' needs and requirements. Freight Logistics Solutions (FLS) is a service offering that covers all aspects of a products cycle, from production to consumption and each phase along the way. For example, the consignment life cycle for iron ore begins when it is mined, to where it ends when it ends up as a final product. Spoornet's FLS products were created to offer customers a global door-to-door service, extending its products beyond rail. Through joint ventures and partnerships with other service providers, Spoornet intends transforming the freight transport sector into an effective and efficient logistics management industry.

Freight Logistics Solutions describes an enhanced or beneficiated freight transport product incorporating the concept of "time and place" utility. FLS describes the consignment life cycle. It starts with the production and ends with the consumption of a consignment in each phase of the process. Spoornet's FLS products were created to overcome the displacement in time and physical location of the consignment, between the point of production and the point of consumption. This has meant Spoornet's expansion into warehousing, transport (including long haul, transshipment and feeder services), inventory carrying cost and freight forwarding.

To achieve this, Spoornet has developed competencies, such as;

- The understanding of supply chains
- Logistics trends

- Logistics and supply chain management
- Diagnostic analysis
- Solution design for customers

The adoption of FLS was intended to deliver a holistic product, levered from freight transport, its core competency, and from rail, its core investment, with the intention of becoming a leader in supply chain management.

3.5 CUSTOMER RELATIONSHIP MARKETING

Spoornet operates in a typical industrial market, which requires customer intimacy rather than mass marketing to ensure success. The business must actively develop tools that will harness customer knowledge and contact. This will entrench relationship marketing as the basis for all marketing initiatives. Relationship marketing focuses on cementing customer relationships with all customers. Spoornet recognizes the fact that relationship marketing only succeeds in a culture of service excellence. Customer Relationship Management (CRM) underpins the following approach as adopted by Spoornet:

- Appropriate customer segmentation (industries, sectors, customer type) with differentiated services and treatments.
- Ongoing customer segmentation aligned with industry-and market segmentation.
- Alignment of the segmentation logic with differentiated service offerings to enhance service delivery.
- To build sustainable business relationships with strategic customers.
- A Single point of contact enhancing quick responses and solutions.

Spoornet's CRM philosophy further aims to develop insight driven value propositions by:

- Focusing on rail/road offerings .
- Joint collaboration projects.
- Focussed and relevant market intelligence and customised solutions.CRM enables Spoornet to:

- Understand competitive forces impacting strategic and key customers.
- Develop opportunities for revenue and profit enhancement .
- Focused monitoring and proactive communication.
- Continuous monitoring of internal and external customer satisfaction levels.

- Risk management to ensure long- term sustainability of Spoornet and customers
- Supporting processes across the organisation to achieve Spoornet and customer objectives .
- Develop differentiated contracting regimes aligned with business opportunities.
- Develop an integrated view of the customer.

3.6 E - COMMERCE

Spoornet's Electronic Commerce (EC) drive is aimed at providing a seamless interface to trading partners, stakeholders and customers, moving towards the capability of conducting a full range of business activities electronically.

Spoornet's e-commerce enabled freight logistics offerings include: View invoices and consignments parameters, Next Week's Business (NWB) a system which captures each customer's transport requirements for each day of the following week.

The Freight Reservation System enables Spoornet to take consignment details and in consultation with the customer, check available resources, commit to time appointments and make freight reservations from origin to destination for each consignment. Spoornet's business process is based on advance planning and scheduling and follows a policy of freight reservations. A host of systems are used to enable this process. Freightweb, Spoornet's interactive web-based application makes some of this functionality available to customers. Customers can view invoices and consignment parameters; Customer transport requirements for each day of the following week can be captured in the Next Week's Business (NWB) application. This aids production planning and the optimisation of resources and assets. Spoornet promotes customised solutions and augments these through the use of electronic commerce (EC) capabilities, providing a seamless interface with trading partners, stakeholders, supply chain partners and customers.

3.7 PROJECT PREDICTABLE SERVICE

Predictability is the cornerstone of Spoornet's service. Spoornet has recognized that the core requirement for delivering a predictable service requires changing the railroad's basic philosophy from a push to a pull type system. The consignment is pulled through the network and its total time assignment is managed accordingly. This "demand" view of logistics practice implies that only the goods required by the end consumer are moved through the supply chain with very little buffer stock. Demand management starts with the customer and works backwards- it is pulled through the supply chain. This therefore requires flawless and efficient execution of service. The schedules for

making and delivering goods across the supply chain need to match a precise window of delivery, hence predictability of all service providers. For Spoornet this translates to Arrival Time Management of the consignment with predictable arrival and departure times and is achieved via a Freight Reservation System.

3.8 SPOORNET CHALLENGES

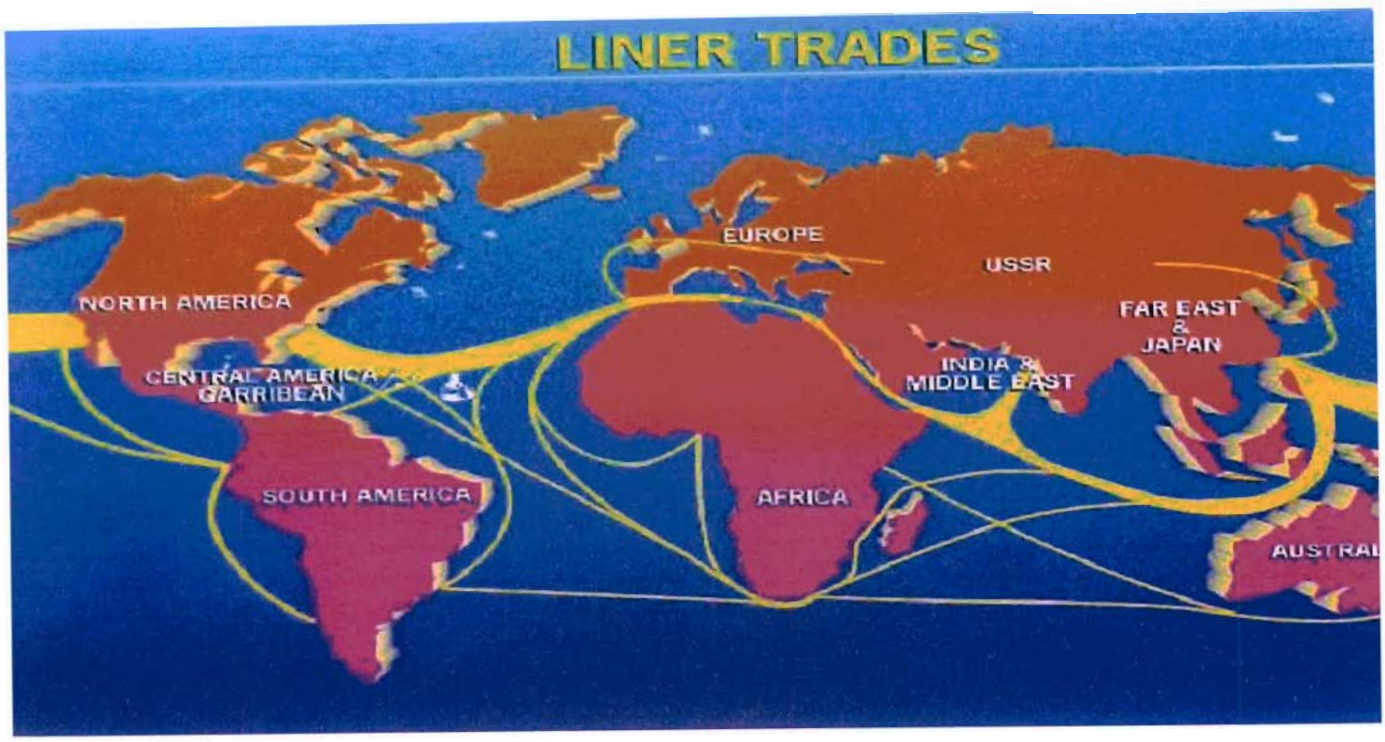
Spoornet plays a vital role in South Africa's economy and like South Africa's economy it faces large uncertainty and many challenges. The most obvious challenge facing Spoornet is a lack of resources and funding. Spoornet's predecessor, SA Railway Services let infrastructure and rolling stock capacity decline over 25 years, leaving many locomotives, wagons, lines and other vital equipment in a state of disrepair. This dilemma can clearly be seen in terms of Spoornet's lack of rail wagons, vital to the moving of freight. The government has outlined plans to upgrade and purchase new equipment through an initiative that will cost approximately R15 billion. The length of time and effectiveness of this upgrade is crucial.

3.9 OVERVIEW OF THE SOUTH AFRICAN CONTAINER MARKET

Containerisation was born more than 40 years ago. In Southern Africa, containerisation only began in the 1970's. General cargo traffic is increasingly containerised on all the world's major shipping routes. In line with this development, Transnet, as an infrastructure facilitator invested in terminals as well as its own private containers called 'SARU' containers.

The South African Container Terminals (Ports) are not situated on the major East / West container liner trade routes thus limiting the opportunities for large volume growth but are however strategically positioned on trunk routes serving the Southern hemisphere (figure 3.1).

Figure 3.1 - East /West Container Liner Trade Routes



The containerised freight market in South Africa has three main categories:

Domestic Traffic - this involves the management of containers locally i.e. Inter-city traffic and Over-border.

Import Traffic - this involves the management of containers from any origin overseas that arrives via South African harbours for a destination locally and overborder.

Export Traffic - this involves the management of containers leaving South Africa via our ports with a destination overseas.

World trade continues to grow with almost two thirds of trade volumes moved by sea. Containers account for sixty – three percent of world general cargo trade. Predictions given by Portnet's Durban Container Terminal (DCT) are that the rate of increase in international container traffic will remain at an average of five percent per year for the next twenty years. This is in line with international predictions for the growth of containerised trade worldwide.

Durban is the premier container port. It is followed by Cape Town and PE. An estimated 1,6 million containers a year are handled by South African Harbours. This market currently displays

good growth and is expected to continue growing within the next twenty years. Substantial investment is already being made at the Durban Port to cope with this anticipated increase in traffic by expanding the container terminal area over the next 3 years to handle a potential capacity of 1.8 million containers. Spoornet is currently conveying about 0,450 million containers per annum, only a portion of the total volume.

Other major changes in this market are the move from carrier haulage to merchant haulage where landside agents have greater influence over the mode of transport once vessels dock at the various ports. This implies greater competition amongst the different transporters of road, rail and sea for domestic deliveries. The market is also expected to combine forces to increase economies of scale. Transporters have already expressed interest to become more involved in terminal management as this plays an important role in the total distribution channel.

South Africa's Foreign Trade Performance has consistently grown since 1994, resulting in increased import and export volumes.

In 2001 South Africa exported to 254 countries and imported from 218 countries.

In 2002 South Africa exported to 263 countries and imported from 222 countries.

Containers handled at South Africa's three main ports:

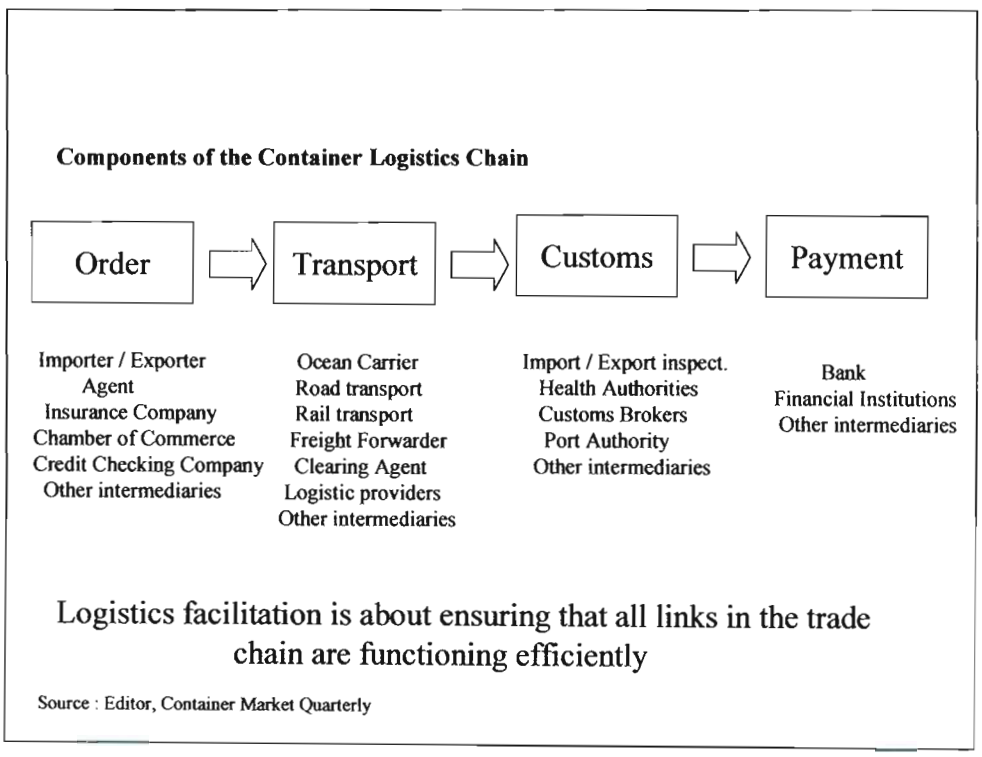
Table 3.1 – South African Ports Container Volumes

	1998	1999	2000	2001	2002
Durban	1,079,692	969,085	1,169,376	1,223,601	1,313,290
Cape Town	325,330	351,785	354,137	471,112	476,394
P.E	228,425	223,629	220,576	156,883	278,145

The majority of all containers in South Africa are handled by Portnet's Durban Container Terminal followed by the ports of Cape Town and Port Elizabeth (table 3.1). Seventy-five percent of the volume of SA's containerised exports leaves the country via the port of Durban. Durban is also the most significant port for containerised imports. The scope for growth on the Durban - Johannesburg route is large and transport companies compete aggressively on this route.

Volume growth is expected on the major import /export lines e.g. Durban-Gauteng and vice versa, and Port Elizabeth - Gauteng. Spoornet volumes are currently between twenty to twenty – five percent of total market size on the Durban – Gauteng route. Spoornet needs to position itself to fully exploit the anticipated growth in container volumes.

Figure 3.2 Key role – players in the import / export process in South Africa



The South African import / export container market can be summarised as follows:

- Port growth plan to treble container handling by 2020 - Gear up and plan for increased rail container business predominantly on the Natal Mainline.
- SA trade is typified by a silo approach with many role-players i.e. shipping lines, shipping agents, clearing and forwarding agents, SARS, importers, exporters, transporters, insurance companies and logistics suppliers (figure 3.2)
- South African industry is slow to adapt to new international concepts in intermodalism i.e. piggyback etc.
- South Africa's major urban / industrial complex is not at the coast but some + - 500 km inland making transport costs a major consideration.
- An obstacle faced by shipping lines is the re-positioning of empty containers
- Shipping Lines dictate port of discharge
- Traffic mix and routes use various options of transport.

- Shipping industry and related services are unique and require specialized expertise and skills.

3.10 SPOORNET'S CONTAINER MARKET SHARE

Spoornet's market share has diminished from 200,000 containers in 1999 to 140,000 containers in 2003. Spoornet's market share is made up of:

- Thirty – seven percent in the export market.
- Twenty- four percent in the import market.
- Thirty – five percent in the domestic market.
- Road haulers average seventy percent.

Durban Container Terminal (2004) figures confirm that seventy – five percent of all containers enter or leave the port by road, with twenty – three percent using rail and two percent coastal shipping. These figures confirm that customers prefer using road transporters to rail. In order to reverse this decline Spoornet needs to improve service delivery and increase customer satisfaction.

3.11 INTERMODAL SECTOR PROFILE

The Import / Export Container Division of Spoornet also known as the Intermodal Sector consists primarily of Third Party Logistics Providers, who operate under the common banner of Intermodal Marketing Companies (IMC's). There are eight major container rail contracts with the major container companies in South Africa.

The IMC's have both import/export cargo owners as their customers, whilst they in turn "wholesale" Spoornet services to these cargo owners. Some of the IMC's are linked to major shipping lines, either contractually or by shareholding, but also manage domestic container movements that are also covered in other sectors of Spoornet. In addition to the Intermodal Sector, other sectors within Spoornet also service container customers and conclude container contracts.

The Intermodal Marketing Companies interact directly with South African Ports Operation (SAPO) and Spoornet Terminals on a daily basis. The twenty – four hour operation is more critical at the SAPO terminals than it is for Spoornet Terminals as SAPO operates on a twenty – four hour basis.

This industry is currently experiencing growing volumes as demand for secure shipment increases. Despite many hub-to-hub movements (Durban, Port Elizabeth and Cape Town ports to Gauteng), analysis shows an industry characterised by small wagon- loads to a high number of destinations.

Spoornet has six major inland terminals within South Africa and nineteen satellite depots that are strategically established to link with all the ports in South Africa. These Spoornet terminals are extensively utilised by all Intermodal Marketing Companies. The following are the six terminals, each with satellites depots handling containers, cars and bulk traffic: City Deep (Eastcon, Kazcon), Belcon (Saldanha, Ashton, Dalcon), Deal Party (East London, George), Pretcon (Phalaborwa, Witbank, Pietersburg, Nelspruit, Piet Retief), Bayhead (Newcastle) and Bloemfontein (Kimberly, Maseru, De Aar, Kroonstad, Kakamas, Bethlehem).

Historical and current pricing philosophy has been very "accommodating" in order to gain market share in the container business, traditionally dominated by road transport.

311.1 Intermodal Strategic Objectives

The following are the current strategic objectives of the Intermodal Sector:

- Focus on operational efficiency.
- Develop an optimal revenue model using effective pricing based on a clear understanding of costs and sound business principles.
- Determine how to cross-subsidise within the customer's total business, e.g. empty container legs.
- Extend Spoornet's participation into services other than transportation to ensure non-dependency on volumes alone.
- Encourage business growth directly with shipping lines.
- Intermodal Portfolio should rather be called "Container Division" to align with international terms.
- Run "container" business as a separate business unit with own performance accountability, moving away from legacy of a "social services carrier."
- Facilitate direct access to rail for other than IMC's, e.g. freight forwarders.
- Develop integrated Supply Chains: Spoornet & SAPO in alliance with selective industry role players.
- Define and Brand Value added/differentiated offerings & services for a specific customer.

It is also the intent of the sector to deal with customers individually and less as a group as is currently the practice. This is to be achieved through the development of a strategy per customer as opposed to dealing with I.M.C's as a group. It is envisaged that this would break the collusion

mentality amongst the large IMC's in the industry change the mentality that "what applies to one applies to all."

3.11.2 Intermodal Service Offerings

The following rail services are offered to Intermodal Marketing Companies:

1. Three Train Traffic Categories

The strategic intention of this programme is to establish three distinctly different service offerings to Spoornet's current and prospective customers. Each category is categorized by its own specific definition, business rules and operational and commercial criteria. These traffic categories will enable Spoornet to plan a significant portion of the total train plan and required resources in advance. This ultimately leads to greater predictability during service execution, hence customer satisfaction. This train plan, with a large base load component improves ability to proactively identify and manage deviations.

The use of three categories of capacity management enables Spoornet to commit more resources to customers longer in advance and deliver them as promised. The service is differentiated based on customer consistency and traffic volumes, while simultaneously simplifying the train service. Distinctly different operational service offerings also allow commercial to match the service specifications offered more closely to customer and industry specific requirements.

This service aims to service customers through three different ways of capacity management and resource commitment.

The definition and characteristics of each service offering (traffic category) is as follows:

- **MegaRAIL**

This traffic consists of large consistent traffic volumes with a fixed maximum parcel size. Guaranteed capacity is available. This service is further characterised by fixed train slots, i.e., will always run on exactly the same day of the week. With this service the customer pays for the planned slot whether or not it is utilised.

- **flexiRAIL**

The pattern of demand is not consistent enough to conform to exactly the same day of the week and

same time of the day from week to week. The charter analogy best describes this service. Maximum volumes are specified and agreed upon on case specific bases every week. There is however no guarantee that the charter requests will be satisfied. Other corridors, i.e. country- wide terminals, can best be serviced by flexiRAIL strategy. Also, peak imports/exports, e.g. evacuation of empty containers are serviced by flexiRAIL.

- **accessRAIL**

This service involves scheduled trains and services traffic between terminals. The traffic is often irregular consignments. The municipal-bus type service is the analogy that best describes this service. All demands are handled on a "first-come-first-served" basis. Delivery of service is dependent on the availability of adequate capacity that was pre-agreed.

2. IMEX Service (Import/Export)

This is the Import / Export (IMEX) service between City Deep and Durban Container Terminal. The service has ring fence resources and entails five trains to Durban and five trains to Gauteng i.e. bi-directional traffic. Although these trains are currently unbalanced due to more exports compared to imports, attempts are being made to obtain balance traffic. IMEX ring-fenced block trains to the other 2 major corridors namely, Port Elizabeth-Gauteng and Cape Town-Gauteng corridors to cater for the motor industry.

3. Table Bay Harbour to Rosslyn Service

This service is currently dedicated to MSC Logistics for the conveyance of BMW Complete Knocked Downs (CKD's) in containers.

4. Algoa – Bay to Pretoria Service

This service is dedicated to the motor industry around Pretoria, i.e. Nissan South Africa in Rosslyn and Ford/Mazda in Silverton. The CKD's are discharged in Port Elizabeth and railed to Pretoria.

5. South African Ports to Overborder Service

Cargo is discharged at South African Ports and railed to over border destinations like Zimbabwe, Botswana, Swaziland and Lesotho. These countries are mainly land-locked; hence South African Ports are being utilized.

6. Terminal Services

- Physical and administrative checks.
- Acceptance/delivery of the container in the interchange zone at the terminal.
- Loading/unloading of the container at the terminal interchange zone from/to a hauler or when lifted from/placed on a rail wagon at the railhead.
- Conveyance between the interchange zone or railhead and the stack.
- Stacking/destacking.
- Handling by means of container crane and/or gantry crane as the case may be.
- Transhipment of containers emanating from and destined for foreign countries.
- Storage.

7. Freight Protection Facility

The Freight Protection Facility was successfully introduced and implemented in 1998. The principle aim of the Freight Protection Facility is to streamline and reduce transport insurance cost for all Spoornet customers.

Guardrisk and Cigna Insurance companies, Spoornet, CMC and TMRS, divisions of insurance brokers Alexander Forbes are the most important participants. The facility, a first for rail in the world, provides protection for freight on the total supply chain. It has the potential for customers to cut transport insurance costs considerably on the basis of one risk, one premium. The facility is risk related, and risk management can be applied more effectively.

3.11.3 Intermodal Product - The Container Wagon

The container rail wagon (figure 3.3) is designed to convey either two six-metre containers or a single twelve-metre container. The standard features and measurements of this container wagon are detailed in table 3.1.

Figure 3.3 – A Container Wagon

Table 3.2 Wagon Features and Measurements

Standard Features		Measurements	
Designed for:	Container Traffic	Length:	12 190 mm
Brake System:	L/R/V	Width:	2 258 mm
Tank Lining:		Height:	n/a
Mass Limit on Rail:	74 000 kg	Floor Area - m2	27,5
Tare (kg)	18 900 kg	Remarks:	This truck is designed to transport containers
Load (kg)	48 000 kg		

3.11.4 Intermodal Challenges

The Intermodal service as provided by Spoornet does not meet current customer demands, particularly in terms of capacity / resources. Other factors are:

- The costs for less than trainload traffic are prohibitive.
- The industry has increasing volumes as demand for secure shipments increases.
- Lack of predictability has seen market share shrink.
- Anticipated consolidation by road hauliers will see market share diminish even further.
- Key customers are logistic providers and competitors. Pricing philosophy based on a "social service carrier" cannot continue amid pressure to change to a "profit organnisation".
- There is a lack of capacity to meet demands for large volume once-off shipments. Capacity availability is of critical importance and the Intermodal Sector has been restricted by capacity shortages.
- The sector is plagued by high seasonality in terms of demand.

- Security and time sensitivity are the two key drivers in these industries that need enhancement and guarantees in order to attract greater market share.
- Duplication of Terminals countrywide resulting in under-utilised resources.
- Traffic mix and routes use various options of transport. Imports are transported mainly by road (JIT principle) while rail receives more exports (meet pre-determined stack deadlines).
- Shipping Industry and related services are unique and require specialized expertise and skills.
- Port growth plan to treble container handling by 2020.
- SA trade is typified by a silo approach with many role-players i.e. shipping lines, shipping agents, clearing and forwarding agents, SARS, importers, exporters, transporters and logistics suppliers that results in a lack of common data sharing and integration.
- The South African Industry is slow to adapt to new international concepts in intermodalism. This has resulted in infrastructure limitations and a lack of implementation of unique initiatives.
- South Africa's major urban / industrial complex, Gauteng, is not at the coast but + - 500 kilometers inland making transport costs a major consideration.
- An obstacle faced by shipping lines is the re-positioning of empty containers

Furthermore, IT Requirements are very specific to this sector in terms of:

- Reservation systems.
- Invoicing Systems to match 3 PL and 4PL requirements.
- Storage management and invoicing systems.
- Track and Trace systems across the total supply chain.
- Yield Management.
- Payload Management.
- Spot Pricing Enablement.
- Document Processing.

3.11.5 Intermodal Summary

The key features / drivers of this portfolio are summarised as follows:

- Portfolio consists primarily of 3rd Party Logistics Providers, operating under the common banner of Intermodal Marketing Companies (IMC's).
- IMC's have both export/import cargo owners as customers.
- IMC's "wholesale" Spoornet services to cargo owners.

- Some IMC's are linked to shipping lines, either contractually or by shareholding.
- Predictable Service is critical to success in this industry.
- Train Reservations and scheduled services are key components of service delivery.
- Duration between collection and delivery must be minimal.
- Effective and efficient terminal handling.
- Competitive rates
- Seamless service from a community perspective
- IT enablement
- Support philosophy of freight visibility.

3.12 PREVIOUS SPOORNET SURVEYS

In 1995, Research International was approached by Spoornet to conduct a Customer Satisfaction survey. As Spoornet's intentions were to develop a customer satisfaction orientated culture, the SMART approach was used for the study, allowing Research International to examine both internal staff and external customer perceptions and understandings of service and satisfaction levels.

Qualitative research was conducted first to develop a sound understanding of Spoornet's customers' needs and expectations. The qualitative phase was conducted to generate the service attributes to be measured in the quantitative study, which followed, and to benchmark service versus competitors (road). The quantitative phase was also used to establish how well Spoornet measured up to these expectations and to generate understanding of the relative importance of each attribute or dimension measured. Subsequent tracking studies have been repeated in 1996, 1997/98 and 1999 to measure and assess progress on an annual basis.

At the 1997 presentation of Spoornet's Customer Satisfaction study results, there appeared to be some changes in the importance rating results. This may have reflected a change in Spoornet's customer / potential customers' perceived importance ratings of certain of the attributes, which have been used throughout the tracking studies since 1995.

Due to these apparent changes, a decision was taken by Spoornet to verify the current attributes and, if deemed necessary, add to the current list of attributes, before conducting the 1999 Customer Satisfaction study. Three focus groups subsequently were completed, with definite changes in customer's perceived important attributes noted, but due to time pressures, the perceived changes

were not implemented before conducting the 1999 Customer Satisfaction study.

A segmentation study was also conducted during 1997. Spoornet's industry segments were all readjusted to match the relevant industries used in the segmentation study for comparability purposes.

The initial objectives on which the research was based in 1995 were:

- To develop a sound understanding of customers' needs and expectations of Spoornet and competitive services (relative importance of different attributes or service dimensions).
- Provide a benchmark measure of the degree to which Spoornet's current service and performance meets or lives up to these needs and expectations (and in future track service improvement initiatives directed at reducing observed gaps between service expectations and service delivered).
- Provide a competitive evaluation of how well Spoornet's performance compares to that of major competitors.
- To enable exploitation of strategic advantages or core competencies and the elimination of disadvantages or weaknesses relative to the competition.
- Examine the market for potentially different segments, with sufficient common needs that they may be addressed through specific strategies and specifically targeted communications.
- Subsequent tracking studies have been repeated in 1996, 1997/98 and 1999 to measure and assess progress on an annual basis.

3.13 SUMMARY

As the import / export market plays a vital role in South Africa's economy, Spoornet as a rail operator plays an equally essential role. Spoornet not only carries a responsibility to meet the ideals of the South African economy and ultimately facilitate economic growth but also to reverse the trends of declining market share. It is therefore imperative that South African importers and exporters have the appropriate support and backup of Spoornet.

The services rendered by Spoornet, as detailed in this case study, indicates that Spoornet provides a fairly comprehensive range of service offerings. These service offerings, alone, however, are not sufficient to enable the organization to develop a sustainable competitive advantage in the long term.

The increasing competitiveness of the transport industry both locally and internationally has resulted in companies within the transport industry competing on more than service offerings. Value – added services, which include customization of services, have become the norm. Differentiation of the container division, from Spoornet's sectors that transport break – bulk cargo is not visible. Economies of scale enable Spoornet as a rail transporter to efficiently transport large volumes of containers as opposed to road transporters.

To enable the achievement of a sustainable competitive advantage, there is a need to focus on enhancing the competitive strengths of Spoornet and eliminating or minimizing the company's weaknesses. It is this advantage that Spoornet must harness and utilise to differentiate its service offerings from that of competitors.

CHAPTER FOUR

ANALYSIS AND FINDINGS

4.1 INTRODUCTION

A detailed review of the key concepts of service quality, customer satisfaction and customer behaviour, has been undertaken in chapter two of this study. This was followed by a review of these concepts within the context of Spoornet, the focus of the case study. The focus now is to evaluate Spoornet's performance as a service organization in terms of the literature reviewed. Current performance, identified in the case study will be measured against the theory on service quality, resulting in the identification of gaps for improvements that can ultimately lead to the realisation of customer satisfaction.

The qualitative evaluation will be followed by a quantitative analysis of the survey conducted to determine the level of customer satisfaction at Spoornet. Data collected by administering the questionnaire detailed in chapter one were subjected to statistical analysis. Both, the quantitative and qualitative analysis will provide a good understanding of the current level of service quality at Spoornet.

4.2 QUALITATIVE ANALYSIS

In order to the assess the case study, it is important to understand the concepts that underline the case and that ultimately impact upon the desired objectives i.e. a favourable evaluation of customer service and it's desired impact on customer satisfaction at Spoornet. These concepts include:

- Gap Analysis
- Service quality (as perceived by the customer)
- Customer satisfaction
- Customer behaviour (as a consequence of customer satisfaction)

4.2.1 Application of the Gap Analysis to Spoornet

The Servqual model is a five-level diagram of service that highlights "gaps" that appears between supplier and customer and within the supplier's organization. One such gap (labeled "Gap 1") is the gap between the customer's expectations of service and management's own perceptions of what the customer expects. To close the gap Spoornet must find out what the customer expects: How

convenient are Spoornet's operating hours? How can it provide a reliable and predictable transport service? How long (if at all) are customers willing to wait for wagons? Further, why do those who do not use Spoornet's services not do so, and what would they like Spoornet to do about it? Spoornet must also be sure that its own attempts to communicate with the public are not part of the problem: Does Spoornet lead customers to expect a service it cannot, in fact, provide ("Gap 4")? If so, these expectations must be changed, even if it means lowering them.

Once the attributes of rail services from the customers' perspective are more clearly known and understood, its service providers will be in a better position to anticipate consumer requirements rather than to react to consumer dissatisfaction. Gaps were identified in the service delivery of Spoornet across the five service quality dimensions.

Gap 1: Consumer Expectations vs. Management Perceptions

Often Transport Managers fail to understand what customers expect in the offered product/service. This includes understanding which features (of the product) are necessary to deliver high-quality service. Gap 1 occurs when this breakdown of understanding occurs. For example, Spoornet might develop a system to ensure that all customers wait no longer than 36 hours for consignments to be delivered. If customers get upset after a 24-hour wait, then Gap 1 exists.

Often, transport firms initially survey customers to understand their expectations. However, over time these customer expectations change (change is constant). If the product/service does not adapt to these changes, then Gap 1 widens.

Ongoing research is essential to stay abreast of the changing customer expectations. Formal research plus informal research (managers talking to customers, for example) is one source of information. The marketing force, is a vital source of changing customer expectations.

Gap 2: Management Perception vs. Service Quality Specifications

When Spoornet Managers know what customers expect, but cannot or will not develop products/services and systems to deliver it, then Gap 2 occurs. Several reasons for Gap 2 are:

- Inadequate commitment to service quality,
- Lack of perception of the feasibility of addressing customer expectations.
- Inadequate task standardization (within the transport organisation)

- Absence of goal setting by management and inability to get employee "buy-in."

Spoornet, historically can be viewed as being short-term oriented. Short-term profits and unwillingness to invest in human resources and technological tools and equipment almost always causes service quality delivery problems.

Gap 3: Service Quality Specifications vs. Service Delivery

When Spoornet managers know what customers expect and have developed products/services, systems, and specifications to deliver it but employees are unable or unwilling to deliver the service, then Gap 3 occurs. Several reasons for Gap 3 are:

- Employees are not given the tools and working conditions to do render the right service.
- Employees are not correctly selected, trained, and motivated.
- Employees are not properly "led" by managers.

Gap 4: Service Delivery vs. External Communications

When Spoornet (represented by marketing and sales and corporate affairs) promises more in its external communications than it can deliver (operations) then Gap 4 occurs. External communications includes, but is not limited to, advertising, public relations, pricing messages, and personal customer contact.

Spoornet's marketing personnel must ensure that operations can deliver what marketing and other external communications promises. General managers must fully understand the marketing/selling process as well as operational processes. It is imperative that the two areas work "seamlessly" together to meet customer expectations.

Gap 5: Expected Service vs. Perceived Service

The size of Gap 5 is dependent on all of the other gaps.

Expected Service is what the customer expects to receive from Spoornet as a service organisation.

Perceived Service is what the customer believes or perceives that he or she has actually received from Spoornet (after the service experience).

Gap 5 is the difference between the above. Customer satisfaction and quality is dependent upon

this gap being reduced or eliminated. Spoornet management is responsible for managing the absence or presence of this gap.

The Gap model of service quality significantly affects the service industry. This model offers management options to think about the way that they manage service quality. Managers at Spoornet and other transport companies can utilize service quality models to guide real structural changes that, if implemented, will be both effective and efficient. Spoornet has a reputation for being short-term oriented. Often, in this fast moving industry, there is a large amount of "fire-fighting" that occurs. When problems arise they seem to completely surround the managers of both commercial and operations departments of Spoornet, survival is key. Thus, simply handling the problem and moving to the next problem .This has become the pattern of activity. Long-term planning and serious thought seems to be often overlooked.

Spoornet, as a transport company offers an undifferentiated service, i.e. transport, but not all transporters offer superior service quality. As explained, meeting customer expectations translates into service quality. Those transport companies that deliver service quality escape the "commoditisation" of the transport industry and differentiate themselves from their competitors. This differentiation leads to competitive advantage as well as other benefits. Some major benefits to Spoornet of delivering service quality are:

- Retaining Customers – This means "repeat business" from Spoornet's existing customers.
- Referrals – Satisfied customers are happy to generate positive word-of-mouth thereby attracting new customers to Spoornet.
- Avoidance of "Price" Competition – If Spoornet is seen by customers as the same as other transporters, then its product/service is essentially undifferentiated. Differentiation is a strategy upon which to effectively compete. Price strategy is another way to compete, however this may not always be possible or desirable. Attaining service quality allows competition based on a differentiation strategy.
- Retention of good employees – Employees like to work for a "quality" organization.
- Reduction of Costs – When quality is achieved, costs of correcting problems (after they have occurred) is reduced. Since a focus on quality stresses preventative maintenance, then these costs are reduced. Many other costs are also reduced, such, as lowering employee turnover and the cost of having to motivate uninspired employees (Kotler, Bowen, and Makens, 1996).

4.2.2 Service Quality at Spoornet

As Spoornet is the only rail transporter in South Africa, there is no academic literature that deals specifically with service quality in the South African rail industry. It has been found in international literature on service quality in rail industries that companies realize several benefits. These include:

- Reduced transaction and administration costs.
- Improved employee productivity.
- Improved process efficiencies.
- Improved business and customer relations.
- The creation of market efficiencies both internally and externally through streamlining previous costly business processes.

A major driver of service quality implementation is to develop and nurture the customer relationship (OneSoft, 1998). This is significant because the service management and marketing literature shows that the cost of obtaining a new customer is approximately six-to-seven times that of maintaining an existing relationship (Reicheld and Sasser, 1991). Service quality can foster existing relationships that ultimately lead to customer satisfaction.

To relate the dimensions of service quality to Spoornet , previous customer satisfaction research at Spoornet was reviewed. Some reported or claimed benefits of Spoornet's service as well as concerns of Spoornet's customers are matched to the service quality dimensions as defined by Parasuraman et al (1985). These dimensions are:

Reliability: Delivery punctuality and predictability are key customer concerns. An effective planning system will ensure that trains run as planned with minimal downtime. Reduced downtime will enhance Spoornet's image as a provider of a dependable and reliable service.

Responsiveness: Spoornet essentially engages in personal responses rather than electronic responses in terms of consignment information. Tracking and the communication of progress regarding customers' goods are important criteria to Spoornet's customers. If staff does not inform customers timeously of the status of their consignments this results in unfulfilled customer expectations leading to customers judging Spoornet as unresponsive.

Assurance: Several Spoornet customers often question the security of their goods while on rail. If

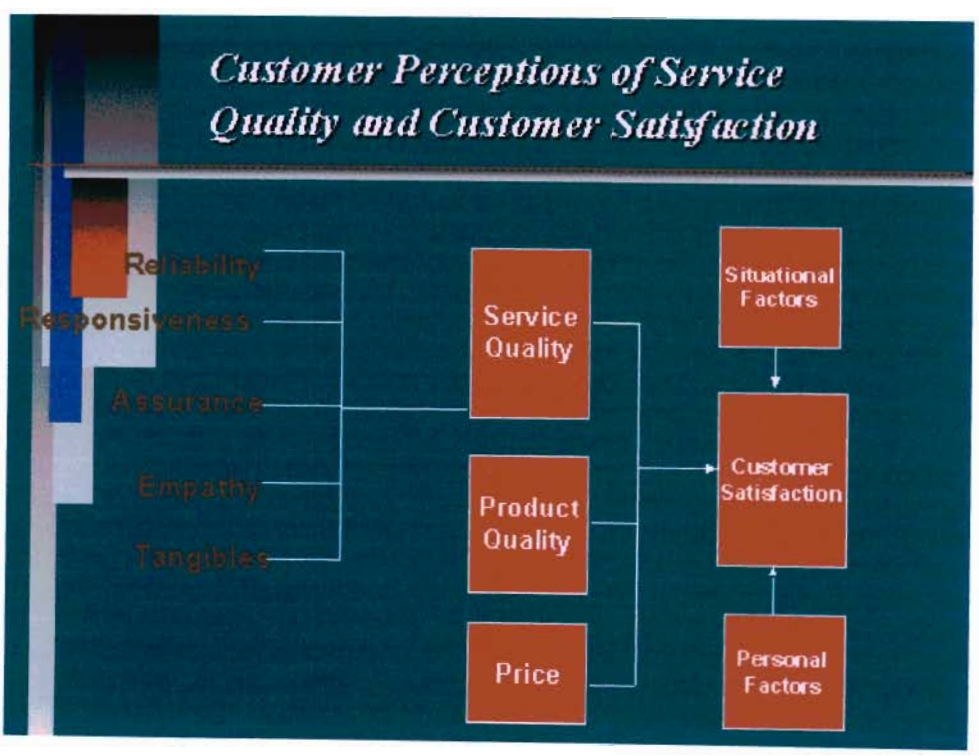
security precautions do not measure up to expectations of customers then trust and confidence will be lost. The behaviour of the staff at Spoornet can instill confidence in customers and ultimately fulfill the service quality dimension of assurance.

Empathy: Previous research has shown that Spoornet's customers value staff helpfulness, individualized attention and a flexible consultative approach. Individualized customer attention through the adoption of the principles of key account management and customer relationship marketing will convey a sense of caring and individualised attention. Intelligent use of the marketing philosophy of segmentation can add to the perception of individualized attention in this large organisation.

Tangibles: Visually appealing documentation, easy access to electronic tracking systems and clean wagons could enhance Spoornet's image and differentiate it from its competitors. These tangible dimensions of service quality would instill greater confidence in Spoornet's customers and play a contributing role in ultimate customer satisfaction.

4.2.3 Customer Perception of Service Quality and its impact on Customer Satisfaction at Spoornet

Figure 4.1: Customer Perceptions of Service Quality



A number of factors work together to influence the customer's perception of the quality of service

being offered. These in turn impact on the levels of satisfaction that are experienced by the customers of Spoornet (figure2.2).

Service relationships are a great contributing factor to service quality. Berry (1983) argues that service relationships focus mainly on the structure of the relationships e.g. the level and nature of the bond and its antecedents e.g. trust, commitment etc. Promises are a core construct in relationship marketing. Promises kept are more important than promises made. Gronroos (1990) agreed by saying that service relationships are achieved through mutual exchange and fulfillment of promise. Three activities lead to adequate fulfillment thereof viz. making realistic promises; enabling employees and service systems to deliver promises made and keeping those promises during delivery. It is the co-coordinated effort of customers, employees and processes that achieves this (Gronross, 1994).

The first interaction between customers and most service delivery processes is the customer waiting time for service. Customer reactions to waiting in line, whether good or bad can colour the customer's perception of the service delivery process. Chebat et al's (1994) study of bank customers supports this notion of the halo effect where the customer's evaluation of a service was influenced not only by the end service received but also by the service delivery itself, which included waiting time. Therefore the proper management of waiting times plays a significant role towards greater customer satisfaction in many service organizations.

The loyalty of the customer may also influence his/her perception of the quality of service being offered. Berry and Parasuraman (1991) identified three bonds on which to classify relationships that develop customer loyalty viz. financial bonds, social bonds and structural bonds. Berry (1995) stresses that in order for relationships to continue they must be perceived as being mutually beneficial. Customers must perceive some benefit that is over what they might expect to receive in the traditional transaction based marketing system. This can be achieved by taking into consideration the perspectives of both the customer and the service provider.

4.2.4 The Impact of Customer Contact on Service Satisfaction

Each customer contact is critical to the building of the relationship. Relationships emerge over time rather than bursting into being as a result of an initial successful encounter. Each encounter contributes to the customer's overall satisfaction and desire to continue the relationship. At each level of contact the organization's abilities are revealed to the customer. Therefore evaluation needs to look at the series of contacts rather than one isolated incident. Beardon et al (1998) present

3 moderating characteristics upon which this relationship is based:

1. Customer Characteristics
2. Service Characteristics
3. Service Employee Characteristics.

They proposed that the service employee characteristics of self-efficacy, adaptability, and empathy moderate the relationship between the level of contact and perceived service satisfaction.

4.2.5 Employee Characteristics that Influence Customer Satisfaction

Frontline people can significantly impact consumers' outcome perceptions. A study conducted by Gillian (2000) examines the importance of initial contact with salespeople on consumers' perceptions of value and the impact of salesperson service failure on perceptions of value among non-purchasers. Value perceptions for consumers that experienced salesperson service failures were lower than non-purchasers who were just comparison-shopping. An exit survey of shoppers was conducted to realistically study these issues. Results show that outcome perceptions were significantly lower when either there was no contact with salespeople, or the consumer had to initiate the contact. The retailer that had the highest percentage of salesperson initiated contact, earned the highest perception ratings and also had the highest ratio of buyers to browsers. Furthermore, non-purchasers that experienced service failures (slow service or offended by a salesperson) discounted not just the perception of that retail visit, but also overall value compared to other retailers. These results suggest that retailers must encourage their sales staff to initiate consumer contact. The quality of salesperson contact has been found to impact on consumers' outcome perceptions. Satisfaction customers have with contact employees influences the customers' perceptions of quality, value and word-of-mouth intentions. Likewise, Westbrook (1981) demonstrated the importance of retail service employees to customers' perceptions of satisfaction. Along with influencing outcome perceptions, the literature also reveals the importance of salespeople to the consumer's willingness to make a purchase.

The following characteristics are identified as being crucial for service personnel at Spoornet:

Responsiveness: Customers' perceptions of the willingness of contact employees to help have a greater influence on the customers' willingness to buy than perceptions of product quality. Responsiveness, or lack thereof, creates psychic or time benefits or costs. Time is saved when Spoornet employees respond promptly to consumers. In contrast, time costs are incurred when

employees lack responsiveness. The importance of psychic benefits, derived through the responsiveness dimension, has been explored by Crosby et al (1990), who found that in repeat-contact sales relationships (life insurance), contact initiated by the salesperson and cooperative intentions (expression of a willingness to help the customer) are beneficial to ongoing sales relationships. A positive relationship is found linking these behaviors to sales effectiveness and anticipation of future sales. Bitner et al (1990), examining service encounters, also observes the importance of employee responsiveness to outcome perceptions. They found that polite but not pushy responses are characteristics of memorable satisfactory service encounters. They also find, however, an equal number of negative responses (e.g. rudeness, "acting as if the customer were bothering the employee", being ignored by employees, and slow service), lead to memorable dissatisfactory service encounters.

Self-Efficacy: The employee's belief that he or she is competent to execute the required activities related to the job. There is a positive effect of increased employee self-efficacy on customer perceived service quality. These employees at Spoornet are better able to handle difficulties inherent in their jobs.

Adaptability: Also referred to as flexibility, Zeithaml and Bitner (2000), reflects on the CCR's (customer care representative) ability to adjust behaviour and handle interpersonal situations. This perceived adaptive employee behaviour was identified as being an important determinant of customer satisfaction. It is important that Spoornet customers perceive that the employee is doing something special for him/her whereas the activity may be routine from the employee's point of view.

Empathy: This may refer to the ability to provide the customer with caring, individualized attention. The CCR may show a level of personal involvement. Responsive and assuring communication may create a more personal atmosphere, which is appreciated by customers, especially in longer, higher levels of contact service encounters. Bearden et al (1983), identified empathy as being more important in longer level service encounters than shorter encounters as is the case at Spoornet.

Time: This refers to the speed, which the customer complaint is resolved. It can be seen as an element of trust, which is an important element of the relationship between the service provider and the customer. It is important that customers do not feel pressured but at the same time are not held up for longer than is necessary. However, a somewhat conflicting objective for management is to

minimize costs by minimizing talk and wrap-up time. This may interfere with the Spoornet employee's objective of allowing a reasonable time span to listen to the customer's problem and help him/her in a consistent way.

Reliability: This is where the employee delivers promises dependably and accurately. A building of trust must occur as this is a critical component of the customer care employee's behaviour. Perceptions of commitment to service quality and customer satisfaction: Bitner et al (1994) state that commitment to service quality can suffer not because frontline employees are not willing to provide good service but also because lack of basic knowledge of the system and it's constraints, inability to provide a logical explanation to the customer and the lack of authority to do anything. At Spoornet, a lack of alignment or common understanding between marketing personnel and operations can lead to negative perceptions of service quality.

Empowerment: Having the desire, skills, tools and authority as a frontline employee to serve the customer can be achieved by sharing with organizational frontline employees, rewards based on performance and the knowledge and power to make decisions.

Staff Attitude: This quality may refer to the degree to which service employees are friendly and considerate when dealing with customers.

Explanation: Satisfactory or dissatisfactory service encounter incidents are critical to the frontline employee's response to customer complaints. Bitner et al (1990) state that customers want the truth and reasons behind events that have occurred. The content of the response has an impact on customer satisfaction or dissatisfaction.

Competence: The customer care representative at Spoornet must possess knowledge necessary for performance. They must have knowledge of the services offered and skills to multitask.

Security: The Spoornet customer must have the feeling that his/her dealings with the organization are confidential. The customer care representative must have the necessary skills to spot customer uncertainties and eliminate them.

Knowing the Customer: The CCR must know how to read the customer and identify what they require and expect from the contact. Technology available in service centers may help the employees in this regard, however, it may not always be enough. Employees must have listening and interpreting skills to adequately understand their customers. These employees need to realize

that customers who are loyal may have a high lifetime value for the firm (Parasuraman et al, 1988).

The type of research into the quality of service offered by the customer care representative adds value to the service organization by creating a picture of customer expectations of voice-to-voice encounters. Customers hold certain expectations of the customer care representative in these voice-to-voice encounters. Since these expectations are likely to determine how the customer evaluates the quality of the service quality of the organization, it is important for service organizations such as Spoornet to understand what these expectations.

The following determinants give an indication of these expectations:

The quality of adaptiveness incorporates different service attributes and just as in other service encounters, the Spoornet CCR would need to adjust his/her behaviour to the customer, handle interpersonal situations and adapt to a variety of other situations. CCR's are expected to be competent and skilful and therefore able to help the customer. They should not be afraid to deal with the various situations during an encounter and must be capable of assessing the customer's constitution and the language to the level of sophistication of the customer accordingly.

Assurance focuses on aspects related to security and explanation and the customer care employee that provides clear information to the customer about procedures will comfort the customer and eliminate uncertainty. The Spoornet Intermodal customer does not only expect that the company will handle his/her information discreetly, but also that the customer care representative provides the assurance that information will be handled confidentially.

Empathy indicates that the Spoornet customer care representative must be able to empathize with the customer's emotions and situations and not to give the customer the feeling that he is not important to Spoornet. Customers need to feel important and believe that their problems are being taken seriously.
Spoornet Customers tend to expect the customer care representative to have the authority to deal with the various issues that they are discussing. They may find it disturbing if the CCR is not authorized to answer the customer's questions or solve his/her problems.

However, these qualities alone are not sufficient in delivering an appropriate level of service to Spoornet customers for several reasons:

- Customers engage in contact with Spoornet for different reasons and will hold different expectations of the services that they desire. An angry customer calling in with a severe complaint will demand different aspects of a customer care representative as opposed to one that calls in for an answer to a general question. The level of requested empathy will be vastly different in these two situations
- The aspect that complements these qualities in the customer care representative in providing an adequate level of service is that of the service environment that may also influence the employee's behaviour. Employee satisfaction, rewards, motivation, training and development, and frontline support may also affect the possession of the qualities in the CCR.

4.3 FINDINGS OF PREVIOUS SPOORNET RESEARCH

The customer satisfaction survey conducted by Research International in 1995 and detailed in chapter three shows that the priorities for Spoornet were clearly:

- Delivery punctuality and speed
- Tracking/communicating progress
- Resolution of billings and claims problems
- Having a flexible, consultative attitude
- Minimising losses and damages.

In 1996, with Spoornet clearing the customer database of smaller and lost customers, this reduced the relative importance of losses, theft and damages. Road's performance improves marginally more than Spoornet's, with Spoornet's priorities remaining focused on the 1995 key dimensions.

In 1997/98, Spoornet's improvements were not on the critical dimensions, with Road showing similar improvements on almost the identical dimensions. Delivery punctuality and speed remained Spoornet's key client requirements.

In 1999, the gap between Spoornet and road remained virtually static, with Spoornet's improvements simply reversals of 1997/98 declines. Meaningful improvement trends in 1999 were competitive pricing and negotiability of rates, key recent focus areas for Spoornet.

Short-term declines appeared to be mainly reversal of 1997/98 improvements:

- Efficiency of tracking (3.11 : 2.97)

- Providing ETA's (2.01 : 1.92)
- Resolve billing problems (2.67 : 2.58)
- Claims handling (2.52 : 2.46).

The same key dimensions appear to be of critical importance in 1999:

- Delivery punctuality and speed
- Efficiency of tracking and communication of progress.

The issue enjoying growth in relative importance is getting Proof of Delivery (POD) regularly and timeously when required. Spoornet's performance on the key dimensions, communicating progress, efficiency of tracking and speed of delivery, still lags that of Road substantially. It can be noted the gap closed slightly on delivery punctuality, general business flexibility and getting POD's.

Spoornet's performance appears to be strongest among their large customers and in the segments where most attention is focused, namely mining and heavy manufacturing. Mining customers' primary needs are largely the same as the other industry sectors (delivery punctuality, communicating progress, speed and POD's), but their relative importance greater for:

- Staff helpfulness
- Speed of returning calls
- Resolving billing problems
- Invoicing and accounts
- Business flexibility.

Heavy manufacturing companies' needs place more emphasis on POD's, with light manufacturing, as in the import / export container market, concerned more with communicating progress, efficient tracking and damages, losses and theft.

4.4 QUANTITATIVE ANALYSIS

The data obtained from the administration of the questionnaire described in Chapter one were subjected to various statistical analyses. The descriptive statistics of data was analysed by means of the SPSS statistical software package. The raw data obtained was edited for data entry to ensure accuracy. The editing process is designed to identify errors and omissions. Chapter four will outline the results obtained. Descriptive statistics such as frequency tables will be applied to demographic data. The arithmetic mean and standard deviations has been calculated where appropriate. Results will also be illustrated utilising graphic illustrations such as bar charts. Inferential statistics such as the t-test will be applied to determine the differences in means between male and female responses to expectations and perceptions.

Reliability and validity tests using the Cronbach coefficient alpha will also be undertaken. This test is used to measure the reliability and validity of the measuring instrument. As a limited quantitative analysis has been undertaken for this study, the results for perceptions and expectations will be calculated through the use of both descriptive and inferential statistics.

4.4.1 Demographic Statistics

The various descriptive demographic statistics that comprise the sample population are detailed in tables 4.1 to 4.3. The frequency distribution tables indicate that the majority of respondents are male (60%), 50% of respondents have been customers of Spoornet for more than five years, the majority of respondents (48%) have daily contact with Spoornet with a further 38% engaging in direct contact with Spoornet more than once a week.

Table 4.1- Sample Distribution based on Gender

Gender	Count	Percent
Male	30	60.0
Female	20	40.0
Total	50	100.0

Table 4.2 - Sample Distribution based on Length of Time as a Customer

Length as customer	Count	Percent
Under 1 year	3	6.0
2-3 years	10	20.0
3-5 years	12	24.0
More than 5 years	25	50.0
Total	50	100.0

Table 4.3 - Sample Distribution based on Frequency of Contact

Frequency of Contact	Count	Percent
Daily	24	48.0
More than once a week	19	38.0
Monthly	1	2.0
When necessary	6	12.0
Total	50	100.0

Tables 4.4 and 4.5 detail multiple responses of respondents to questions A3 (reason for contact with Spoornet) and A4 (level of involvement in transport matters). Reasons for contact with Spoornet (A3) are varied with 34,7% engaging in contact to track consignments. In terms of level of involvement in transport matters (A4) 37,1% of respondents engage in contact on an operational level, 35,7% for accounting/ claims related issues and 27,1% on a decision making level. This distribution indicates that the sample is representative of all levels of personnel in Intermodal Marketing Companies.

Table 4.4 - Sample Distribution based on Reasons for Contact

Reasons for Contact	Count	Percent
Request rates	22	23.2
Order wagons	18	18.9
Track consignments	33	34.7
Account/Claim queries	22	23.2
Total	95	100.0

Table 4.5 - Sample Distribution based on Level of Involvement

Level of Involvement in Transport Issues	Count	Percent
Making decisions regarding transport issues	19	27.1
Daily operational issues	26	37.1
Payment/invoicing/reconciling transport	25	35.7
Total	70	100.0

4.4.2 Frequency and Percentage: Expectation Statements

The percentages in Table 4.6 show that most of the respondents either agreed or disagreed to the statements relating to expectations, indicating that they have high expectations

Frequency and percentage scores are detailed for both the expectations and perception questions:

B1-B20 Expectation scores are tabulated in Table 4.6.

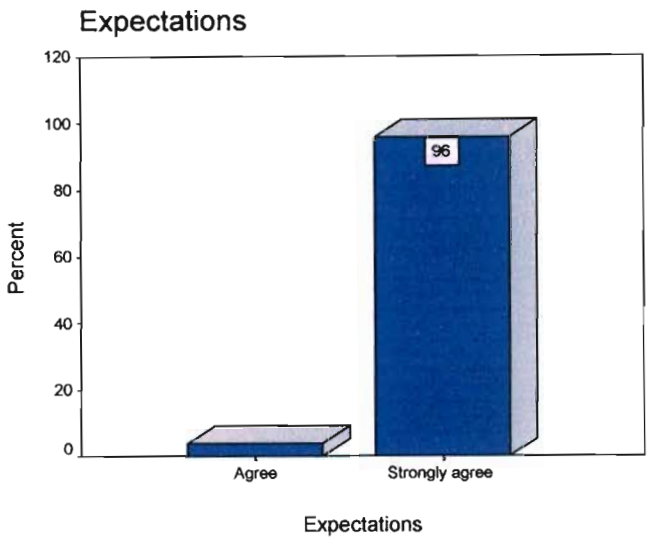
C1-C20 Perception scores as tabulated in Table 4.8.

Table 4.6 - Expectation Frequency Scores

Expectation Statements	Strongly disagree		Disagree		Neutral		Agree		Strongly agree	
	Count	%	Count	%	Count	%	Count	%	Count	%
B1	0	.0%	0	.0%	4	8.0%	20	40.0%	26	52.0%
B2	0	.0%	0	.0%	5	10.0%	16	32.0%	29	58.0%
B3	0	.0%	0	.0%	5	10.0%	15	30.0%	30	60.0%
B4	1	2.0%	1	2.0%	6	12.0%	12	24.0%	30	60.0%
B5	0	.0%	0	.0%	1	2.0%	4	8.0%	45	90.0%
B6	1	2.0%	0	.0%	0	.0%	3	6.0%	46	92.0%
B7	0	.0%	0	.0%	0	.0%	6	12.0%	44	88.0%
B8	1	2.0%	0	.0%	0	.0%	9	18.0%	40	80.0%
B9	0	.0%	0	.0%	0	.0%	8	16.0%	42	84.0%
B10	0	.0%	0	.0%	0	.0%	3	6.0%	47	94.0%
B11	0	.0%	0	.0%	0	.0%	1	2.0%	49	98.0%
B12	0	.0%	0	.0%	0	.0%	5	10.0%	45	90.0%
B13	0	.0%	0	.0%	0	.0%	4	8.0%	46	92.0%
B14	0	.0%	0	.0%	0	.0%	4	8.0%	46	92.0%
B15	0	.0%	0	.0%	0	.0%	1	2.0%	49	98.0%
B16	0	.0%	0	.0%	0	.0%	4	8.0%	46	92.0%
B17	0	.0%	0	.0%	1	2.0%	4	8.0%	45	90.0%
B18	1	2.0%	0	.0%	2	4.0%	6	12.0%	41	82.0%
B19	0	.0%	0	.0%	0	.0%	3	6.0%	47	94.0%
B20	0	.0%	0	.0%	0	.0%	0	.0%	50	100.0%

Most of the respondents either agreed or strongly agreed with the statements relating to expectations, indicating that they have high expectations of a transport service provider. All respondents agreed with statement B20 that an excellent transport company will understand the specific needs of its customers. Ninety – eight percent of respondents strongly agreed with both statements B11, that staff will always be willing to help customers and B15, that staff will be consistently courteous with customers. Expectation statements B1 to B4, which captures the 'tangibles' dimension of service quality, attracted the largest neutral response as all other expectation statements attracted an overwhelming response of 'strongly agree'. This indicates that tangibles hold the least importance for respondents (customers of a transport company).

Figure 4.2 – Expectation Frequency Bar Chart



The Expectation Bar Chart indicates that 96% of respondents strongly agree with the expectations statements across all fives service quality dimensions. The respondents overwhelmingly expect rail transporters to possess the features described in the Servqual questionnaire indicating that they have high expectations of a rail transporter.

4.4.3 Measures of Central Tendency: Expectation

In Table 4.7, the mean values of the statements relating to expectation confirm what the frequencies have indicated. Most of the respondents had high expectations.

Table 4.7 – Measures of Central Tendency: Expectation

	Minimum	Maximum	Mean	Std. Deviation
B1	3	5	4.44	.644
B2	3	5	4.48	.677
B3	3	5	4.50	.678
B4	1	5	4.38	.923
B5	3	5	4.88	.385
B6	1	5	4.86	.606
B7	4	5	4.88	.328
B8	1	5	4.74	.664
B9	4	5	4.84	.370
B10	4	5	4.94	.240
B11	4	5	4.98	.141
B12	4	5	4.90	.303
B13	4	5	4.92	.274
B14	4	5	4.92	.274
B15	4	5	4.98	.141
B16	4	5	4.92	.274
B17	3	5	4.88	.385
B18	1	5	4.72	.730
B19	4	5	4.94	.240
B20	5	5	5.00	.000
Valid N				

Table 4.8 – Measures of Central Tendency: Expectation Total Score

	Mean	Std. Deviation	Minimum	Maximum
Expectations	4.8050	.18905	4.05	5.00

Table 4.8 shows that the overall score for expectation ranges from a minimum of 4.05 to a maximum of 5. The mean value of 4.8 indicates that respondents generally had high expectations. The low standard deviation indicates that respondent's scores did not differ from the mean.

Figure 4.3 – Expectation Histogram

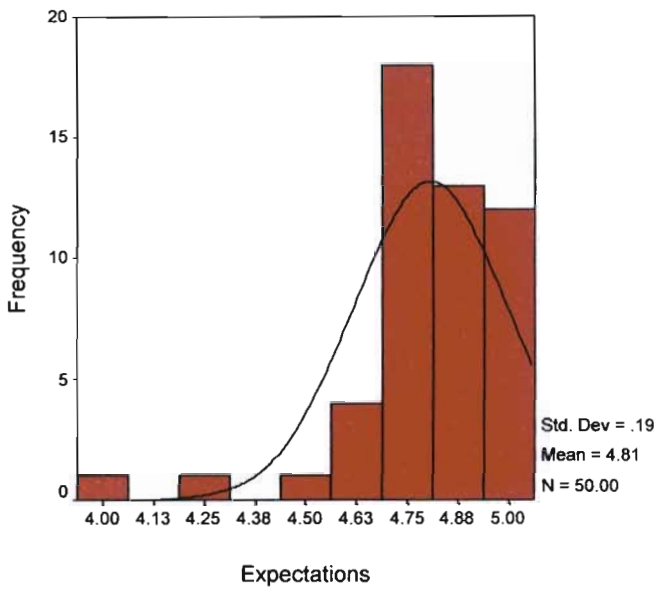


Figure 4.3 confirms that the overall value for expectation ranges from 4 to 5. The mean confirms that overall level of expectations is very high.

4.4.4 Frequency and Percentage: Perception statements

The responses to the statements relating to perceptions as reflected in Table 4.9 indicate that responses ranged from strongly disagree to neutral indicating that respondents displayed low perceptions of Spoornet. Consistently low scores were obtained across all perception statements.

Table 4.9 – Perception Frequency Scores

	Strongly disagree		Disagree		Neutral		Agree		Strongly agree	
	Count	%	Count	%	Count	%	Count	%	Count	%
C1	3	6.0%	14	28.0%	24	48.0%	8	16.0%	1	2.0%
C2	3	6.0%	14	28.0%	23	46.0%	9	18.0%	1	2.0%
C3	0	.0%	3	6.0%	31	62.0%	11	22.0%	5	10.0%
C4	4	8.0%	7	14.0%	30	60.0%	7	14.0%	2	4.0%
C5	7	14.0%	14	28.0%	23	46.0%	5	10.0%	1	2.0%
C6	2	4.0%	6	12.0%	21	42.0%	11	22.0%	10	20.0%
C7	10	20.0%	10	20.0%	24	48.0%	5	10.0%	1	2.0%
C8	9	18.0%	11	22.0%	17	34.0%	10	20.0%	3	6.0%
C9	8	16.0%	12	24.0%	17	34.0%	11	22.0%	2	4.0%
C10	5	10.0%	14	28.0%	22	44.0%	6	12.0%	3	6.0%
C11	7	14.0%	7	14.0%	22	44.0%	12	24.0%	2	4.0%
C12	7	14.0%	12	24.0%	19	38.0%	10	20.0%	2	4.0%
C13	8	16.0%	12	24.0%	20	40.0%	9	18.0%	1	2.0%
C14	4	8.0%	3	6.0%	34	68.0%	8	16.0%	1	2.0%
C15	8	16.0%	10	20.0%	17	34.0%	13	26.0%	2	4.0%
C16	9	18.0%	9	18.0%	13	26.0%	13	26.0%	6	12.0%
C17	11	22.0%	7	14.0%	15	30.0%	9	18.0%	8	16.0%
C18	13	26.0%	9	18.0%	14	28.0%	10	20.0%	4	8.0%
C19	12	24.0%	8	16.0%	18	36.0%	10	20.0%	2	4.0%
C20	10	20.0%	7	14.0%	23	46.0%	8	16.0%	2	4.0%

Figure 4.4 – Perception Frequency Bar Chart

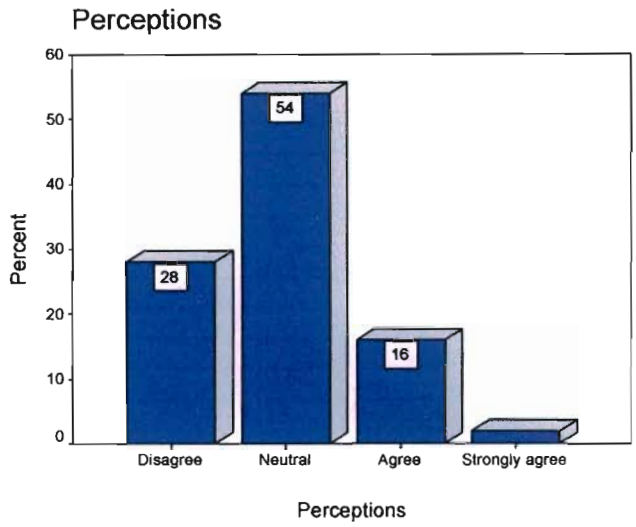


Figure 4.4 indicates that overall, 54% of respondents are neutral about feelings/ perceptions of Spoornet, 28% disagree with the perception statements regarding Spoornet's service, 16% agree with the statements and 2% agree.

4.4.5 Measures of Central Tendency: Perception

Table 4.10 – Measures of Central Tendency: Perception

	N	Minimum	Maximum	Mean	Std. Deviation
C1	50	1	5	2.80	.857
C2	50	1	5	2.82	.873
C3	50	2	5	3.36	.749
C4	50	1	5	2.92	.877
C5	50	1	5	2.58	.928
C6	50	1	5	3.42	1.071
C7	50	1	5	2.54	.994
C8	50	1	5	2.74	1.157
C9	50	1	5	2.74	1.103
C10	50	1	5	2.76	1.001
C11	50	1	5	2.90	1.055
C12	50	1	5	2.76	1.061
C13	50	1	5	2.66	1.022
C14	50	1	5	2.98	.795
C15	50	1	5	2.82	1.119
C16	50	1	5	2.96	1.293
C17	50	1	5	2.92	1.368
C18	50	1	5	2.66	1.287
C19	50	1	5	2.64	1.174
C20	50	1	5	2.70	1.093
Valid N	50				

The descriptive statistics in Table 4.10 indicate that perceptions range from strongly agree to strongly disagree. However, the mean indicates that respondents' perceptions were low or neutral.

Table 4.11 – Measures of Central Tendency: Perception Total Score

	Mean	Std. Deviation	Minimum	Maximum
Perceptions	2.8340	.77040	1.50	4.50

Table 4.11 shows that the overall score for perception ranges from a minimum of 1.5 to a maximum of 4.5. The mean value of 2.8 indicates that respondents generally had low perceptions. The high standard deviation confirms that respondent's scores differed from the mean.

Figure 4.5 - Perception Histogram

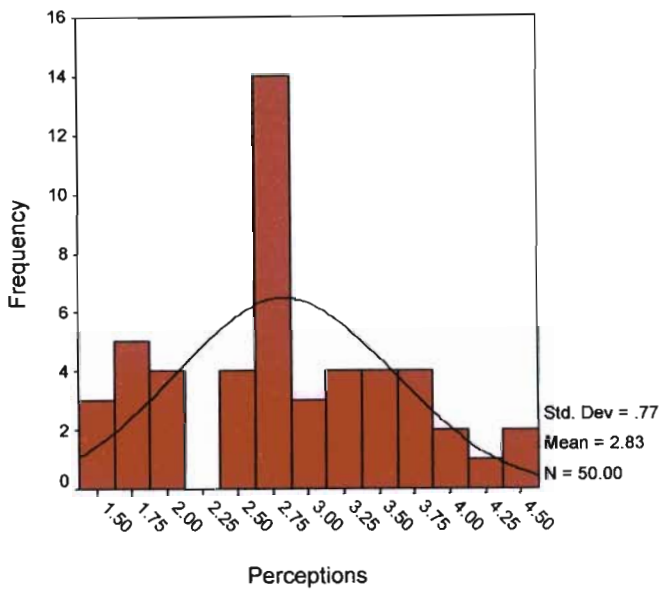


Figure 4.5 indicates the distribution of perception scores and confirms graphically that respondents' perception ranges from low to high but majority of respondents are indifferent.

4.4.6 Correlation

The purpose of correlation is to determine whether a linear relationship exists between 2 variables. The correlation value (Pearson r) ranges from –1 to 1. Negative values indicate an inverse relationship while positive values indicate a direct relationship. Values close to 0 indicate no linear relationship. The correlation values in Table 4.12 show that expectations and perceptions are not linearly related. This is confirmed graphically in Figure 4.5.

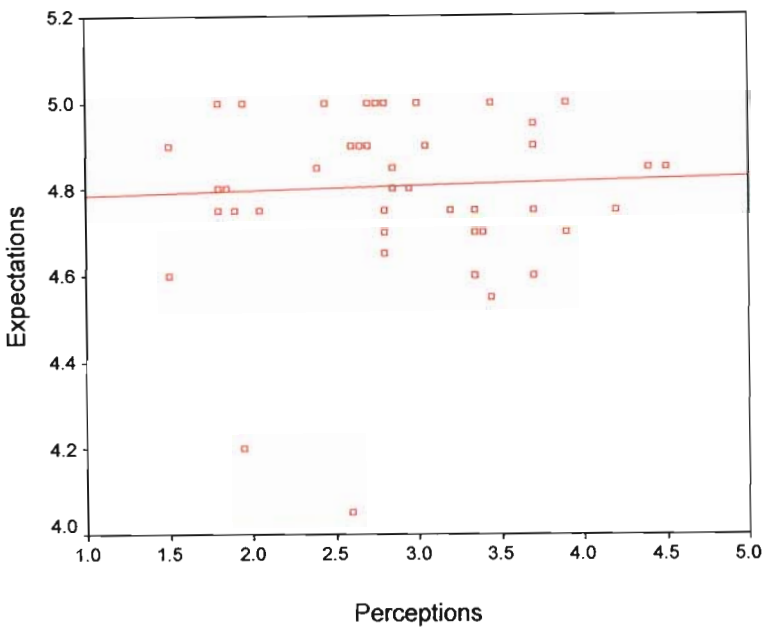
Table 4.12 – Correlation between Expectation and Perception

		Expectations	Perceptions
Expectations	Pearson Correlation	1	0.043
	p	.	0.767
	N	50	50
Perceptions	Pearson Correlation	0.043	1
	p	0.767	.
	N	50	50

The purpose of correlation is to determine whether a linear relationship exists between 2 variables. The correlation value (Pearson r) ranges from –1 to 1. Negative values indicate an inverse relationship while positive values indicate a direct relationship. Values close to 0 indicate no linear

relationship. The correlation values (r=0.043, p>0.05) show that expectations and perceptions are not linearly related. This is confirmed graphically in Figure 4.6.

Figure 4.6 – Correlation between Expectation and Perception



4.4.7 Comparison of Mean Expectations and Perceptions Scores

The paired t-test was computed to compare the differences in mean perception and expectation values.

The t-test below shows that expectations differ from the perceptions (p<0.05). The mean value for expectations indicates that respondents' have high expectations and the mean value for perceptions indicate that respondents are indifferent.

Table 4.13 – T-Test Comparison between Expectation and Perception

	Mean	N	Std. Deviation	t	df	p
Expectations	4.8050	50	.18905	17.747	49	0.000
Perceptions	2.8340	50	.77040			

4.4.8 Comparison of Mean Expectations and Perceptions Scores based on Gender

The independent samples t-test was computed to compare whether perceptions differ between male and female. Table 4.14 provides the mean and standard deviation.

A value of p greater than 0.05 indicates that no difference exists between the 2 groups tested. The results in table 4.14 indicate that there is no difference in expectations or perceptions between males and females (p>0.05).

Table 4.14 - Expectation and Perception Scores Based on Gender

	Gender	N	Mean	Std. Deviation	t	df	p
Expectations	Male	30	4.8417	0.12871	1.712	48	0.093
	Female	20	4.7500	0.24815			
Perceptions	Male	30	2.9533	0.71534	1.353	48	0.182
	Female	20	2.6550	0.83270			

4.4.9 Expectation and Perception Scores Based on Length of Time as a Customer

Table 4.15 indicates that there is no difference in expectations or perceptions between respondents who were customers for less than 5 years and those that were more (p>0.05).

Table 4.15 - Expectation and Perception Scores Based on Length of Time as a Customer

	Length of time as customer	N	Mean	Std. Deviation	t	df	p
Expectations	5 years and under	25	4.8060	.18670	0.037	48	0.971
	More than 5 years	25	4.8040	.19521		48	
Perceptions	5 years and under	25	2.9460	.71252	1.029	48	0.309
	More than 5 years	25	2.7220	.82337			

4.4.10 Reliability

The coefficient Cronbach Alpha was used to measure internal consistency. The data was tested for reliability using this technique. This coefficient ranges from 0 to 1. A value of 0,6 generally indicates unsatisfactory internal consistency.

Expectations Reliability Coefficients:

Number of Cases: 50

Number of Items: 20

Alpha Value : 0,7183

Perceptions Reliability Coefficients:

Number of Cases: 50

Number of Items: 20

Alpha Value : 0,9537

The alpha value for expectations was 0,7183 and the alpha value for perceptions was 0,9537. The Cronbach Alpha for both perceptions and expectations indicate a high degree of internal consistency and reliability.

4.4.11 Summary

The demographic data as well as expectation and perception data were subject to both descriptive and inferential analysis such as means, standard deviation, frequency distribution tables, correlations, t-tests and the Cronbach coefficient Alpha. The results overwhelmingly confirm that customers of a transport company have high expectations of the company and that Spoornet's customers as represented by the respondents in this study have low perceptions of Spoornet's service. The results have been interpreted in this chapter and will be further discussed in the Recommendations and Conclusions in Chapter 5.

CHAPTER FIVE

RECOMMENDATIONS AND CONCLUSION

5.1 INTRODUCTION

The findings of this study have important practical implications to the management of quality of Spoornet's rail services. This study demonstrates the usefulness of the Servqual approach as a measure of service quality. The results of the study indicate that the Servqual scale could make a valuable contribution by enhancing the understanding of the perceived service quality of rail services. The measurement scale also serves to identify symptoms and the underlying problems that inhibit the effective provision of quality services in rail transport.

Services as provided by companies such as Spoornet are unique in the sense that they are intangible and, thus, customers must have trust before they purchase. In service industries, as in the transport industry, quality and perception of quality is essential. Service quality has many benefits including the ability for the Spoornet to compete with a "differentiation" strategy in a in an industry that is largely undifferentiated in terms of products/services.

Once the attributes of rail services from the customers' perspective are more clearly known and understood, Spoornet will be in a better position to anticipate customer requirements rather than to react to consumer dissatisfaction.

5.2 RESEARCH CONCLUSIONS

Both the qualitative and quantitative studies clearly indicates that the overall levels of customer perception of Spoornet's service delivery is substantially lower than that which is expected of a transporter. This is apparent across all five service quality dimensions of tangibles, reliability, responsiveness, assurance and empathy (figure 4.4). This means that the customer satisfaction in the Intermodal sector of Spoornet is very low. However, important dimensions such as reliability and responsiveness need to be investigated, as they are important factors in transport services. The expectation statements that relate to reliability include statements B5 - B8 while the statements that relate to responsiveness include statements B9 – B12 (table 4.6). The expectation frequency distribution scores for both reliability and responsiveness as detailed in table 4.6 clearly indicates that Spoornet customers regard reliability and responsiveness of a transport service provider as critical. The reliability and responsiveness perception scores as detailed in table 4.9 clearly

indicates that Spoornet does not satisfy these important requirements of its customers. It is essential for Spoornet to be viewed by its customers as satisfying these criteria as customers require reliability and responsiveness to instill confidence that the transporter is capable of rendering a quality service. The ability to respond to customer requirements both reliably and predictably will enable Spoornet to retain existing customers and regain lost customers.

In previous surveys undertaken by Spoornet, although delivery punctuality, speed, efficiency of tracking and communications appear to remain the critical dimensions, preliminary qualitative research during 1999 revealed possible shifts in customer needs or opportunities for improving the measuring instrument. The measuring instrument was phrased in such a way that it reflects the needs and terminology of smaller customers, now eliminated from the customer base), rather than those of the remaining larger clients.

The attribute of reliability has been identified by customers in this study and in previous research undertaken to be the most important dimension of service quality. This dimension was also found to have the highest gap (perception minus expectation), implying that customers' expectation of the reliability dimension of the railway services are not met by Spoornet. Although these findings cannot be generalized to the overall customer profile, Spoornet should use it as an impetus to assess their services, particularly to study ways of improving on its reliability.

5.3 RECOMMENDATIONS

The findings of both the qualitative and quantitative research has resulted in the following areas being identified as areas for improvement:

- Customer Involvement
- Employee training
- Customer contact activities
- Technology and e-commerce
- Streamlined processes
- Corporate Image
- Further research

Each of the areas identified will be further elaborated in terms of recommendations and subsequent benefits / advantages for Spoornet.

5.3.1 Customer Involvement

As the customer plays a key role in the definition and evaluation of the quality of rail services offered, managers of Spoornet should incorporate consumer expectations and perceptions in the formulation of effective long-term marketing strategies. It is strongly recommended that a further in-depth qualitative study amongst the Intermodal Industry customers be undertaken to ascertain key criteria in the ever changing import /export market. Once the qualitative phase is completed, it is also strongly recommended that the quantitative measure replicate the Servqual model adopted in this study.

Further in-depth feedback to the Intermodal Industry Sector regarding its clients and areas of interest is imperative for Spoornet to reach its ultimate goal of becoming a more customer service orientated company. In the current enviroment of organisational restructuring, it is more important than ever to retain and reinforce the customer orientation achieved thus far by regular monitoring of client feedback. This process has been identified to have helped to prevent significant slippage during past periods of restructuring and change. It has the potential to do so again as Spoornet faces substantial challenges not only in local markets but also in the global economic enviroment.

5.3.2 Employee Training

Spoornet management could start by improving on staff training, especially to train their staff to be more professional and courteous when dealing with customers. The customer confidence of Spoornet has to be gained and the best way is for the management to look at improving on aspects such as training of staff to realize greater customer focus. Management must implement cultural changes to alter existing ideas of what Spoornet is and how it should operate in order to achieve greater customer orientation. Significant efforts to change the culture and beliefs of individuals who have been in the company for a considerable period of time and who may doubt that these changes are possible, is required.

5.3.3 Customer Contact Activities

Spoornet must reassess the basic ways in which customers contact, communicate and do business with Spoornet. The segmentation approach currently proposed is correct but must be refined. The segmentation of customers must lead to the offering of transport options that reflect the distinctive nature of each industry's business. The Intermodal Sector must be segmented based on the import and export of containerised traffic and not combined with other unique industries such as the

cement industry. Customised services cannot be offered to such diverse customers when grouped as one sector. Such a grouping prevents the offering of transport options unique to the import / export container business. This proposal requires urgent reviewing during Spoornet's current restructuring. Furthermore, the alignment of services with the nature of the industry will ensure greater responsiveness and predictability and ultimately lead to increased rail volumes.

The role of Customer Relationship Management (CRM) via existing Key Account Managers are essential in ensuring that customised services are offered to customers and customer satisfaction realised. The mentality of "one size fits all" cannot be applied to all customer segments within Spoornet. The essential nature / dynamics of the import / export container division clearly differentiates it from all other sectors within Spoornet. Customised interaction enables the understanding of the customer's unique needs, which is then translated into unique service offerings.

5.3.4 Technology and E-Commerce

More effective technology and improved e-commerce usage has the potential to transform Spoornet's level of customer satisfaction. This will result in:

- More accurate handling of customer requests promptly thereby improving responsiveness, a key service quality dimension of transport operators, and simply, by streamlining internal processes. This would reduce both transaction costs and current complexities of Spoornet's operations.
- Better interface with customers through user – friendly systems that offer more ways of engaging in business with Spoornet resulting in value adding.
- Customised information to customers via linked Spoornet / customer websites / intranets.
- Alignment of Spoornet employee's actions and abilities with the business strategy.
- Customer Relationship Managers can utilize e-commerce to manage the customer relationship.

It is essential for Spoornet to start investing significantly in technology and resources to realise these benefits and improve the quality of service offered to its customers.

5.3.5 Streamline Processes

In streamlining processes to serve customers better, Spoornet can successfully address both the revenue and cost sides of the business. Systems and processes that simplify the delivery of services

such as wagon ordering and that simplify the transaction process such as claims would have the ability to drastically reduce costs and improve profitability. Streamlining Spoornet's processes would lead to:

- Optimisation of resource utilization.
- Increased use of scheduled operations such as the Import / Export service.
- Establishment of reliable reservation and wagon ordering systems.
- Sophisticated yield management systems once Spoornet is capable of managing and controlling capacity.
- Improved profitability systems enabling Spoornet to price existing business, manage yields and selectively accept new business.

5.3.6 Corporate Image

Service companies such as Spoornet are increasingly positioning through the communication channel i.e. advertising and marketing, with the objective of building strong corporate images in order to create relative attractiveness. In addition, the service quality dimensions of tangibles can also contribute to an improved corporate image for Spoornet. Statements B1 – B4 in table 4.6 details the tangibles dimension as measured by the servqual questionnaire. The tangibles expectation scores (table 4.6) indicate that respondents either agree or strongly agree with the statements which points to the importance of this dimension. The perception scores for tangibles (table 4.9) however indicate that respondents have a low perception of the tangible aspects of Spoornet. This contributes to a further understanding of current negative media focus. Spoornet should focus on improving the tangible aspects of service, which would ultimately result in an improved corporate image. The adoption of a superior corporate image under current marketing conditions will play an important role in both attracting and retaining customers.

5.3.7 Further Research

In view of the intense competition in the transport sector since the deregulation of the transport industry in South Africa, it is imperative that the management of Spoornet undertakes further research to discover any shortfalls in service quality and to take necessary corrective measures in case of a shortfall. This would ensure that the service quality that Spoornet provides to its customers is of a high standard that would also enable it to compete effectively with other modes of transport.

The study should include a more indept analysis of the Spoornet's service delivery in the import / export market. A more representative sample should be obtained than that which was used for this study. The Servqual questionnaire should be administered to not just the Intermodal Marketing Companies but also to their principals who are the cargo owners and other role players in the supply chain.

5.4 CONCLUSION

Spoornet can be summarized as follows (Research International Study, 1989):

- Semi flexible service.
- Unilateral approach in dealing with customers.
- "One size fits all" service.
- Two stream structured Spoornet (non-integrated).
- Common rail carrier with limited capacity.
- Common technology platform.

In order to achieve service quality and ultimate customer satisfaction Spoornet must endeavour to achieve the following:

- Fixed train schedules / reservation system.
- Multilateral approach.
- Customised services for unique industries.
- Shorter communication channel with customer to facilitate immediate response.
- Collaborative logistics service.
- Customised tailored technology solutions.

International rail transport managers utilize service quality models that can guide them in planning and implementing service quality systems that are almost guaranteed to deliver "competitive advantage." In order to realise this competitive advantage in a highly competitive transport industry, Spoornet, as the only rail transporter in South Africa, should benchmark its services against that of quality models adopted by leading international rail companies.

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APPENDIX I

Spoornet Survey

Research Questionnaire

Dear Customer,

As part of my partial fulfillment of the Master of Business Administration Degree I am currently conducting a Research Project at the University of Kwa-Zulu Natal. In order for me to fulfill this requirement it would be appreciated if you could kindly complete the attached questionnaire.

This questionnaire is designed to assess the quality of service rendered by Spoornet to you, the customer.

Your responses will be completely confidential and the information supplied is kept anonymous.

Kindly complete this questionnaire as honestly and accurately as possible.

Your input is greatly appreciated.

Thank you,

Amsha Govender

QUESTIONNAIRE

SECTION A: GENERAL

Please tick the appropriate response in the corresponding blocks.

1. Your gender is:
   a) Male [ ]1
   b) Female [ ]2

2. How long have you been a customer of Spoornet?
   a) under 1 year [ ]1
   b) between 2-3 years [ ]2
   c) between 3-5 years [ ]3
   d) more than 5 years [ ]4

3. When do you seek the services of Spoornet personnel?
   a) to request rates [ ]1
   b) to order wagons [ ]2
   c) to track consignments [ ]3
   d) for accounts/ claims queries [ ]4
   e) other- specify ---------- [ ]5

4. Which of the following best describes your involvement in transport matters? Are you involved with.....

   a) Making decisions regarding transport issues [ ]1
   b) Daily operational issues [ ]2
   c) Payment/ invoicing/ reconciling of Transport Accounts [ ]3
   d) Other [ ]4

5. How often do you liaise with Spoornet personnel?

   a) daily [ ]1
   b) more than once a week [ ]2
   c) monthly [ ]3
   d) when necessary [ ]4

SECTION B: YOUR EXPECTATIONS OF A RAIL TRANSPORT COMPANY

Based on your experiences as a customer of a transport company, please think about the quality of service that you would EXPECT to receive. Indicate the extent to which you think a transport company should possess the features described by each statement. If you feel the features mentioned are essential in your judgment of a transport company, please circle 5 (strongly agree). However, if you feel the features mentioned are of little importance, please circle 1 (strongly disagree).

	Strongly Disagree				**Strongly Agree**
1) An excellent Transport Company will have neat looking equipment, e.g. clean trucks	1	2	3	4	5
2) The physical facilities will be visually appealing.	1	2	3	4	5
3) The staff will be neatly dressed e.g. uniforms, safety wear	1	2	3	4	5
4) Documentation associated with the service (such as delivery notes or statements) will be visually appealing	1	2	3	4	5
5) When an excellent transport company promises to do something by a certain time, they will do so.	1	2	3	4	5
6) When a customer has a problem, the staff should show a sincere interest in resolving it.	1	2	3	4	5
7) An excellent transport company will perform the service right the first time.	1	2	3	4	5
8) An excellent transport company will insist on error-free records.	1	2	3	4	5
9) The staff will inform customers exactly when the services would be provided.	1	2	3	4	5
10) Staff will give prompt service to customers.	1	2	3	4	5
11) Staff will always be willing to help customers.	1	2	3	4	5
12) Staff will never be too busy to respond to customers' requests.	1	2	3	4	5

13) The behaviour of staff will instil confidence in customers.	1	2	3	4	5
14) Customers of an excellent transport company will feel safe in their transactions.	1	2	3	4	5
15) Staff of an excellent transport company will be consistently courteous with customers.	1	2	3	4	5
16) Staff of an excellent transport company will have the knowledge to answer customers' questions.	1	2	3	4	5
17) An excellent transport company will give customers individual attention.	1	2	3	4	5
18) An excellent transport company will have convenient operating hours.	1	2	3	4	5
19) An excellent transport company will have the customer's best interests at heart.	1	2	3	4	5
20) An excellent transport company will understand the specific needs of its customers.	1	2	3	4	5

SECTION C : YOUR PERCEPTIONS OF WHAT SPOORNET IS DOING

The following set of statements refers to your feelings and PERCEPTIONS about Spoornet. For each statement indicate the extent to which you believe that Spoornet has the feature described by each statement. Once again, circling 5 means that you strongly agree and circling 1 means that you strongly disagree.

	Strongly Disagree			**Strongly Agree**
1) Spoornet has neat looking equipment.	1	2	3	4
2) The physical facilities are visually appealing.	1	2	3	4
3) The staff at Spoornet appear neat	1	2	3	4
4) Documentation associated with the service is visually appealing	1	2	3	4
5) When Spoornet promises to do something by a certain time, it does so.	1	2	3	4
6) When I have a problem, the staff shows a sincere interest in solving it.	1	2	3	4
7) Spoornet performs the service right the first time.	1	2	3	4
8) Spoornet insists on error-free records.	1	2	3	4
9) The staff at Spoornet informs us when services will be provided.	1	2	3	4
10) The staff at Spoornet gives prompt service.	1	2	3	4
11) The staff at Spoornet is always willing to help.	1	2	3	4
12) The staff at Spoornet is never too busy to respond to our requests.	1	2	3	4
13) The behavior of staff instills confidence in us.	1	2	3	4
14) I feel safe in my transactions with Spoornet.	1	2	3	4
15) Staff at Spoornet is consistently courteous.	1	2	3	4
16) Staff at Spoornet has the knowledge to answer my questions.	1	2	3	4
17) Spoornet gives us individual attention.	1	2	3	4
18) Spoornet has operating hours convenient to all its customers.	1	2	3	4
19) Spoornet has my company's best interests at heart.	1	2	3	4
20) Staff at Spoornet understands our specific needs.	1	2	3	4