



THE RELATIONSHIP BETWEEN SERVICE QUALITY AND  
SERVICE RECOVERY TOWARD CUSTOMER RETENTION  
IN OCEAN LINER BUSINESS

By  
Thorarin Phunhitphat

A Survey Research Report for  
MS 7000 Research/IS project

Submitted in Partial Fulfillment of the Requirements for the Degree of  
Master of Science in Management

November 2008





**Assumption University**  
**COLLEGE OF INTERNET DISTANCE EDUCATION**  
**School of Business Administration**

**THE RELATIONSHIP BETWEEN SERVICE QUALITY AND  
SERVICE RECOVERY TOWARD CUSTOMER RETENTION  
IN OCEAN LINER BUSINESS**

**By**

**Thoranin Phunphitphat**

**A Survey Research Report for  
MS 7000 research/IS project**

**Submitted in Partial Fulfillment of the Requirements for the Degree of  
Master of Science in Management**

**November 2008**

# **The Relationship between Service Quality and Service Recovery toward Customer Retention in Ocean Liner Business**


**By**

**Thoranin Phunphitphat**

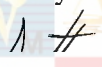
**A survey Research Report  
Submitted in Partial Fulfillment of the Requirements for the Degree of  
Master of Science in Management**

## **Examination Committee:**

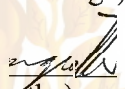
Committee Chairperson:

  
(Dr. Piyathida Pradibatuga)


Committee Member:

  
(Dr. Satha Phongsatha)

Committee Member:

  
(Rear Admiral Prasart Sribhadung)

Advisor:

  
(Dr. Mayuree Aryupong)

**Date of Examination:** November 6, 2008

**Date of Graduation Approval:** November 6, 2008

**College of Internet Distance Education  
Assumption University of Thailand**

**November 2008**



# **THE RELATIONSHIP BETWEEN SERVICE QUALITY AND SERVICE RECOVERY TOWARD CUSTOMER RETENTION IN OCEAN LINER BUSINESS**

**Author name:** Thoranin Phunhitphat **Advisor:** Dr. Mayuree Aryupong.

**Degree:** Master of Sciences in Management **School:** School of Internet Distance Education

## **Abstract**

**Keywords:** Service quality, Service recovery, Customer retention, Ocean liner business.

The objectives of this study were to 1) identify the effect between service quality and its dimensions toward customer retention in ocean liner business. 2) To identify the effect between service recovery and its dimensions toward customer retention in ocean liner business. 3) To provide suggestion for improvement of service quality and service recovery strategy to ocean liner company.

In today's hyper-competitive business environment, customer retention is vital for success. Service quality and service recovery has a potential for increase customer retention ratio. In this study, we want to examine how service quality and service recovery and its dimension effect with customer retention in ocean liner business. The 240 sets of questionnaire were distributed to exporter and importer who locate in Chonburi & Rayong area. Result from multiple regression model found that service recovery is extremely important with customer retention while service quality become general requirement for ocean liner business. Thus, effective service recovery strategy (e.g. apology combine with tangible compensation) had a strong positive influence for customer retention in ocean liner business. Consistence with previous research, interactional justice is the most important factor for customer retention ratio follow with procedural and distributive justice. The result indicates that ocean liner must apologize after service failure happen.

## TABLE OF CONTENT

Preface .....	
Abstract .....	<b>ii</b>
Acknowledgement.....	<b>iii</b>
Table of Content.....	<b>iv</b>
List of Tables .....	
List of Figures .....	<b>vi</b>
<b>Chapter</b>	
<b>1 Introduction .....</b>	<b>1</b>
Background of Study .....	1
Statement of the Problem .....	6
Research objective .....	7
Research question.....	7
Significance of the study.....	8
Scope of Research.....	8
Limitation of Research.....	8
Definition of Terms.....	9
<b>2 Literature review .....</b>	<b>12</b>
Review literature related to the dependent variable .....	12
Review literature related to the independent variable ....	19
<b>3 Research Framework.....</b>	<b>46</b>
Research Methodology.....	46
Theoretical Framework .....	47
Conceptual Framework .....	50
Respondents and Sampling Procedures .....	54
Research Instruments and Questionnaire .....	57
Pretest and reliability .....	58
Collection of Data/ and Gathering Procedures.....	59
Static treatment of data.....	61
<b>4 Data analysis and Result.....</b>	<b>63</b>
Descriptive Analysis.....	64
Hypothesis testing .....	71
Hypothesis Summary.....	74
<b>5 Conclusion and Recommendation.....</b>	<b>75</b>
Research Findings.....	75
Implication for Practice .....	76
Recommendations .....	77
Conclusions .....	86
<b>References .....</b>	<b>87</b>
<b>Appendices</b>	
Appendix A .....	94

## LIST OF TABLES

Table	Page
2.1 Dimension of Service Quality	26
2.2 SERVPERF's Five Dimension	30
2.3 Summary of Dimensions of Service Quality by Five Theories	34
2.4 Key Finding and Limitation of Service Quality by Five Theories	35
2.5 Justice Framework	42
2.6 Key Finding and Limitation of Service Recovery by two Theories	45
3.1 Sample Size Determination	56
3.2 Reliability Test	59
4.1 Total of Teu support	64
4.2 Factor loading, Cronbach's Coefficient Alpha, mean and S.D. of service quality's dimension	66
4.3 Factor loading, Cronbach's Coefficient Alpha, mean and S.D. of service recovery's indicator	68
4.4 Factor loading, Cronbach's Coefficient Alpha, mean and S.D. of customer retention indicator	70
4.5 Correlation of service quality's dimension and service recovery's indicator	71
4.6 Multiple Regression result of service quality, service recovery with customer retention	72

4.7	Multiple Regression result of service quality dimension, service recovery indicator with customer retention	72
4.8	Summary of Hypothesis testing result	73





## LIST OF FIGURES

Figure	Page
1.1 Laem Chabang's capacities	6
2.1 Virtuous Circle	17
2.2 Function quality of process	24
2.3 SERQUAL Model 1988	27
2.4 Service quality as conceptualized	27
2.5 Service recovery metord (Singh)	38
3.1 Conceptual framework of the research	50
5.1 Equipment control and monitoring system, Thailand 40 general propose container detail	80
5.2 Equipment control and monitoring system, Malaysia 40 general propose container detail	80

## **Chapter 1**

### **Introduction**

#### **1.1 Background of Study**

As deregulation of the freight transportation industries in United States in year 1980, buying logistic service has become similar to the other type of industry services. With the number of ocean liner in the market, the competition in this industry becomes more intense. Service quality and service recovery become more important for each ocean liner to maintain their current customer. This exploratory research is to examine the relationship between service quality and service recovery toward customer retention for Thailand importer and exporter.

##### **1.1.1 Important of Customer Retention, Service Quality and Service Recovery**

As repeat purchase behavior is an important issue for most marketers. While many marketing activities are designed to gain new customers, concern for repeat purchasing by current customers is designed to maintain existing customers by decreasing customers exit. Since the cost of gain new customer usually greatly exceeds the cost of retaining a customer, managers are increasingly concerned with minimizing customer defection. Thus, customer retention is also important in ocean liner business.

Service is more or less subjectively experienced processes where production and consumption activities take place simultaneously. Interactions, including a series of moments of truth between the customer and the service provider occur. What happens in these interactions, so-called buyer-seller interactions or service encounters,

will obviously have a critical impact on the perceived service (Gronroos 2000). Customers perceive services in term of the quality of the service and how satisfied they are overall with their experiences. These customer-oriented terms, quality and satisfaction, have been more focus of attention for executives and researchers alike over the last decade or more (Zeithaml, 2003). In service business, quality depends on the customer's experience with delivery. Thus, how the customers feel between the service provider and themselves is important to the business success. So, ocean liner should focus and improve their service quality to ensure that customer will stay with their service in the long run.

Despite considerable efforts to make customers happy, things do not always go right in service delivery. Then things go wrong negative emotions, such as anger fluctuation and ever rage, are produced and expressed. When the service fails, recovery is attempted by service provider by enhance or enflame these negative emotions. Knowing how to handle service recovery process is crucial as an inappropriate response may only make matters worse (Sparks and McColl-Kennedy, 2001)

This paper examine Thai importer and exporter buying retention on their current ocean liner in reflect changing competitive condition in the global marketplace. This paper will focus on the service quality and service recovery of shipper and consignee toward their buying retention on their current ocean liner. This paper will help manager of ocean liner to understand the customer perception of liner's service quality and service recovery toward customer retention and loyalty.

It is very necessary to take a different approach to attracting and retaining a loyal and profitable clientele in a drastically changing industry like ocean liner business. A strong customer focus enables a business to stay in close contact with

customer needs and satisfaction. The model of service quality and service recovery toward customer retention of ocean liner business should be constructed in order to achieve highest level of repurchase and service loyalty.

### 1.1.2 Background of Transportation industry and containerization

Using the broad definition of service industry, which list was adapted from survey of current business 1988, Logistic and transportation is classified as service. Ocean liner is consider as Third-party logistic services which emerged as a significant topic in the literature in the middle 1980s, it refers to a for-hire provider performing logistics activities for the buyer or seller of raw materials, goods in process, or finished products. The third party performs services that might be done by the buyer or seller, is actively engaged in the movement of goods and information relevant to the transaction, but does not take title. Third-party logistics services cover a wide range of products.

Even though goods are shipped aboard by rail or truck, international transportation frequently requires ocean or air freight, which many corporations only rarely use domestically. In addition, combinations such as land bridges or sea bridges are frequency permit to transfer of freight among various mode of transportation which is resulting in intermodal movements. For international transportation, water carriers dominate international transportation, with more than 50 percent of trade volume in dollar and 99 percent by weight (statistic abstract of the U.S.: 1997, P.656.) Three types of vessels operating in the ocean shipping can be distinguished by their services which are liner service, bulk service, and tramp or charter service. *Liner service* offer regularly scheduled passage on established routes. *Bulk service* mainly provides contractual service for individual voyages or for prolonged periods of time.



*Tramp service* is available for irregular routed and is scheduled only on demand (Czinkota, Ronkainen and Buonofina, 2004). Anyway this research will focus on the liner services that provide container service only.

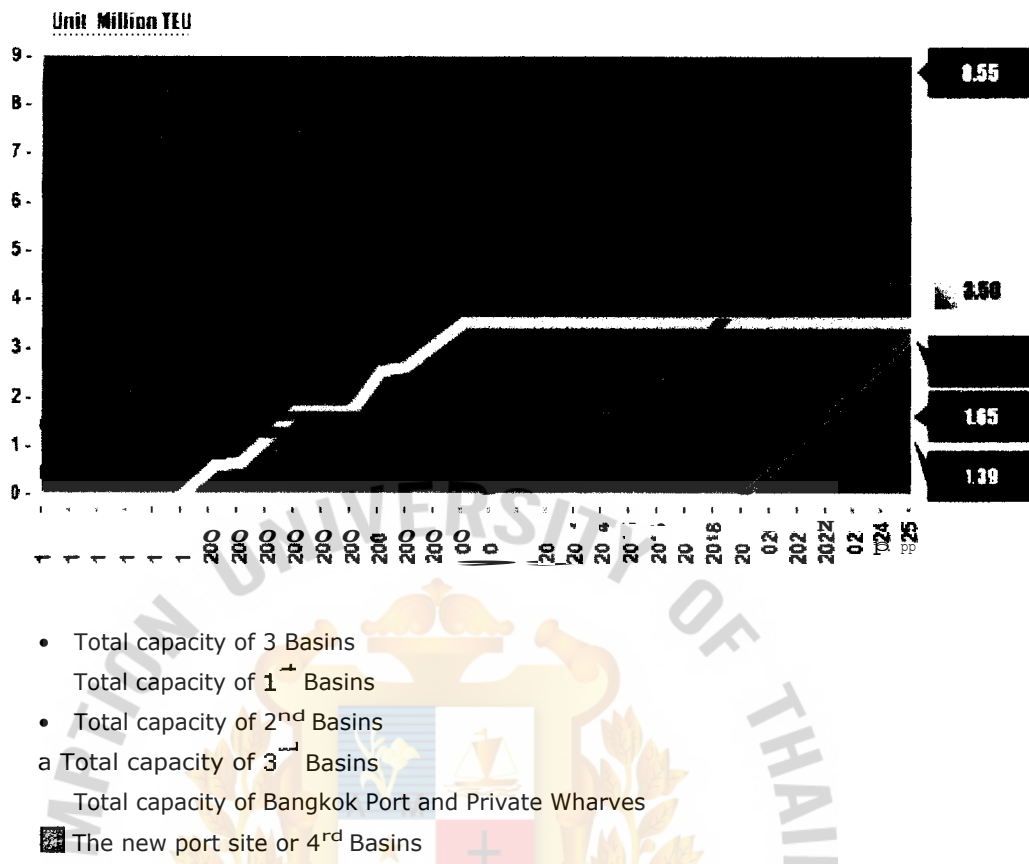
As mention as above that this research will focus on liner services that provide service in container, thus, to understand this research we need to understand the background of containerization and the important of it. Containerization is a system of intermodal freight transport cargo, using ISO container (know as shipping container or Isotainers) that can be loaded and sealed intact onto container ships, railroad, cars, planes and trucks. The introduction of container result in vast improvement in port handling efficiency, thus lowering cost and help to lower freight charges and boosting trade flows. Almost every product that human consume spends some time in container.

Human had use the container since 19<sup>th</sup> century during late of 1780s. In 1830s, container was use for carrying the goods via trucks or ships, but those containers are smaller than today which was using to carry coal only. In year 1951, the first vessel propose-built to carry container began operation in Denmark in 1951. Ships were used to carry the container from Seattle to Alaska.

In year 1956, the U.S. container shipping industry was became more important, when trucking entrepreneur Malcom McLean put 58 containers aboard a refitted tanker ship, the "Ideal-X," and sailed them from Newark to Houston what was new in the USA about McLean's innovation was the idea of using large containers that were never opened in transit between shipper and consignee and that were transferable on an intermodal basis, among trucks, ships and railroad cars. McLean had initially favored the construction of "trailerships" - taking trailers from large trucks and stowing them in a ship's cargo hold.

Container was improving in term of size and reliability to protect the good from damage. Now the container size and capacity become standard which all of ocean liner using the same which are 20ft, 40ft and 45ft.

In Thailand, there is a significant increasing in consumption of liner business since year 2003. In year 2005, Laem Chabang was ranked 13<sup>th</sup> for the busiest terminal in Asia which was 20<sup>th</sup> for world rank. In that year, Laem chabang port was handling over 3,834,000 container export and import from/to Thailand. Moreover Laem chabang declare the capacity at 5 million TEU in year 2010 which data is shown in figure 1.1. Since the demand of container that use terminal service come from the volume that Thai Shipper and consignee who export and import their merchandise in and out from Thailand, it implies that Ocean liners that serve in Thailand will be more aggressive to invest for new higher capacity vessel. It also implies that competition will be more intense in the liner business in term of ocean freight and service offer. Beside the ocean freight offer, ocean liner's service quality and service recovery also play the important role in order to satisfy most of their customer and maintain their support to survive in the long run.



**Figure 1.1:** Laem Chabang's capacities (Source: [www.laemchabangport.com](http://www.laemchabangport.com))

## 1.2 Statement of problem

Many issues about customer retention still remain to be examined. Customer retention is very important because there is a tremendous opportunity cost associated with losing an existing or potential customer. In fact, poor customer retention is frequently a major contributor to declining revenues and makes it difficult to expand a business into new market.

Customer retention is a fundamental requirement in making a business more profitable or expanding that business's direction. The higher the rate of customer retention, the greater the profits impact for a given business. (Best 1997)

The challenge, in the Ocean liner industry, is very necessary to take a different approach to attract and retain loyal and profitable customers. Thus in this study, we can find out that: Does service quality and service recovery and its dimension are important for customer retention in ocean liner business?

### 1.3 Research objective

The overall objectives of this research are:

- 1) To identify the effect between service quality and its dimensions toward customer retention in ocean liner business.
- 2) To identify the effect between service recovery and its dimensions toward customer retention in ocean liner business.
- 3) To provide suggestion for improvement of service quality and service recovery strategy to ocean liner company.

### 1.4 Research question

In this research, we will not concern for the liner general service like a transit time, routing also ocean freight as, most of the time, those factors are not different much from each liner. We will focus on service quality and service recovery of those liners and the attitude and retention to purchase from customer base on those two factors.

***RQ:*** Does service quality and service recovery dimension can motivate exporter to repurchase the ocean liner service?



### 1.5 Significance of the study

This study intends to discover the service quality and service recovery aspects important for customer retention in ocean liner business. The importance of study is to find out how to retain customers, which are the ultimate objective of any given marketing strategy. The benefits of this research are for the marketing manager of ocean liner as well as their sale and customer service team in order to enhance and improve their service operation. The customer satisfaction and retention are important linkages to a market-based strategy and profitability. If a business can accomplish this objective, the business could produce above average profits.

### 1.6 Scope of research

The research is conducted to gain the cue attributes from the importer and exporter that use any of the ocean liner around the Chonburi and Rayong area, in order to establish the practice and improve service quality and service recovery strategy to approach and obtain maximizing customers' retention.

### 1.7 Limitation of the research

This study is limited to the number of customers who received service of any ocean liner around Chonburi and Rayong Province for the particular time. Therefore it should take the caution when generalize the results across the respondents of entire ocean liner basket.

Beside this research will use judgment (Purposive) sampling procedure, it might have chance for a bias to select sampling unit by researcher. (Mccain, 1998). Researcher will select the company that well know as big volume exporter and importer in Chonburi and Rayong which have around 50 customers in the respondent

list. Those selected respondent are big volume customer which can not represent the same attitude with SMEs customer. However, the rest off respondent will be distribute to all type of customer in different segmentation that locate in Rayong and Chonburi area.

### **1.8 Definition of term**

**Inter-modal freight transport** involves the transportation of freight in a container or vehicle, using multiple modes of transportation (rail, ship, and truck), without any handling of the freight itself when changing modes. The method reduces cargo handling, and so improves security, reduces damages and loss, and allows freight to be transported faster.

**Logistics** is the art of managing the supply chain and science of managing and controlling the flow of goods, information and other resources like energy and people between the point of origin and the point of consumption in order to meet customers' requirements. It involves the integration of information, transportation, inventory, warehousing, material handling, and packaging.

**Container ships** are cargo ships that carry their entire load in truck-size containers. Their capacity is often measured in TEU or FEU. These initials stand for "twenty foot equivalent unit," and "forty foot equivalent unit," respectively. For example, a vessel that can hold 1,000 40-foot containers or 2,000 20-foot containers can be said to have a capacity of 2,000 TEU. In the year 2005, the largest container ships in regular operation are registered to carry in excess of 8,000 TEUs.

**Twenty-foot Equivalent Unit** (often **TEU** or **teu**) is an inexact unit of cargo capacity often used to describe the capacity of container ships and container terminals

Bulk cargo is commodity cargo that is transported unpackaged in large quantities. These cargos are usually dropped or poured, with a spout or shovel bucket, as a liquid or solid, into a bulk carrier's hold, railroad car, or tanker truck/trailer/semi-trailer body. Roll-on/roll-off (**RORO** or **ro-ro**) ships are designed to carry wheeled cargo such as automobiles, trailers or railroad cars. This is in contrast to lo-lo (lift on-lift off) vessels which use a crane to load and unload cargo.

Service is an activities or series of activities or more or less intangibles nature that normally, but not necessary, take place in interactions between the customer and service employees and/or physical resources if goods and/or system of the service provider, which are provided as solutions to customer's problem.

Service quality can be defined as the extent of discrepancy between customer expectations or desires and their perception.

Tangible is related to the appeal of facilities, equipment and material used by a service firm as well as the appearance of service employee.

Reliability is involved with accurate service the first time without any mistakes and delivers what it has promised to do by the first time that has been agreed upon.

Responsiveness is the willingness to help customers and to provide prompt service. This dimension emphasizes attentiveness and promptness in dealing with customer request, questions, complaints and problem.

Assurance is defined as employees' knowledge and courtesy and the ability of the firm and its employee to inspire trust and confidence.

Empathy is defined as the caring individualized attention the firm provides its customers.

Customer retention is the ability of a service provider to get the customer to return in the future.

## 3391

Word-of mouth is defined as the extent to which a customer informs friends, relatives and colleagues about an event that has created a certain level of satisfaction.

Trust is a relationship of reliance. A trusted party is presumed to seek to fulfill policies, ethical codes, law and their previous promises.

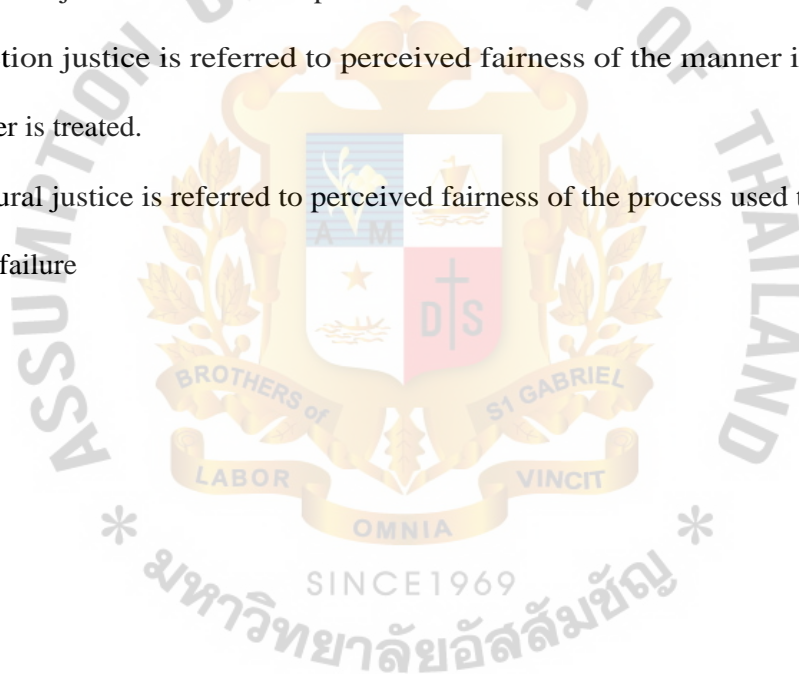
Loyalty is referring as the customer intention to repurchase from the supplier who created a certain level of satisfaction.

Service recovery is a way to offset consumer dissatisfaction when the service has not been delivered satisfactorily, a firm can offer apology, a refund, offer free services, and/or offer compensation to demonstrate good will.

Distributive justice is referred to perceived fairness of the outcome.

Interaction justice is referred to perceived fairness of the manner in which the customer is treated.

Procedural justice is referred to perceived fairness of the process used to rectify the service failure





## **Chapter 2**

### **Literature Review**

#### **2.1 Theories related to the dependent variable**

As customer retention is becoming very important. It will provide a lot of benefit to the company if they can maintain their current customer. Researcher has reviewed the importance of customer retention and how it will benefit to company and customer. Researcher also reviews the component of customer retention and select the most suitable component that match with the objective of the research.

##### **2.1.1 Important of customer retention**

Customer retention is the ability of a service provider to get the customer to return in the future. Customer retention is very important because there is a tremendous opportunity cost associated with losing an existing or potential customer. There is no any company could retain 100% of their customer. Improving in customer retention ratio can mean significantly more dollar. Another reason to be concerned about retention is that the only available alternative to keeping existing customers is to constantly bring in new customer.

Retention is defined as the percentage of customer in any particular month who returns within specified time. Ninety days is often used to as a period of time to evaluate a customer's return. In this case, if the customer does not return within 90 days from their first visit or booking the service, they are considered not retained for a liner business.

Customer retention provides such a great benefit to company, it is apart of main focus that marketing team need to know in order to achieve goals of relationship marketing. Since the primary goal of relationship marketing is to build and maintain a base committed customers who are profitable for the organization. To achieve this goal, firm will focus on attraction, retention and enhancement customer relationship (Zeithml, 2003).

The firm will seek to attract customers who are likely to become long term partner though market segmentation. The company can come to understand the best target markets for the building lasting customer relationships. When the relationship grows the customer become loyal which they always frequency help to attract new customer via the word of mouth. After there is strong relationship from the customer and company, customer will be more likely to stay in the relationship when they are consistency provided the good services and goods value overtime. They are less likely to be pulled away by competitors if they are feel the company understands their changing needs and seems willing to invest in the relationship by constantly improving and evolving its product and service mix (Zeithml, 2003). Since repeat purchase behavior is an important issue for marketers. While many marketing activities are designed to gain new customers, concern for repeat purchasing by current customers is designed to maintain existing customers usually exceeds the cost of retaining customer, managers are increasing concerned with minimizing customer defections. Research has consistently found a relationship between satisfaction and repurchase intentions. Therefore, one of the important consequences of satisfaction is increased repurchase intention.

### 2.1.2 Theories of Customer Retention

Best (1997) said the real benefit of the strong market orientation and high level of customer satisfaction is a high level of customer retention. A business with a strong market orientation is in the best position to develop and implement strategies that deliver high levels of customer satisfaction and retention. The relationship between customer satisfaction and customer retention is intuitively easy to observe. However, different competitive conditions modify this relationship. In less competitive market where a few substitute, customer retention is easily to retain even with the poor level of customer satisfaction. However, in highly competitive market where number of service provider and low customer switching costs, even high level of customer satisfaction may not insure against customer defection. In these markets, customer's satisfaction is much more difficult. Grocery store, restaurants, bank and ocean liner business, customers can switch quickly if not completely satisfied. While the time between purchase events is longer such as personal computer, automobile, and customer electronics, customer can also easily to move to another brand if products and services are not completely satisfied. And as a result, it takes higher levels of customer satisfaction to retain customers from one purchase to the next. In ocean liner business, there is number of service provider offer the same sailing service which it cost less to customers to switch to support other if there are not satisfy with their current liner service.

As mention above repeat purchase behavior is an important issue for most marketers, it can be say that customer retention will help company to 1) save cost and increase margin, 2) make the stakeholder satisfy, 3) create word of mouth from customer, 4) create trust and 5) create loyalty. Researcher has summarized the finding as below.

Cost and margin: As the cost of gain new customer usually greatly exceeds the cost of retaining a customer, managers are increasingly concerned with minimizing customer defection. All parties in the customer-firm relationship can benefit from customer retention. Customer will get benefit by receive greater value relative to what they expect from the competing firms. Value can be defined as a trade-off for customer between the give and the get component. Consumers are more likely to stay in a relationship when they get (quality, satisfaction, specific benefits) exceed the gives (Monetary and no monetary costs). (Zeithml, 2003).

While company also benefits from the customer's life time value which Reicheheld (1990) claim that the higher retention rate leads to higher net present value. Another study by Reicheheld and sasser (1990) has qualified the significance of customer retention. They found that profits in service industries, including credit card companies, increased direct proportion to the length of a customer's relationship. They also found that a decrease in defection by 5 percent would boost profits by 25 percent to 85 percent. They concluded that customer defections have a significant impact on a company's profitability. They also suggest that long term customers are more likely to buy additional service and pass on favor recommendation as well.

As customer retention goes up, marketing costs go down. Doyle (1998) said that retain the existing customer, its cost less. Clearly, marketing efforts and resource should be earmarked to retain the most profitable customers those who cost less to serve, are repeat buyers and who evolved to high margin offer. The challenge is not identify them, but also retaining their business.

Moreover loyal customers frequently bring in new business. P, Kummar (1999) study also support as he said that relationship-oriented business to business



service firms achieve higher overall returns on their investments than the transaction oriented firm. The relationship marketing will help to reduce the marketing and administration costs, and the ability to maintain margins without reducing price while also increase the revenue overtime from customer. So that company can improve their bottom line from the relationship marketing and customer retention campaign.

According to Buchanan and Gilles (1990), the increased profitability associated with customer retention efforts occurs because:

- The cost of acquisition occurs only at the beginning of a relationship: the longer the relationship, the lower the amortized cost.
- Account maintenance costs decline as a percentage of total costs (or as a percentage of revenue).
- Long term customers tend to be less inclined to switch and also tend to be fewer prices sensitive. This can result in stable unit sales volume and increases in dollar-sales volume.
- Long term customers may initiate free word of mouth promotions and referrals.
- Long term customers are more likely to purchase ancillary products and high-margin supplemental products.
- Long term customers tend to be satisfied with their relationship with the company and are less likely to switch to competitors, making market entry or competitors' market share gains difficult.
- Regular customers tend to be less expensive to service because they are familiar with the processes involved, require less "education," and are consistent in their order placement.

- Increased customer retention and loyalty makes the employees' jobs easier and more satisfying. In turn, happy employees feed back into higher customer satisfaction in a virtuous circle.

**Stakeholder satisfaction:** Schlesinger and Heskett (1991) added employee loyalty to the basic customer loyalty model. They developed the concepts of "cycle of success" and "cycle of failure". In the cycle of success, an investment in your employees' ability to provide superior service to customers can be seen as a virtuous circle. Effort spent in selecting and training employees and creating a corporate culture in which they are empowered can lead to increased employee satisfaction and employee competence. This will be likely result in superior service delivery and customer satisfaction. This in turn will create customer loyalty, improved sales levels, and higher profit margins. Some of these profits can be reinvested in employee development thereby initiating another iteration of a virtuous cycle.



**Figure 2.1** *Virtuous Circles* (Schlesinger and Heskett, 1991)

Source: Schlesinger, L. and Heskett, J. (1991) "Breaking the cycle of failure in service", Sloan management review, spring, 1991, pp. 17-28

Fredrick Reichheld (1996) expanded the loyalty business model beyond customers and employees. He looked at the benefits of obtaining the loyalty of suppliers, employees, bankers, customers, distributors, shareholders, and the board of directors

**Word-of mouth** is defined as the extent to which a customer informs friends, relatives and colleagues about an event that has created a certain level of satisfaction. From Hart *et al.*, (1990) who found that customer who has had bad experienced tell approximately 11 people while those who got experience tells just 6. Moreover, Fortune (1995) also support from his research that people tell only 8 friends about truly satisfy which deliver more than 20 people about bad experience. Anyway, from Holmes and Lett (1997) who found that customer with positive experience were, more inclined than those with negative experience to communicate their feeling to other which this is the reason to believe that positive events produces stronger respond than negative events under certain conditions.

**Trust** is a relationship of reliance. A trusted party is presumed to seek to fulfill policies, ethical codes, law and their previous promises. Many researches have shown that in Relationship marketing trust must be built. Trust exists when one party has confidential in an exchange partner reliability and integrity. Repeat satisfaction over times would strengthen the perceived reliability of the service provider and it will contribute further to trust formation. (Ganesan,1994). So satisfaction with service quality and service recovery would lead to building of trust.

**Loyalty** is referring as the customer intention to repurchase from the supplier who created a certain level of satisfaction. From the Heskett (2002) suggests that customer behaviors can divided into 5 levels which are Satisfaction, loyalty, commitment, apostle-like behavior (Willingness to convinces other to use a product or service) and ownership.

Since loyalty, trust and word of mouth can be observe via shipper and importer which is the main respondent for this research while the rest must be observe from ocean liner themselves. So, researcher selects *loyalty, trust and word of mouth* as a dimension to measure the customer retention with their current ocean liner.

## **2.2 Theories related to the Independent variable**

The following topic will provide a definition of service and quality. Beside, five service quality theories and two service recovery theories has been reviewed which researcher also compares the advantages and disadvantage for each theory in order to select the most suitable service quality and service recovery theory that match with this objective of the research.

### **2.2.1 Important of Service Quality**

High performance of service quality model will help company to improve their service performances which also help to improved customer satisfaction. During a past few decades service quality has become a major area of attention to practitioners, managers and researchers owing to its strong impact on business performance, lower costs, customer satisfaction, customer loyalty and profitability (Nitin Seth, 2005). There has been a continued research on the definition, modeling, measurement, data collection procedure, data analysis etc., issues of service quality, leading of development of sound base for the researchers.

In order to understand the service quality, it is necessary to understand the characteristic of service and quality. In practice, it is difficult in a service operation to distinguish clearly between the service, the process of providing the service and the system for delivering it. Since the service itself almost always consists of an act

involving the customer, quality will be perceived by the customer in term of this interaction. A moment of truth occurs whenever a customer comes into contact with any aspect of a service and draws a conclusions about its overall service quality (Normann 1991). Quality of a particular products or service is whatever the customer perceives it to be. Service is more or less intangibly experienced series of processes, where the customer often actively participated in the production process. Thus service is bound to be perceived as extremely complex. What is needed is a model of service quality, that is, a model of how the quality of service is perceived by customers ( Gronroos 1990)

Products (Goods) are bundles of attributes rendering satisfaction. Service is bundles of attributes rendering satisfaction. Compared with goods, it is commonly accepted that services have unique characteristics. Service are intangible with can not be separated from their provider and their delivery tend to be inconsistence.

Nature of service; There are many ranges on definitions of service suggested in the literature. Here are varieties of definitions upon the service phenomenon from three decade:

"Service; represents either intangible yielding satisfaction directly (transportation, housing), or intangible yielding satisfaction jointly when purchased either with commodities or other service" (Regan 1963,P.57)

"Service is much intangible benefit, which is paid for directly or indirectly, and which other includes a larger or smaller physical or technical component" (Anderson et al.1983,P.6)

"Service is an activities or series of activities or more or less intangibles nature that normally, but not necessary, take place in interactions between the customer and



service employees and/or physical resources if goods and/or system of the service provider, which are provided as solutions to customer's problem: (Gronroos, 1990)

There is different between service and manufacturing goods this is impact on the approach of quality management. The silent different are provided as below.

1) Intangibility: service can not be seen, felt, touched or tasted in the same manner of tangible product. The lack of intangible attribute means that it is difficult for producer to describe the service and for the consumer to ascertain it's likely virtual. Therefore, customers are looking for a sign of quality such as word of mouth and reputation.

2) Heterogeneity: Services are performance, frequently produced by human; thus no two services will be precisely alike. This can be results because two customers are precisely alike; each will have demand or experience the service in a unique way.

3) Simultaneous production and consumption; most service are sold first and then produced and consumed simultaneously. Service producers find themselves playing a role as a part of the product itself and as an essential ingredient in the service experience for the consumer.

4) Perishability; service can not be kept saved, stored, resold or returned. This means that, unlike manufacturing goods, it is not possible to have a final quality check. It implies that service provider needs to get the service right at the first time.

The word quality means different things to people according to context. It can be classifies into 5 perspectives. (David, 1988)

- *The transcendent view* of quality is synonymous with innate excellence, a mark of uncompromising standards and high achievement. This viewpoint is often applied to the performing and visual arts. It argues that people learn to recognize quality only through the experience gained from repeat exposures.

- *The product-based approach* sees quality as a precise and measurable variable. Difference in quality reflects difference in amount of some ingredient or attribute processed by the products.
- *User-based definitions:* These definitions equate quality with maximum satisfaction. This subjective, demanded-oriented perspective recognizes that different customer have different wants and need.
- *The manufacturing-based approach:* it is supply based and is primarily concerned with engineering and manufacturing practices. (If it is service, it is operation driven). It will focus on internal specification development which often drive productivity and cost containment goal.
- *Value-based definition* defines quality in term of value and price. By considering between tradeoff between performance and price, quality come to be defined as "affordable excellent"

As discussion previously, service is intangible thus, the purchaser cannot judge its quality or value prior to purchase and consumption. Customers will judge the quality of service by comparing perceptions of what they receive with their expectations of what they should receive. Both expectation and perception are experiential sensation rather than necessarily being real. So most of the service quality definitions will be fell within user-based definition. (Ghobadian, 1993)

### 2.2.2 Theories of service quality

In resent years, many valuable researches had examined the level of quality and it dimension in the performance of service. It shown that, service quality may not be easy to copy since certain characteristics in an organization's culture are often to develop and sustain it.

Zeithaml, Parasuraman and Berry have developed a model by which it is possible to measure the perceived service quality by starting with the introduction of concept of perceived service quality by Gronroos. Service quality can be defined as the extent of discrepancy between customer expectations or desires and their perception.

As there are many service quality models. Therefore, in order to select the suitable service quality model, the main 5 service quality models have been reviewed and discuss as below.

#### **2.2.2.1 Nordic Model (Gronroos, 1984)**

In this theory, quality, and service quality in particular, is a complex phenomenon that a much more detailed model than the ones normally used is needed. This theory divided the quality of a service as it is perceived by customers into two dimensions, which are, a technical or outcome dimension and a functional or process — related dimension. What customers receive in their interactions with the firm is clearly important to them and to their quality evaluation. Internally, this is very often thought as the quality of the product delivered. Gronroos (1984) explained that this is merely one quality dimension which was called the technical quality of the outcome of this service production process. It is what the customer is left with, when the production process and buyer – seller interactions are over. Frequently, this dimension can be measured rather objectively by customers, because of its character as a technical solution to a problem.

The customer is also influenced by how they receive the service and how they experience the simultaneous production and consumption process. This is another quality dimension, which is very much related to how the moment of truth of the

buyer-seller interaction themselves, is taking care of and how the service provider functions. Therefore, it is called the function quality of the process.

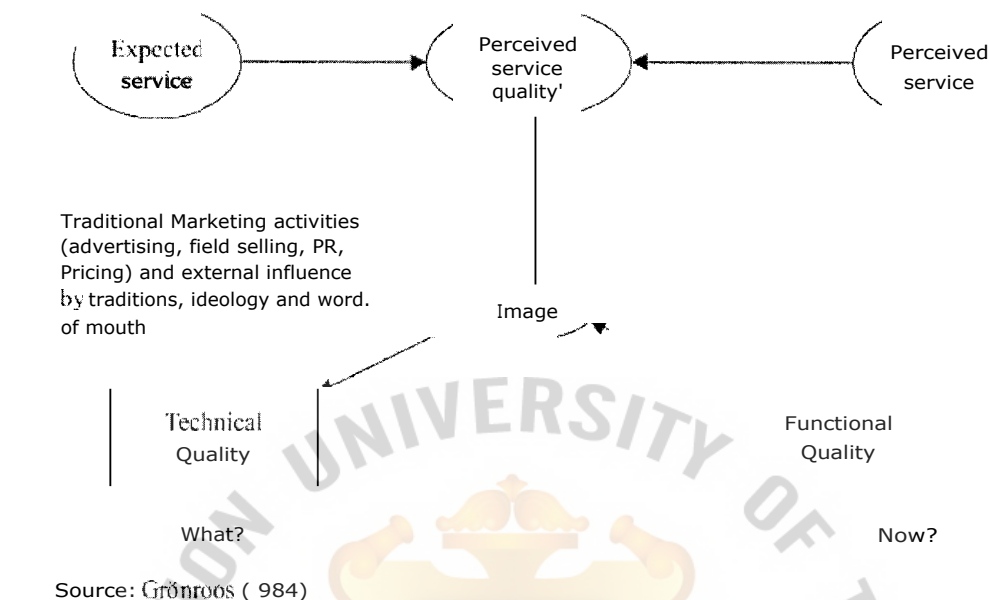


Figure 2.2: Function quality of process

From the above, Nordic Model show in figure 2.2, There is two basis quality dimension which are technical quality or outcome of the process and functional quality or functional dimension of the process.

Technical quality is the quality of what consumer actually receives as a result of their interaction with the service firm and is important to them and to their evaluation of the service quality. Functional quality is how customer gets the technical outcome. This is important to them and their view of service they received.

Image is very important to service firms and this can be expected to build up mainly by technical and functional quality of service including the other factors (tradition, ideology, and word of mouth, pricing and public relation).

However this model has disadvantages in term of explanation that it does not offer how to measure functional and technical quality.

#### 2.2.2.2 SERVQUAL Theory (Parasuraman, Zeithaml, and Berry,1998)

The SERVQUAL Model used by researcher to measure customer satisfaction with different of service quality is derived from the work of Paramasuraman *et al.*, (1988). In the SERVQUAL model, quality is defined as "perceived quality" rather than "objective quality". That mean service quality in this model is depend on customer's perception of what they can expect from service and what they believe that have received, rather than any objective standard as determined by a professional group or in conventional performance measurement.

Their initial study of service quality determinant s and how customer evaluates the quality in year 1985 based on the perceived service quality concept which was summarized into 10 service quality dimension (see table 2.1)



Table 2.1: Dimension of Service Quality

TABLE 1  
Determinants of Service Quality

---

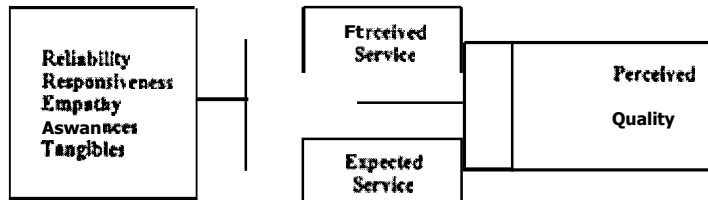
<p>RELIABILITY involves consistency of performance and dependability. It means that the firm performs the service right the first time. It also means that the firm honors its promises. Specifically, it involves:</p> <ul style="list-style-type: none"> <li>—accuracy in billing;</li> <li>—keeping records correctly;</li> <li>—performing the service at the designated time.</li> </ul>
<p>RESPONSIVENESS concerns the willingness or readiness of employees to provide service. It involves timeliness of service:</p> <ul style="list-style-type: none"> <li>—mailing a transaction slip immediately;</li> <li>—calling the customer back quickly;</li> <li>—giving prompt service (e.g., setting up appointments quickly).</li> </ul>
<p>COMPETENCE means possession of the required skills and knowledge to perform the service. It involves:</p> <ul style="list-style-type: none"> <li>—knowledge and skill of the contact personnel;</li> <li>—knowledge and skill of operational support personnel;</li> <li>—research capability of the organization, e.g., securities brokerage firm.</li> </ul>
<p>ACCESS involves approachability and ease of contact. It means:</p> <ul style="list-style-type: none"> <li>—the service is easily accessible by telephone dines are not busy and they don't put you on hold);</li> <li>—waiting time to receive service (e.g., at a bank) is not extensive;</li> <li>—convenient hours of operation;</li> <li>—convenient location of service facility,</li> </ul>
<p>COURTESY involves politeness, respect, consideration, and friendliness of contact personnel (including receptionists, telephone operators, etc.). It includes:</p> <ul style="list-style-type: none"> <li>—consideration for the consumer's property (e.g., no muddy shoes on the carpet);</li> <li>—clean and neat appearance of public contact personnel.</li> </ul>
<p>COMMUNICATION means keeping customers informed in language they can understand and listening to them. It may mean that the company has to adjust its language for different consumers—increasing the level of sophistication with a well-educated customer and speaking simply and plainly with a novice. It involves:</p> <ul style="list-style-type: none"> <li>—explaining the service itself;</li> <li>—explaining how much the service will cost;</li> <li>—explaining the trade-offs between service and cost;</li> <li>—assuring the consumer that a problem will be handled.</li> </ul>
<p>CREDIBILITY involves trustworthiness, believability, honesty. It involves having the customer's best interests at heart. Contributing to credibility are:</p> <ul style="list-style-type: none"> <li>—company name;</li> <li>—company reputation;</li> <li>—personal characteristics of the contact personnel;</li> <li>—the degree of hard sell involved in interactions with the customer.</li> </ul>
<p>SECURITY is the freedom from danger, risk, or doubt. It involves:</p> <ul style="list-style-type: none"> <li>—physical safety (Will I get mugged at the automatic teller machine?);</li> <li>—financial security (Does the company know where my stock certificate is?);</li> <li>—confidentiality (Are my dealings with the company private?),</li> </ul>
<p>UNDERSTANDING/KNOWING THE CUSTOMER involves making the effort to understand the customer's needs. It involves:</p> <ul style="list-style-type: none"> <li>—learning the customer's specific requirements;</li> <li>—providing individualized attention;</li> <li>—recognizing the regular customer.</li> </ul>
<p>TANGIBLES include the physical evidence of the service:</p> <ul style="list-style-type: none"> <li>—physical facilities;</li> <li>—appearance of personnel;</li> <li>—tools or equipment used to provide the service;</li> <li>—physical representations of the service, such as a plastic credit card or a bank statement;</li> <li>—other customs in the service facility.</li> </ul>

---

Source: Conceptual Model of Service quality and Its Implications for Future Research, Journal of

Marketing (Fall 1985). 41-50

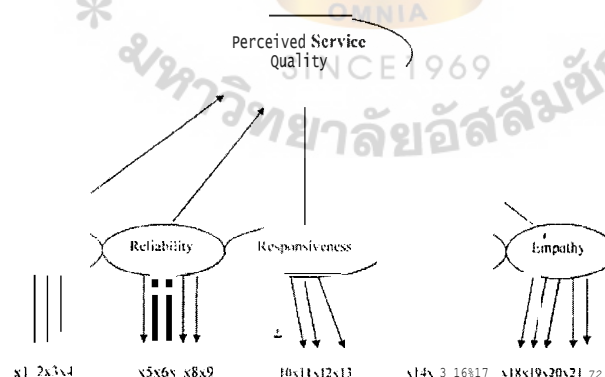
The Mature SERVQUAL model 1988 as a result of later study the ten dimension of service quality were decrease to the five dimensions (see the figure below.)



**Figure: 2.3** the SERVQUAL Model 1988

Source: Brady and Cronin Jr., (2001), "Some new thoughts on conceptualizing perceived service quality: A hierarchical approach," *Journal of Marketing*, 65 (July), pages 35

The subsequently developed SERVQUAL Model (1988), which recasts the 10 determinants into five specific components: tangibles, reliability, responsiveness, assurance and empathy. A set of 22 items are used to measure perceptions of the actual service provided by a company and a similar set of 22 items are used to measure the level of service expected from an excellent service provider. To identifies performance which customer expectation.



**Figure: 2.4:** Service Quality as Conceptualized

Source: *Journal Marketing* 1992, p.58

It will focus on:

1. Tangibles: related to the appeal of facilities, equipment and material used by a service firm as well as the appearance of service employee.

It include 4 attributes: up to date equipment, physical facilities that are visually appealing, employee that are well dressed and appeal neat, and physical facilities that appear to be in keeping with the types of service provided.

2. Reliability: involved with accurate service the first time without any mistakes and delivers what it has promised to do by the first time that has been agreed upon.

It includes 5 attributes: when something is promised by certain time, doing it when there is problem, being sympathetic and reassuring, and dependability (perform service right at the first time), providing service by the time promised and accurate record keeping.

3. Responsiveness: is the willingness to help customers and to provide prompt service. This dimension emphasizes attentiveness and promptness in dealing with customer request, questions, complaints and problem.

It includes 4 attributes telling customer exactly when the service will be performed, receiving prompt service, employees who are always willing to help customers and employees who are not too busy to respond.

4. Assurance: is defined as employees' knowledge and courtesy and the ability of the firm and its employee to inspire trust and confidence.

It includes 4 attributes: employees who are trusts worthy (instill confidence), the feeling that you are safe conducting transactions with firm's

employee, employees who are polite (courteous) and adequate support from the firm to employees (employee's knowledge)

5. **Empathy:** is defined as the caring individualized attention the firm provides its customers.

It includes 5 attributes individual attention, employee who give your personal attention, employees who know what your needs are, a firm which has best interest at heart and convenient operating hours.

However, this is suitable for exploratory research. The model does not explain the clear measurement procedure for the measurement gaps at different level. (Seth, 2004)

#### **2.2.2.3 Theory of the SERVPERF model (Cronin and Taylor , 1992)**

Cronin and Taylor (1992) argued that SERVQUAL confounds satisfaction and attitude. They stated that service quality can be conceptualized as "similar to an attitude", and can be operationalized by the "adequacy-importance model". In particular, they mentioned that "performance" instead of "performance-expectation" determines service quality so that they developed an alternative measurement tool, SERVPERF, which concerns only performance.

The researcher strongly believed that service quality should be measured as an attitude. Therefore, with much supporting literature (Bolton & Drew , 1991; Churchill & Surprenant, 1982; Woodruff, Caddotte & Jenkins, 1983), this instrument focuses on the importance of performance.

Cronin & Taylor said, "The performance-based scale developed (SERVPERF) is efficient in comparison with the SERQUAL scale; it reduces the number of items to be measured by 50%"

They examined the dimensionality and the validity of service quality measures. The study was conducted on four different types of service forms, such as banks, pest control, dry cleaning, and fast food. The results of the dimensionality SERVPERF test was that the 5-component structure proposed by Parasuraman et al. for their SERVQUAL scale that are listed on below table (table 2.2)

Table 2.2 SERVPERF's Five Dimension

Dimensions	Descriptions
Tangibles	The appearance of physical facilities, equipment, personnel, and communication materials.
Reliability	The ability to perform the promised service dependably and accurately.
Responsiveness	The willingness to help customers and to provide prompt service.
Assurance	The knowledge and courtesy of employees and their ability to convey trust and confidence.
Empathy	The provision of caring, individualized attention to customers.



(Perceived service quality as a customer-based performance measure: an empirical examination of organizational barriers using an extended service quality model, Human Resource Management, p.335-364)

However, this model has a few drawbacks as it need to be generalized for all type of service settings. Beside, quantitative relationship between consumer satisfaction and service quality need to be established.

#### **2.2.2.4 Theory of Service quality (Mudie and Cottam, 1999)**

Mudie and Cottam mentioned that customers assesses and evaluate a number of factors or dimensions to measure service quality. They will test the quest by varying from one service to another that has been developed. Consequently from tested in a variety of service industries they can conclude and get five dimensions, as follow:-

1. Reliability – the ability to perform the promised service dependably and accurately. It is particularly crucial for services such as railways, buses, banks, insurance companies, delivery services and trade services, e.g. plumbers, car repair. etc.
2. Responsiveness – the willingness to help customers and to provide prompt service. The dimension is particularly prevalent where customers have requests, questions, complaints and problem.
3. Assurance – the employees' knowledge and courtesy, and the ability of the service to inspire trust and confidence. This dimension may be of particular concern for customers of health, financial and legal services.
4. Empathy – the caring, individualized attention the service provides its customers. Small service companies are better placed for treating customers as individuals than their larger invariably standardized

counterparts. However, relationship making is designed to offer a more individualistic approach for customers of larger organization.

5. Tangibles – the appearance of physical facilities, equipment, personnel and communication materials. All of these are used in varying degrees to project an image that will find favor with consumers. Tangibles will be of particular significant where the customer's physical presence at a service facility is necessary for consumption to occur e.g. hair salon, hotel, and nightclub.

The consequence of customers' judgments used the five dimensions. It is based on a comparison of expected service and perceived service. The gaps between expected and perceived services are a measure of service quality.

The researcher found this model inspiring, especially on the side of service providers to improve their knowledge and skill.

#### **2.2.2.5 Theory of multidimensional model of service quality (Yong, 2000)**

Yong reviewed the definitions of service and pointed out that the following features of service are noteworthy in order to better understand the concept.

*First*, service is a performance. It happens through the interaction between customers and service providers (Gronroos, 1990 and Zeithaml et.al., 1996)

*Second*, other factors such as physical resources or environments play an important medium role in the process of service production and consumption (Gronroos, 1990)

*Third*, service is needed by customers to provide certain functions such as problem solving (Gronroos, 1990 and Ramaswamy, 1996)

The researcher understood that these three points put together can lead to the conclusion that a service combined with good products, is experienced and evaluated by customers who have particular goals and motivations to customer for consuming the service.

Yong (2000) had developed the model of service quality by proposing that the perception of service quality consists of four dimensions.

- Program Quality : operating time and secondary service
- Interaction Quality : attitude, behavior and expertise
- Outcome Quality : waiting time, tangibles and valence
- Environment Quality : ambient conditions, social factors and design

#### 2.2.2.6 Discussion of the selected SERVPERF model

From the review of five different theories, the common variables that are selected to be determinants of service Quality are Responsibility, Reliable, Empathy, Tangible and Assurance which are shown in Table 2.3

The conceptualization and measurement of service quality perceptions have been the most debated and controversial topic in service marketing literature to date. As the objective of this research study is to identify the model of service quality aspects important for customer retention in shipping liner business, The SERVPERF model seem to fit with this research and should adopted into the conceptualization of this research. Researcher has given the reason as following.

**Table 2.3** Summary of Dimensions of *Service Quality* by Five Theories

SUB Variable	Theory				
	Gronroos C. (1984)	Parasuraman et al. (1988)	Cronin and Taylor (1992)	Peter Mudie & Andela Cottam (1990)	Yong J.K. (2000)
Technical Quality	X				
Functional Quality	X				
Reliability		X	X	X	
Responsibility		X	X	X	
Tangibles		X	X	X	
Empathy		X	X	X	
Assurance		X	X	X	
Program Quality					X
Interaction Quality					X
Outcome Quality					X
Environment Quality					X

More over researcher has compare the key finding and limitations of each service quality model which is shown in table 2.4

**Table 2.4** Key finding and Limitation of service quality by five theories

Model	Key finding and applications	Select weaknesses and limitations
Nodic's Model	Service quality depend on technical , quality and corporate image of the organization. Functional quality is more important than technical quality	The model does not offer an explanation on how to measure functional and technical quality
SERVQUAL	The model is an analytical tool. It enables the management to identify systematically service quality gaps between a numbers of variables affecting the quality of the offering. This model is extremely focused. It is capable of assisting the management to identify the relevant service quality factors from the view point of customer.	Exploratory study The model does not explain the clear measurement procedure for the measurement of gaps at different levels.
SERVPERF	Service quality should be conceptualized and measure as an attitude. The performance based SERVPERF is efficient in comparison with SERVQUAL, as it directly reduces the number of item by 50 percent and result are better. Service quality is an antecedent of consumer satisfaction and may have a better effect on purchase intentions than service quality.	Need to be generalized for all types of service settings. Quantitative relationship between customer satisfaction and service quality need to be established.
Mudie's Service Quality model	It is bases on a comparison of expected service and perceived service. The gaps between expected and perceived services are a measure of service quality.	The model does not explain the clear measurement procedure for the measurement of gaps at different levels.
Multidimensional model of service quality	Focus on 4 dimension which are program quality, Interaction quality, out come quality and environmental quality. Focus on the customers who have particular goals and motivations to customer for consuming the service.	Difficult to measure the environmental quality beside model does not explain the clear measurement

The following paragraph is the reason why the other three conceptualization models are not employed in this research.

Base on nature of ocean liner business, tangible, reliability, responsiveness, empathy and assurance are the most appropriated variable that should be tested for the



service quality of ocean liner. However, there are three theories that have those attributions. Researcher has compared the pros and cons of each model which found that SERVPERF model is the most efficiently model to use, since this model focus on performance only while the rest two model focus on the gap between customer perception and expectation. Cronin & Taylor said, "The performance-based scale developed (SERVPERF) is efficient in comparison with the SERVQUAL scale; it reduces the number of items to be measured by 50%". By using the same 5 dimensions of SERVQUAL model, SERVPERF Model had been empirically tested in a number of studies involving "pure" service setting such as banking and long distance telephone service, So Ocean liner is one of the pure service business and the SERVPERF attributes should be appropriate to study.

### 2.2.3 Important of Service failure and service recovery

As it is impossible for service firms to provide 100% service delivery without fail in every transaction, the way a firm responds to customer's dissatisfaction may have a crucial impact on retaining the customer and lead to positive word of mouth and referrals for future business. As a way to offset consumer dissatisfaction when the service has not been delivered satisfactorily, a firm can offer apology, a refund, offer free services, and/or offer compensation to demonstrate good will. Clearly, if compensation is giving with impoliteness or disagreeably, this can negatively affect the perceptions of the consumer.

Despite considerable efforts to make customers happy, things do not always go right in service delivery. When things go wrong negative emotions, such as anger fluctuation and ever rage, are produced and expressed. The magnitude of service failure can be vary depending on individual situational factors, and understanding the

seriousness of service failure is critical in determining an appropriate recovery strategy (Hart *et al.*, 1990). When the service fails, recovery is attempted by service provider by enhance or enflame these negative emotions. Knowing how to handle service recovery process is crucial as an inappropriate response may only make matters worse (Sparks and McColl-Kennedy, 2001) Previous research showed that it might be more difficult for service organizations to execute an effective recovery when the failure is perceived more serious than minor by customer (Darida *et al.*, 1996).

Responding to mistakes or service failures that have been made, therefore, become crucial if the vitality of the relationship is to be preserved. The term that has emerged in the service literature is to describe the way in which a firm deals with unexpected problems that arise and resolves initial problems is called service recovery (Hert *et al.*, 1990). The reward to the service providers who satisfactorily resolve these problems are generally high and such satisfaction can positively impact on customers' perceived service quality evaluation.

As service recovery is very important to customer satisfaction which will lead to improve customer retention, we will also focus on the area that is almost virgin territory in examination of service marketing especially in ocean liner business, to wit, service recovery and its associations with satisfaction in the business-to business setting.

## 2.2.4 Theory of Service Recovery

When there is a service failure, customer can respond in a variety of way as illustrated in Figure 2.5 Singh (1977).

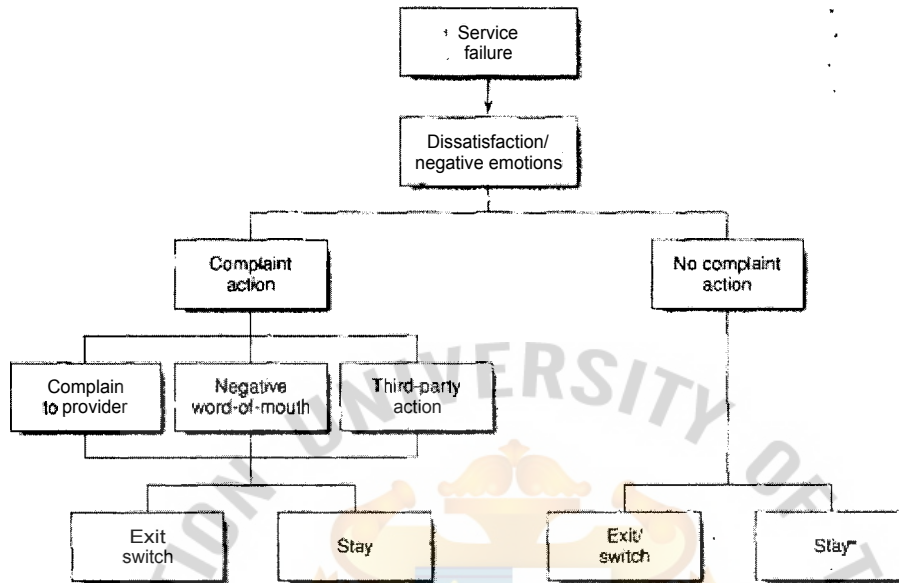


Figure 2.5: Service recovery method Singh (1977).

Source: Service Marketing, (2000)

It is assumed that following failure dissatisfaction at some level will be occur for the customer. In fact, research suggests that a variety of negative emotions can occur following a service failure, including such feeling as anger, discontent, disappointment, self pity, and anxiety. (Zeithaml 2000).

Substantial research suggests that complaining behavior of customers who have used a firm's services can be used as a way to improve service quality. Yet most customer remain silent when they are unhappy with the service they receives Tax and Brown (1998) have identified reason why customer do not complain. These include a belief that the company will not respond to the complaint, the fear the firm will be hostile to their complaints, uncertainty about their right versus the company's obligation, and unwillingness to waste time an effort in complaining.

Tax and Brown (1998) also suggest that when customer dissatisfied with service they will expect the outcome fairness, procedure fairness and interaction fairness from service provider. Customer expects outcomes, or compensation, that matches the level of their dissatisfaction. This compensation can take the form of actual monetary compensation, an apology, future free services, reduced charges, repairs, and/or replacement. They also expect equality, which mean, they want to be compensated no more or less than other customers who have experienced the same type of service failure. For procedure fairness, customer expect the fairness in term of policy, rule and timeliness of the complain process. They want easy access to complaint process, and they want things handled quickly by the first person they contact. For interaction fairness, they expect to be treated politely with care and honest. (Zeithaml 2000).

To some degree, overall satisfaction in a service failure is determined by two factors: the outcome of the original service encounter based on service attributes and attributes associated with the service recovery process. (Spreng, 1995). Service recovery processes are those activities in which a company engages to address a customer complaint regarding to service failure. For example, the service failure from core service such as unavailability of service, exceptional slow service, mistake in service, etc. In addition, as suggestion by Kelly and Davis (1994), service failure can vary in seriousness- from something trivial to being very serious.

Parasuraman et al. (1988) identify two primary type of dimensions operation when customer evaluates a service encounter which is outcome dimension and process dimensions. Both dimension type are occurred both the original service encounter and service recovery. In research of Berry and Parasuraman (1991) indicated that outcome is the primary driver of customer evaluations of service during the initial service

encounter, which process is the primary during service recovery. They mention that “A service failure is essentially a flawed outcome that reflects a breakdown in reliability, Even though reliability is of a service, the process dimensions assume prominence during recovery service” (Berry and Parasuraman 1991, p.46). Gronroos, 1990 also mention that service recovery strategies involve actions taken by service providers to respond to service failures. Both what it is done (tangible compensation) and how it is done (employee interaction with the customer) influence customer perceptions of the service recovery (Levesque and McDougall 2000).

So it can conclude that original service outcome attributes play an important role on customer initial experience, the service recovery process dimension may assume great importance when customer have a complaint. Original service and service recovery may play an important roles in determining overall satisfaction, yet it is unknown how these two aspects of customer satisfaction influence overall satisfaction and behavioral intention regarding future purchases of the service.

Hart et al., 1990 had explain the concept and the important of service recovery which are unless an organization is committed to resolving dissatisfaction, the outcome can be destructive for the firm. One way to understand the importance of service recovery is to appreciate how service firms improve sales and market share by managing the flow of new and existing customers. Firnelli and Wernerfelt (1987) suggest that this flow consists of new customers into and out of the market, customer shift their supports from one firm to another, and changes since it can determine its growth, decline, or stagnation.

Hart (1990) suggest that customer who are dissatisfied, but receive a good experience in service recovery, may ultimately be even more satisfied and more likely to repurchase than are those who were satisfied in the first place. Tax (1998)'s



research had shown the positive support that resolving customer problems effectively has strong impact on customer satisfaction, loyalty and bottom line performance. That is, customer who experience service failures but ultimately satisfied based on recovery effort by the firm, will be more likely to loyal than whose problems are not solved. Technical Assistance Research Program (TARP) verified this relationship which those who complain and have their problem resolved quickly is much more likely the repurchase than are those whose complaints are not resolved. Those who never complain are least likely to repurchase.

An effective service recovery strategy has multiple potential impacts. It can increase customer satisfaction and loyalty and generate positive word of mouth. A well designed, well-document service recovery strategy also provides information that can be used to improve service as part of a continuous improvement effort. By making adjustments to service processes, systems, and outcomes based on learning from service recovery experiences, companies increase the likelihood of "doing it right at the first time". In turn, this reduces costs of failures and increases initial customer satisfaction. (Zeithaml 2000)

Recent research has aimed at gaining a better theory appears to be the dominant theoretical framework applied to service recovery. Two of service recovery theories have reviewed as below.

#### 2.2.4.1 Justice theory (Smith *et al.*, 1999)

Similar to complaint handling, customer evaluate perception of fairness with the service recovery by three factors: outcomes, procedural fairness and interaction treatment. Please refer to table 2.7 for the summary of justice framework.

**Table 2.5: Justice Framework**

Perceived fairness dimension	Definition
<b>Distributive justice</b>	Perceived fairness of the outcome (e.g. refund, discount or free gift)
<b>Interaction justice</b>	Perceived fairness of the manner in which the customer is treated (e.g. apology)
<b>Procedural justice</b>	Perceived fairness of the process used to rectify the service failure (e.g. company policies)

**Distributive justice** in service recovery, it refers to the perceived fairness of the outcome whereas procedural justice involves the policies and the rules by which recovery decision effort are made (Smith *et al.*, 1999). In case of a service failure, customer would prefer the service provider to compensate them to any tangible loss they suffered as a **result** of that service failure. Customer may expect different levels of compensation depending on how severely the service failure affects them. An annoyed customer would expect a fair fix for the problem, while a customer who feels "victimized" as a result of service failure may expect some value-added atonement (Bell and Ridge, 1992). Overall, in a service recovery attempt, tangible compensation will lead to higher perceptions of distributive justice (redness fairness), which in turn will lead to higher customer satisfaction and lower negative word of mount intentions.

**Procedural justice**, in service recovery, it refers to the fast action of service failures or complaints are corrected and handled is one of the major determinants of customer perceptions of procedural justice (Blodgett *et al.*, 1997). Berry (1986) explain the procedural justice as “service firms that are great at problem resolution — that are accessible and respond with quickness are far more likely to repair the damage done to their quality reputations than are the firms that take a casual attitude.” Empowering frontline employees to attend to customer needs by making on-the-spot decisions is essential goods for service recovery since they are the first to know about the problems and are the best position to determine what can be done to satisfy the customer (Hart *et al.*, 1990)

**Interaction justice** focuses on the interaction treatment during the process. Prior research shows that apology is important for customer's perception of interaction justice (Smith *et al.*, 1999). It's also focus on the perceived fairness of the manner in which customer is treated throughout the service recovery effort. Tyler (1988) found that citizen's reactions to dealing with policies were highly influenced by the sensitivity shown to their problems by the authorities. Bies (1986) found that potential employees perceived outcome to be fairer when a recruiter demonstrated concern for their right. We conceptualize international justice to include two related behaviors describing the manner in which the consumer is treated by service provider.

By using all three dimensions, we are assumed to explain a large percentage of variation in service recovery satisfaction.

#### **2.2.4.2 RECOVSAT (Boshoff, 1999)**

The other popular theory of service recovery is called RECOVSAT which was a study by Boshoff, 1999. This model contain of six dimensions of service recovery. These six dimensions are communication, empowerment, feedback, atonement, explanation, and tangibles. Definition of each dimension is explained as below.

- 1) Communication. This dimension focuses on the clearly communication of firm's employee, the asked question to clarity the situation, understanding and be reliable and honest in their endeavors to solve the problem.
- 2) Empowerment. This dimension focuses on the employee who first received the complaints are able to solve the problem, and do not have solicit the help to someone else to do.
- 3) Feedback. This dimension focuses on the feedback about the progress made to solve problem and whether company offered a written apology.
- 4) Atonement. This dimension focuses on the firm tendered an apology for the financial loss incurred. Also firm made sure that customer did not out of pocket and did so in polite manner.
- 5) Explanation. This dimension focuses on the firm provided an explanation of what went wrong.
- 6) Tangibles. This dimension focuses on the service firms employees with whom the customer deal, were well dressed and worked in a tidy, professional environment.

### 2.2.4.3 Discussion of the selected Justice Theory

Table 2.6 Key finding and limitation of service recovery by two theories

Model	Key finding and applications	Select weaknesses and limitations
Justice theory	<p>3 Dimension has been focused which are distributive justice procedural justice and Interaction justice By using all three dimensions ,we are assumed to explain a large percentage of variation in service recovery satisfaction.</p>	<p>The model do not address risk or the level of involvement which is the moderator of respond to service failure (Mary Ann Hocutt, 2006)</p>
RECOVSAT (Boshoff, 1999)	<p>Six dimensions are communication, empowerment, feedback, atonement, explanation, and tangibles</p>	<p>The model do not address risk or the level of involvement as well. Beside 6 dimension can be explained similar to 3 dimension of justice theory.</p>

Researcher had compared the 6 dimensions of RECOVSAT which found that communication, feedback and explanation dimension can provide the similar answer with interaction justice. Empowerment dimension can provide the similar answer to procedural justice while atonement and tangible are similar to distributive justice. Thus, justice theory is more efficiently to use. Beside, base on the nature of ocean liner business three dimensions equity should be adapted for this research as the dimension in equity theory can help the ocean liner understand the outcome of the customer toward the service failure. Since each dimension of equity theory can explain and help the ocean liner to dealing with the decision outcome (Distributive justice), the decision making procedures (Procedural justice) and interpersonal behavior in the enactment of procedure and delivery of outcome (Interaction justice). Thus, the results of this theory can explain all the relationship between service recovery and service retention in ocean liner business.



## **Chapter 3**

### **Research Framework**

This chapter consists of theoretical framework, conceptual framework, research hypothesis and operationalization of the independent and dependent variable. Researcher also does the pretest which result will be found in this chapter.

#### **3.1 Research Methodology**

For this study, survey research was conducted where the researcher communicated with a sampling of respondents. Tull and Hawkins (1980) mentioned that survey research is the systematic collection of data from respondents for the purpose of understanding and predicting the aspect of behavior of the population under study. Survey techniques also provide relatively low cost, minimum time and accurate means of assessing information about the population. The survey method allows the collection of significant amounts of data in an economic and efficient manner.

This research use questionnaires as a tool to collect information. Questionnaire was used to gather information from sample respondents. Because of flexibility, the questionnaire is by far the most common instrument used to collect primary data. The form of question is closed end questions. Philip (2003) mentioned that Close-ended questions specify all the possible answers and provide answers that are easier to interpret and tabulate.

### **3.1.2 Data Source**

#### **Primary Data:**

Primary data is the information collected specifically for the investigation at hand (Churchill, 1996). In this research, the primary data have been collected from the population in the survey via use of structured and self-administered questionnaire.

Burns and Bush (2000) explained that questionnaires are used to present questions and record answers in quantitative field research surveys. The type of questionnaire in this research is Structured-Undisguised questionnaire in which questions were presented with exactly the same wording and in exactly the same order to all respondents when collecting data. The type of questionnaire that was used in this research was a closed end questionnaire.

#### **Secondary Data:**

Davis (1996) mentioned that Secondary data is important because it can save considerable time and cost in solving the research problem at hand. At the beginning, secondary data were used before conducting primary data collection. The secondary data used in this research is retrieved from both manual and online sources such as textbooks, journal, magazine and Internet. The information from all sources is supportive for the theory, data analysis to develop the framework of this study.

SPSS is the tool used for collecting and interpreting the data.

### **3.2 Theoretical Framework**

From the analysis in the chapter 2, the theoretical framework of the SERVPERF's Five Dimension model of Cronin and Taylor, (1992) should be adopted to fit the model of research study: Service quality and service recovery aspects important to

customer retention in ocean liner business. Detail and dimension of SERVPERF model has been summarized in below table.

**Table: 3.1 SERVPERF's dimensions**

<b>Dimensions</b>	<b>Descriptions</b>
<b>Tangibles</b>	The appearance of physical facilities, equipment, personnel, and communication materials.
<b>Reliability</b>	The ability to perform the promised service dependably and accurately.
<b>Responsiveness</b>	The willingness to help customers and to provide prompt service.
<b>Assurance</b>	The knowledge and courtesy of employees and their ability to convey trust and confidence.
<b>Empathy</b>	The provision of caring, individualized attention to customers.

For the Service recovery aspect, Judgment theory (Smith *et al.*, 1999) will adapted to measure the perceived of service recovery from each respondents.

**Table 3.2: Justice Theory and its dimensions**

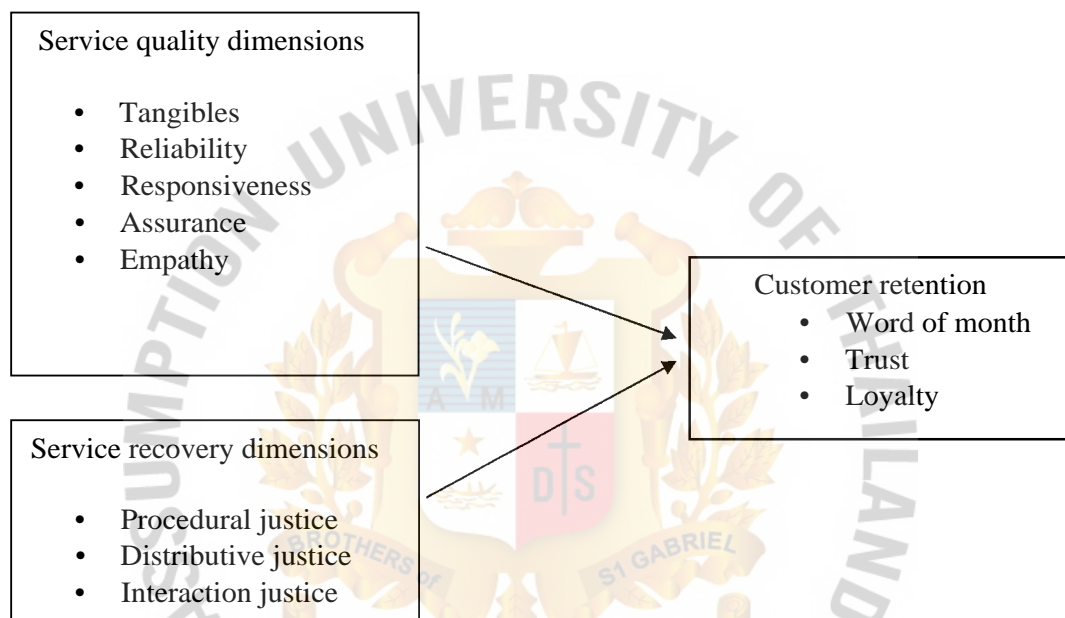
<b>Perceived fairness dimension</b>	<b>Definition</b>
<b>Distributive justice</b>	Perceived fairness of the outcome (e.g. refund, discount or free gift)
<b>Interaction justice</b>	Perceived fairness of the manner in which the customer is treated (e.g. apology)
<b>Procedural justice</b>	Perceived fairness of the process used to rectify the service failure (e.g. company policies)

### 3.3 Conceptual Framework

This conceptual framework is an integration model drawn from model of theoretical framework above. With an attempt to explain the effort of independent variable on dependent variable, this conceptual Framework showed the effect of serviced quality and service recovery aspect on customer retention.

Independent variable

Dependent Variable



**Figure 3.1** conceptual framework of the research.

#### 3.3.1 Service quality dimension

As mentioned in chapter 2 that the attributes of SERVPERF's dimensions are similar to SERVQUAL attribute however, SERVPERF model is focus on only performance of the service which it is reduce 50% of the measurement which it is more efficient than SERVQUAL. 22 attributes of SERVPERF had been reassessed in chapter 2. However, researcher has added some of interesting attribute into



questionnaire which will identifies performance which customer expectations as below.

**Tangibles:** related to the appeal of facilities, equipment and material used by a service firm as well as the appearance of service employee. It includes 7 attributes which researcher has added 2 more attribute in order to cover all related tangible asset of ocean liner business.

- Your current liner provides modern equipment.
- Your current liner has physical facilities that are visually appealing.
- Employee that are well dressed and appeal neat.
- Physical facilities that appear to be in keeping with the types of service provided.
- Your current liner have convenient service hour..
- Your current liner is able to provide substitution of each container types.
- Your current liner provide clean and no damage container all the time.

**Reliability:** involved with accurate service the first time without any mistakes and delivers what it has promised to do by the first time that has been agreed upon. It includes 5 attributes:

- When something is promised by certain time, it does so
- When there is problem, your current liner show sincere interest to solve it.
- Your current liner performs service right at the first time.
- Your current liner is providing service by the time promised and accurate record keeping.

**Responsiveness:** is the willingness to help customers and to provide prompt service. This dimension emphasizes attentiveness and promptness in dealing with customer request, questions, complaints and problem. It includes 4 attributes:

- Employees are telling customer exactly when the service will be performed.
- Employees provide prompt service.
- Employees who are always willing to help customers.
- Employees who are not too busy to respond.

**Assurance:** is defined as employees' knowledge and courtesy and the ability of the firm and its employee to inspire trust and confidence. It includes 3 attributes:

- Employees who are trustworthy (instill confidence),
- The feeling that you are safe conducting transactions with firm's employee,
- Employees who are polite (courteous).
- Adequate support from the firm to employees (employee's knowledge).

**Empathy:** is defined as the caring individualized attention the firm provides its customers. It includes 3 attributes which are as below.

- Employees who give your personal attention.
- Employees who know what your needs are.
- Employee who have a best interest at heart.
- 

### 3.3.2 Service recovery dimension

In this research, Judgment theory (Smith *et al.*, 1999) will adapted to measure the perceived of service recovery from each respondents.

**Distributive justice:** Perceived fairness of the outcome. It includes 4 attributes which are as below.

- Outcome you receive is fair.
- You receive what you deserve.
- Your current liners give you what you need.
- The outcome you receive is not right.

Interaction justice: Perceived fairness of the manner in which the customer is treated.

It includes 4 attributions which are as below.

- The employees in your current liner are appropriately concerned about your problem.
- The employees in your current liner are put the proper effort into flexibility in dealing with your problem,
- The employees' communication in your current liner with you is appropriate.
- When the problem happens, the employees in your current liner do give you the courtesy.

Procedural justice: Perceived fairness of the process used to rectify the service failure. It consists of 4 attributions which are as below.

- The length of time taken to solve your problem is not longer than necessary,
- Your current liner shows flexibility in dealing with your problem.
- Complaint process of your current liner is easy to access.
- It is not hard for you to figure out to whom you should complain in your current liner.

3.3.3 Customer retention: is the ability of service provider to get customer to return in the future. The measurement of customer retention would be respondent's stated intention to continue the relationship by:

Word of mouth is defined as the extent to which customer inform friend about the satisfaction of the service. It will include 3 attributions which are as below.

- Willing to recommend the service to other.
- Positive recommendations about service.
- Tell positive thing about the service to other.

Loyalty is referring as an intention to repurchase the service from a supplier who they are satisfied. It includes 6 attributions which are as below.

- Continue support with current supplier.
- Consider their current supplier as first choice
- You will not change the supplier even contract will expire in near future.
- Using more service from current supplier.
- Considering themselves as loyalty customer.

**Trust** is a relationship of reliance. It consists of 3 attributions which are as below.

- Feeling positive about your current supplier.
- Believe that your supplier can be relied on.
- Believe that your supplier can be trust worthy.

### **3.4 Respondents and Sampling Procedures**

#### **3.4.1 Target Population:**

According to Weiers (1998) population is the total collection of elements about which the researcher wishes to make an inference on. This inference is primarily based on the sample information where the sample would be part of the population that is selected to measure observe. Zikmund (2003) considers the target population as the complete group of specific population elements relevant to the research project. For this study, the researcher has chosen the target population as importer and exporter who use the ocean liner service in Chonburi and Rayong area which are around 600 companies.

### **3.4.2 Sample Selection:**

This Sample will drawn from the listing of all regular shipper in Chonburi and Rayong area, available from a large shipping line which a maintained a comprehensive listing of both customers as well as prospect. Respondent will be selected as the judgment of researcher by selecting the respondents that are known that they have regular shipment export and import by container. The types of company represented by respondents include trading, manufacturing or both. Base on the exporting lists from 5 mains liner companies and company lists from each industrial estate, there are around 600 companies that has an export and import activities in Chonburi and Rayong area.

### **3.4.3 Sample Size:**

The sample size is 240 respondents and counts only the questionnaires that answers correctly and compete to answer all question. The theoretical principles for calculating the sample size come from the Yamane model of determining sample size (Table 3.1). The table shows that sample size is determined for  $\pm 3\%$ ,  $\pm 5\%$ ,  $\pm 7\%$  and  $\pm 10\%$  Precision Levels. So for the study, the confidence level of 95% and  $P = 0.5$  were considered.

### **3.4.4 Sampling Procedure**

In this research, researcher uses Probability Sampling technique for selecting respondents. Gilbert (1996) defined that this technique is used because the population being chosen is known in advance. The researcher used only Judgment sampling procedure for selecting the respondents. Gilbert (2002) mentioned Judgment samples are chosen by the researcher based on the belief that these people represent the majority of the study population.



Table 3.1: Sample Size Determination

**Table 1.** Sample size for  $\pm 3\%$ ,  $\pm 5\%$ ,  $\pm 7\%$  and  $\pm 10\%$  Precision Levels Where Confidence Level is 95% and  $P=.5$ .

Size of Population	Sample Size (n) for Precision (e) of:			
	$\pm 3\%$	$\pm 5\%$	$\pm 7\%$	$\pm 10\%$
500	a	222	145	83
600	a	240	152	86
700	a	255	158	88
800	a	267	163	89
900	a	277	166	90
1,000	a	286	169	91
2,000	714	333	185	95
3,000	811	353	191	97
4,000	870	364	194	98
5,000	909	370	196	98
6,000	938	375	197	98
7,000	959	378	198	99
8,000	976	381	199	99
9,000	989	383	200	99
10,000	1,000	385	200	99
15,000	1,034	390	201	99
20,000	1,053	392	204	100
25,000	1,064	394	204	100
50,000	1,087	397	204	100
100,000	1,099	398	204	100
>100,000	1,111	400	204	100

a = Assumption of normal population is poor (Yamane, 1967). The entire population should be sampled.

### 3.5 Research Instruments and Questionnaire

The researcher used questionnaire to gather the information from the respondent. The questionnaire start with propose of the research. Questionnaire consists of 4 parts. **All** questions responded to the statement of the problems and hypotheses.

The detail of each part is as follows:

**Part 1:** The customer background questionnaire consists of 5 questions. Nominal and Ordinal order are used in this part.

**Part2:** To indicate service quality with of exporter & importer current ocean liner. It consists of 23 questions. Likert-Scales was taken to consider the degree by respondents as shown below:

Strongly agree      7   6   5   4   3   2   1      Strongly disagree

**Part3:** To indicates the service recovery. It consists of 13 questions. Likert-Scales was taken to consider the degree by respondents as shown below:

Strongly agree      7   6   5   4   3   2   1      Strongly disagree

**Part4:** To indicate buying retention toward their current ocean liner. Consist of 11 questions.

Likert-Scales was taken to consider the degree by respondents as shown below:

Extremely likely      7   6   5   4   3   2   1      Not at all Likely

Research will use reverse question to make sure that respondent concentrate on doing questionnaire. 240 sets of questionnaire will be distributed to the respondent in Rayong and Choburi area. Full details of questionnaire are provided in Appendix A.

### 3.6 Pretest

The testing of the questionnaire on a small sample of respondents for the purpose of improving the questionnaire by identifying and eliminating potential problem before using it in actual survey is called pre-testing (Malhotra, 2002). Weiers (1998) confirms the fact that pre-testing is actually a good practice that can result in subjects asking additional information regarding a question, may exhibit a different frame of reference, be unable to follow the directions provided, etc. The questionnaires were refined accordingly. It was carried out to ensure that the respondents understood the questions. As the nature of export and import business that employee must contact with the overseas partner regularly also the respondent that answer this questionnaire are export and import supervisor / manager. So questionnaire will be used English language to apply for all respondents.

In the pre-test process, 30 respondents went through the questionnaire to ensure the most effective questionnaire. The questionnaires were handed out during beginning of October, 2007. It was realized that the questionnaire is indeed applicable but needed some adjustments.

Examining the reliability of the instrument used in the research is the purpose of the pretest. Reliability implicates determining the consistency of independent measure of the same object, group, or situation. The reliability analysis procedure calculates a number of commonly used measures of scale reliability and also provides information about the relationships between individual items in the scale. Burn and Bush (2002) stated that Reliability is the degree to which a respondent is consistent in his or her answers. According to Nunnally (1997), questionnaire will be considered as reliable if the reliability value is at least 0.6 is considered reliable.

In this study, 30 respondents were selected randomly from the sample size for testing. After collecting, the researcher used Cronbach's Coefficient Alpha Scales to analyze the reliability of the questionnaires. The result of all factors is more than 0.6. Therefore this questionnaire is reliability.

However, mistakes were corrected in terms of wording and sequencing to make the questionnaire comply with the objectives. Changes were made; the question's wording was reevaluated to make sure it focused on the researcher's intentions.

The reliability of each variable is as below.

Table 3.2 Reliability Statistics

Attribution	Cronbach's Alpha Based on Standardized Items
Reliability	0.925
Responsiveness	0.848
Tangible	0.917
Empathy	0.832
Assurance	0.888
Distributive justice	0.833
Interaction justice	0.798
Procedural justice	0.599
Word of mouth	0.681
Loyalty	0.909
Trust	0.727

Researcher use SPSS to analyze the reliability of the questionnaires which full detail is provided in Appendix A.

### 3.7 Collection of Data

A survey method was employed for collecting the primary data through the use of self-administered questionnaires. The survey method, the most widely used method for primary data collection, is the approach best suited for gathering information. The questionnaires were distributed by Judgment sample respondents. This research questionnaire was distributed to import and export officer in the factory which locate in Chonburi and Rayong area. In those research areas contend of 6 main industrial zones which are Eastern Seaboard Rayong, Sahapat industrial estate, Amata City, Amata Nakorn, Laem Chabang Industrial Estate, Mataput Industrial Estate. Beside, researcher also distribute the questionnaire to the non-industrial zone especially furniture producer in Klang, Rayong as well. The reasons that select Rayong and Chonburi is the growth of export and import in this area. Beside, there are a lot of ocean liners open the office in this area. Moreover, researcher is familiar with this area. Base on the main 5 liner customer profile also Industry estate company list, there are approximate 600 companies locate in that area which those company has authorize to select the liner in their factory. The process of data collection is carried out questionnaire through respondent factories from a period of March to Dec, 2007 from Monday to Friday.

#### **Research Hypothesis**

In this section, the hypotheses are being stated in statistical form null and alternate hypotheses. After defining the important variables, hypothesis will be set to test for all attribute that have mentioned below:



Hypothesis	Statistical
$H_{01}$ : There is no relationship between service quality and service recovery with customer retention $H_{a1}$ : There is relationship between service quality and service recovery with customer retention	Multiple Regression Technique
$H_{0e}$ : There is no relationship between service quality dimension and service recovery indicator with customer retention. $H_{at}$ : There is relationship between service quality dimension and service recovery indicator with customer retention.	Multiple Regression Technique

### 3.8Statistic Treatment of Data

After collecting the data from 240 respondents, the data were coded into symbolic form used in SPSS software. The researcher used SPSS software for windows for data processing. SPSS software was the tool to analyze in the systematic form and summarizes in an interpret format. Frequencies, mean and Correlation is the statistical tools that provide research results.

The researcher has used the 0.05 (£) level of significant giving 95% confidence level. When null hypothesis is being tested is true, if the probability of occurrence of the observed data (the value of sample information) would be smaller than this level of significance, then null hypothesis should be rejected, and the alternative accepted.

#### 3.8.1 Multiple Regression Analysis

The general purpose of multiple regressions (Pearson, 1908) is to learn more about the relationship between several independent or predictor variables and a dependent or criterion variable.

Multiple regression equation is

$$Y = a + b_1 * X_1 + b_2 * X_2 + \dots + b_p * X_p$$

**Y** is the value of the Dependent variable (Y), what is being predicted or explained

**a** (Alpha) is the Constant or intercept

**b<sub>1</sub>** is the Slope (Beta coefficient) for **X<sub>1</sub>**

**X<sub>1</sub>** First independent variable that is explaining the variance in Y

**b<sub>2</sub>** is the Slope (Beta coefficient) for **X<sub>2</sub>**

**X<sub>2</sub>** Second independent variable that is explaining the variance in Y



## **Chapter 4**

### **Data Analysis and Results**

#### **Introduction**

This research studied the relationship between service quality and service recovery toward the customer retention in ocean liner business. The target population is exporter and importer who locate in Chonburi and Rayong area. This research is to aim to find out the perception of service quality and service recovery toward future purchase behavior and important factors of service quality and service recovery in ocean liner business. The result of this research will help ocean liner to improve their service to meet the satisfaction from their customer which will help them to maintain the competitiveness to retain their customer.

Researcher launched two hundred and forty questionnaires at exporter and importer factories, who locate in Eastern seaboard Rayong, Laem Chabang, Amata Nakorn, Amata city, Sahapat, Maptaput and Asia industry estate. Two hundred and forty questionnaires were edited manually for the completion of the result. Then, all questions were transformed into variables and all answers were coded onto special statistic program called “SPSS” Program which was used to help the researcher to perform statistical output. In this chapter, descriptive statistics concern about demographic characteristic of respondents, factor analysis of perceived service quality, perceived service recovery, and customer retention and its dimensions mean and reliability test will be presented which will be followed by hypotheses test to measures the relationship variable by multiple regression.

#### 4.1 Descriptive Statistics

The data were analyzed using SPSS. The profiles of the respondents would first be presented in this section followed by results of statistic analysis.

##### 4.1.1 Demographic Characteristic of Respondents

Base on the industry zone that was investigated, most of factories in that area have export shipment while some have import shipment. The results from 240 sets of total respondents show that there are pure exporters at 60 companies while there are 4 companies that have pure import shipment from the total respondents. There are 176 respondents have both import and export shipment from the total respondents.

Table 4.1 Total of teu per month

Number of Teu* per month	Frequency	Type of Respondent
10-25 Teu	41	Small size organization
26-50 Teu	74	Medium size organization
51-100 Teu	55	Large business size
More than 100 Teu	70	Corporate account

\* Twenty-foot Equivalent Unit (often TEU or teu)

From the above table, there are 74 respondents or 29.6 percentages have cargo around 26-50 teu, base on the ocean liner's customer segmentation, this customer will be consider as medium size organization. There are 70 respondents, or 28 percentages have cargo export more than 100 teu export per month, these customers are considered as corporate account. There are 55 respondents of 22.0 percentages specified during 51 – 100 teu per month which they are large business large business organization.

Base on the area of study which locates in Eastern seaboard Rayong, Laem Chabang, Amata Nakorn, Amata city, Sahapat, Maptaput and Asia industry estate. The main factories are producing resin and electronic part. They are the majority of the respondents which are 85 respondents' combination or 35.5 percent from total export respondent. While the majority of import cargos are chemical and electronic goods which have 112 respondents or around 56 percent from total import respondent.

#### 4.1.2 Perceived Service Quality

Researcher used factor analysis to summarize information contained in a large number into smaller number of factors. It will help researcher to find out that the question is belong to the group or measure the same thing. The research set factor score at 0.5 which each factor loading that have score higher than 0.5 will be loaded into the calculation for mean of variable. To ensure that the results are reliable, researcher used Cronbach's Coefficient Alpha Scales to analyze the reliability of the questionnaires. According to Nunnally (1967), result will be reliable if only Cronbach's Coefficient Alpha is higher than .06.

The table 4.2 will show the result of factor analysis, Cronbach's Coefficient Alpha, mean and standard deviation of each dimension of service quality.



Table 4.2 Factor loading, Cronbach's Coefficient Alpha, mean and S.D. of service quality's dimension

	Factor loadings	Mean	S.D.
<b>Reliability (Cronbach Alpha =0.846)</b>		4.86	0.71
When your current liner promise to do something by certain time, it does so.	0.756	4.95	0.80
When you have a problem , your current liner show sincere interest in solving it.	0.798	4.91	0.96
Your current liner perform the service right at the first time.	0.827	5.01	0.92
Your current liner provide its service at the time it promises to do so.	0.792	4.79	0.80
Your current liner insists on error free records.	0.773	4.64	1.00
<b>Responsiveness (Cronbach Alpha =0.712)</b>		4.78	
Employees in your current liner give you prompt service.	0.808	4.9	0.93
Employees in your current liner are always willing to help you.	0.665	4.9	0.78
Employees in your current liner are never too busy to respond your requests.	0.78	4.78	1.00
Employees in your current liner keep you inform about when the service will be performed.	0.673	4.55	0.90
<b>Tangible (Cronbach Alpha =0.809)</b>		4.67	0.63
Your current liner have modern looking equipment.	0.675	4.76	0.90
The physical facilities of your current liner are visually appealing.	0.523	4.73	0.99
Employees in current liner appear neat.	0.606	4.84	0.88
I Material associated with the service such as containers are visually appealing.	0.712	4.58	0.90
Your current liner have convenient service hours.	0.681	4.53	1.00
Your current liner are able to provide equipment as required with no substitution carriers based on special container equipment commitment.	0.814	4.76	0.91
Your current liner are able to provide equipment without damage, clean, sea worthy 100% of the time.	0.879	4.76	0.86
<b>Empathy (Cronbach Alpha =0.686)</b>		4.81	0.65
Employees in your current liner give you personal attention.	0.829	4.73	0.73
Employees in your current liner have the best interest in heart.	0.805	4.79	0.83
Employees in your current liner understand your specific need.	0.729	4.9	0.90
<b>Assurance (Cronbach Alpha =0.747)</b>		5.01	0.95
The behavior of employees in your current liner instill confidence in you.	0.639	4.88	0.95
You feel safe when you have transaction with your current liner.	0.751	5.11	0.97
Employees in your current liner are consistency courteous with you.	0.788	4.88	0.91
Employees in your current liner have knowledge to answer your question.	0.835	5.16	0.94

Base on the result of factor analysis, we found that all of the loading factor are importance to measure the variable as the factor score is higher than 0.5. While the Cronbach's Coefficient Alpha show the acceptance reliable as all are higher than 0.6 thus the result of service quality are reliable.

The mean result of main variable and it highest mean sub-factor will be summarizing as below.

- Reliability indicate somewhat agree which has the average mean of 4.86. For the same somewhat agree measurement level as the highest of reliability sub-factor service quality have 5.01 of average mean specified their current liner performs the service right at the first time.
- The responsiveness's perceived service quality indicate somewhat agree has the average mean of 4.78; whereas the highest of responsiveness sub-factor service quality have 4.90 of average mean each specified employees in their current liner give they prompt service, and always willing to help them.
- Tangible's perceived service quality indicate somewhat agree has the average mean of 4.67; whereas the highest of tangible sub-factor service quality have 4.84 of average mean specified employee in their current liner appear neat 4.76.
- Empathy's perceived service quality indicate somewhat agree has the average mean of 4.81; whereas the highest of empathy sub-factor service quality have 4.90 of average mean each specified employees in their current liner understand their specific need.
- Assurance's perceived service quality indicate somewhat agree has the average mean of 5.01; whereas the highest of assurance sub-factor service quality have 5.16 of average mean specified employees in their current liner have knowledge to answer their question.

#### **4.1.3 Perceived Service Recovery**

Service failure is important for the respondent nowadays as we found that respondent give the service failure as very important. For service recovery, researcher used factor analysis and Cronbach's Coefficient Alpha to test service recovery in order to find out whether or not the question is belong to the group or measure the same

thing. Researcher sets factor score at 0.5 which each factor that have score higher than 0.5 will be loaded in to the calculation for mean of variable. While Cronbach's Coefficient Alpha Scales will be used to analyze the reliability of the questionnaires. According to Nunnally (1967), result will be reliable if only Cronbach's Coefficient Alpha is higher than .06 which results are as below table.

**Table 4.3** Factor loading, Cronbach's Coefficient Alpha, mean and SD of service recovery's indicator

	Factor loadings	Mean	S.D.
<b>Distributive justice (Cronbach Alpha =0.652)</b>		4.93	0.53
The outcome you receive is fair.	0.708	4.97	0.91
You do not get what you deserve.	0.591	4.9	0.75
In resolving the problem, your current liner give you what you need.	0.851	5.05	0.93
The outcome you receive is not right	0.626	4.91	0.77
<b>Procedural justice (Cronbach Alpha =0.7)</b>		4.07	0.97
The length of time taken to solve your problem is longer than necessary.	0.938	3.29	1.15
Your current liner show adequate flexibility in dealing with your problem.	0.842	4.82	1.00
Complaint process of your current liner is easy to access	0.894	4.87	1.06
It hard for you to figure out to whom you should complain in the your current liner	0.5	3.29	1.28
<b>Interaction Justice (Cronbach Alpha =0.614)</b>		4.36	0.73
The employees in your current liner are appropriately concerned about your problem.	0.74	4.93	0.91
The employees in your current liner do not put the proper effort into flexibility in dealing with your problem.	0.63	4.36	1.13
The employees communication in your current liner with you are appropriate.	0.803	3.2	0.82
When the problem happen, the employees in your current liner do not give you the courtesy.	0.5	4.93	1.06

Base on the result of factor analysis, we found that all of the loading factor are importance to measure the variable as the factor score is higher than 0.5. While the Cronbach's Coefficient Alpha show the acceptance reliable as all are higher than 0.6 thus the result of service recovery variable are reliable. The question that was used the reverse score had reversed before calculate the factor analysis, Cronbach's Coefficient Alpha and mean. Reverse questions are used to test whether respondents pay attention to answer the question or not. As respondent might be reluctant to answer question frankly by input better score than what they really want. So the mean result of reverse question might not totally opposite the mean of positive question.

The mean result of each variable will be summarizing as below.

- Distributive justice's perceived service recovery indicate somewhat agree level has the average mean of 4.93. The highest of distributive justice sub-factor service recovery have 5.05 of average mean specified agreement as in solving the problem; their current liner give them what they need.
- Procedural justice indicates neutral level of measurement has the average mean of 4.07. This highest level is somewhat agreement have 4.87 of average mean specified their current liner show adequate flexibility in dealing with their problem.
- Interactional justice's perceived service recovery indicate neutral agreement level has the average mean of 4.36. The highest of interaction justice sub-factor service recovery is somewhat agreement level have 4.93 of average mean specified the employees in their current liner are appropriately, and when the problem happen; the employees in their do not give they the courtesy as they are due.

#### **4.1.4 Perceived Customer Retention**

Researcher used factor analysis and Cronbach's Coefficient Alpha to test customer retention's indicator in order to find out whether or not the question is belong to the group or measure the same thing. Researcher sets factor score at .5 which each factor that have score higher than 0.5 will be loaded in to the calculation for mean of variable. While Cronbach's Coefficient Alpha Scales will be used to analyze the reliability of the questionnaires. According to Nunnally (1967), the result will be reliable if only Cronbach's Coefficient Alpha is higher than .06 which results are as below table.

**Table 4.4** Factor loading, Cronbach's Coefficient Alpha, mean and S.D. of customer retention indicator

	Factor loadings	Mean	S.D.
<b>Word of Mouth (Cronbach Alpha =0.602)</b>		4.96	0.58
Although you use your current liner service, you will recommend other not to use it.	0.634	5.3	0.93
Your recommendations about your current liner would have been positive.	0.773	4.66	0.72
You will say positive things about the service of your current liner to others	0.799	4.92	0.74
<b>Loyalty (Cronbach Alpha =0.824)</b>		4.88	0.75
You will continue to stay with your current liner.	0.729	4.96	0.86
You will consider your current liner to your first choice in the service category.	0.783	4.69	0.91
You will not change your current liner even after your contract expire.	0.812	4.79	1.00
In the near future, you will intend to use more of the service provided by your current liner	0.766	5.06	0.88
You consider yourselves to be a loyal customer of your current liner.	0.746	4.88	0.86
<b>Trust (Cronbach Alpha =0.688)</b>		3.18	0.63
You believe that your current liner can be relied on to keep it promises.	0.95	4.78	0.80
You believe that your current liner is trustworthy	0.952	2.7	0.79
You feel pretty negative about your current liner	0.45	3.46	0.92

Base on the result of factor analysis, we found that all of the loading factor are importance to measure the variable as the factor score is higher than 0.5. Except third measurement of trust that has lower scored than 0.5 which researcher do not include that question in the calculation. While the Cronbach's Coefficient Alpha show the acceptance reliable as all are higher than 0.6 thus the result of customer retention variable are reliable.

The mean result of each variable will be summarizing as below.

- Word of mouth has 4.96 of average mean specify somewhat true measurement level. The highest sub-factor is true level have the average mean of 5.30 indicate to although they use their current liner service, they will recommend the other not to use it.
- Loyalty has 4.88 of average mean specify somewhat true level of measurement; whereas the highest sub-factor about in the near future, they will intend to use more of the service provided by their current linear have the average mean of 5.06.



- Trust is neutral true level of measurement having 3.56 of average mean. The highest is level of somewhat true have 4.78 of average mean indicate to they believe that your current liner is trustworthy.

**Table 4.5** Correlation of service quality's dimension and service recovery's indicator

	Reliability	Responsiveness	Tangibles	Empathy	Assurance	Distributive justice	Procedural justice	Interaction justice
Reliability	1.00							
Responsiveness	0.592**	1.00						
Tangibles	0.535**	0.645**	1.00					
Empathy	0.445**	0.491**	0.452**	1.00				
Assurance	0.538**	0.641**	0.670**	0.529**	1.00			
Distributive justice	0.269**	0.170**	0.190"	0.307**	0.243**	1.00		
Procedural justice	0.266**	0.174**	0.273**	0.220**	0.302**	0.35**	1.00	
Interaction justice	0.139*	0.161*	0.144*	0.11	0.09	0.32**	0.432**	1.00

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

\* Correlation is significant at the 0.05 level (2-tailed).

Researcher uses correlation to check the relationship between each variable in order to find out whether the two construct, service quality dimensions and service recovery's indicator, have convergent validity and discriminate validity. According to table 4.6, the correlation result show that among the service quality dimension are between 0.445 to 0.670 while result among the service recovery dimension are between 0.32 to 0.432. However the relation between the service quality dimension and service recovery indicator are only 0.09 to 0.3. The result implies that research has convergent and discriminate validity.

## 4.2 Hypothesis testing

To test the relationship between one dependent variable with two or more independent variable multiple regression will be used to test the relationship amount a dependent variable with those independent variables. According to hypothesis statement 1 and 2 multiple regressions is fit to use to find out the relationship between perceived service qualities, perceived service recovery with customer retention and



perceived service quality's dimensions, perceived service recovery's indicator with customer retention.

Multiple regression results are summarizing as below.

## Hypothesis 1

H<sub>1</sub>: There is relationship between service quality and service recovery with customer retention

**Table: 4.6** Multiple Regression result of service quality, service recovery with customer retention (n=240)

Dependent Variable	Independent Variable	Beta	t	p-value	R <sup>2</sup>	F-value	Sig
Customer Retention	Service Recovery	0.726	15.421	0.000	.629 <sup>a</sup>	209.580	0.000
	Service Quality	0.109	2.312	0.022			

a: predictors (constant), Service quality and Service recovery

Multiple regression is used for analyses the relationship between perceived service recovery and perceived service quality with customer retention. A significant model emerged ( $F_{2,247} = 209.580$ ,  $p, 0.0000$ ) that implied that this model is significant. The R-squared is 0.629, meaning that approximately 62.9% of variability of customer retention is accounted for by the variables in the model. Coefficient Beta of Service quality and service recovery are 0.109 and 0.726 respectively while the p-value of both variable are found significant which p-value of service quality is 0.022 ( $< 0.05$ ) and service recovery is 0.000 ( $< .05$ ).

## Hypothesis 2

H2: There is relationship between service quality dimension and service recovery indicator with customer retention.

Table: 4.7 Multiple Regression result of service quality dimension, service recovery indicator with customer retention (n=240)

Dependent Variable	Independent Variable	Beta	t	p-value	W	F-value	Sig
Customer Retention	Reliability	0.15	3.017	0.003	.646'	54.99	0.00
	Responsiveness	-0.1	-1.164	0.245			
	Tangibles	0	-0.196	0.845			
	Empathy	0	-0.156	0.876			
	Assurance	0.05	0.862	0.390			
	Distributive justice	0.23	4.302	0.000			
	Procedural justice	0.33	7.333	0.000			
	Interaction justice	0.4	8.868	0.000			

a: predictors (constant), Service quality and Service recovery

According to table 4.8, by using enter method, a significant model emerged ( $F_{2,247} = 54.994$ ,  $p, 0.0005$ ) that implied that this model is significant. R-squared is 0.646, meaning that variation in the independent variable accounted for approximately 64.6 percent of the variance in the dependent variable. From the result, service quality dimension, there is only reliability are significant ( $0.003 < 0.05$ ). For service recovery indicator, the entire indicator found significant which distributive justice ( $0.000 < 0.05$ ), procedural justice ( $0.000 < 0.05$ ) and Interaction justice ( $0.000 < 0.05$ ). Coefficient Beta of reliability, distributive justice, procedural justice and interactional justice are 0.153, 0.228, 0.328 and 0.400 respectively.

### 4.3 Hypothesis Summary

This chapter has presented the results of data analysis in terms of hypotheses testing and the summary of results is shown in Table 4.9

**Table 4.8:** Summary of Hypothesis testing result

Hypothesis	Statistical test	Sig.	Result
H <sub>1</sub> : There is relationship between service quality and service recovery with customer retention	Multiple regression	0.000	H1 supported
H <sub>2</sub> : There is relationship between service quality dimension and service recovery indicator with customer retention.	Multiple regression	0.000	H2 supported

The research question is: *Does service quality and service recovery and its dimension can motivate exporter to repurchase the ocean liner service?* Therefore the answers for this research question are: *Yes, service recovery and service recovery and its dimension can motivate exporter to repurchase the ocean liner service.*

## Chapter 5

### Conclusions and Recommendations

The objective of this research is to find out the relationship between service quality and service recovery toward customer retention in ocean liner business. The ocean liner company can apply this research to improve their customer retention strategy. There are number of ocean liner companies in Thailand which the majority liner are : Mersk line, NYKs line, OOCL, HPL, RCL, MOL, K-Line, APL, CMA-CGM line, NOL, China Shipping Line, CNC line, Yangming Line, Wanhai, Evergreen Container line and etc. This thesis also benefits to other liner that participate in Thai market that writer do not mention above.

#### 5.1 Research Findings

Base on the multiple regression results, researcher found that service quality and service recovery has significant positive relationship with customer retention. For service quality, only reliability has a significant relationship with customer retention. For service recovery, all of the variables; distributive justice, procedural justice and interactional justice, have a significant relationship with customer retention. Coefficient Bata of service quality, service recovery, reliability, distributive justice, procedural justice and interactional justice are 0.109, 0.726, 0.153, 0.228, 0.328 and 0.400 respectively.

## 5.2 Implication for Practice

Today's service managers are facing with more demanding customers either during the delivery of the service or service problem arises. However, generic service quality and service recovery strategies may ineffective in retaining customer (Levesque and Mc Dougall, 2000). This research might be able to help ocean liner manager to develop the appropriate strategy on service recover and service quality to retain their current customer.

The result of this research show that both service quality and service recovery has a significant relationship with customer retention in the ocean business. However, service quality is now becoming more and more generic for ocean liner business, as mention that there are a lot of ocean liners who are providing the same service routing with similar feature. So service quality will be always comparing by shipper or consignee which nowadays service quality become general and minimum requirement. Only, Reliability has significant relationship with customer retention among five service quality's dimensions. In fact, reliability is the minimum requirement for shipper and consignee which if liner fails to provide it, it can be simply implying that service failure is incurred. Once ocean liners fail in the reliability dimensions, it might incur a huge cost for customer such as a delay in shipment which customer need to shut down the plant etc.

However, even the tangible, responsiveness, empathy and assurance are not having significant with customer retention; ocean liner should not ignore it as if ocean liners fail to serve it generally imply that service failure incur which shipper and consignee are very concern about it.

For the service failure, It shows that customers are very concerning as mean of the importance service failure is 6.14 which base on scale rating which mean very

important. Service failure can happen in any activity in liner business even controllable or uncontrollable factor (i.e., act of god and port congestion). Customers aware that service failure can be happen but the most of concerning is how ocean liner solve and handle their problem.

Apart of dissatisfaction from customer, extra cost might incur which some customer might charge back to ocean liner or stop support. The cost of failure might be in few amounts, such as ocean liner provides the damage container to customer who needs to return that damage container and pick up the new one, or huge amount, such as vessel delay 1 week from the original offer which cause the consignee shuts down their plant. Thus, service recovery is significantly importance for customer to evaluate the ocean liner whether to continue support or not.

Ocean liner manager should tailor their recovery efforts to match the customer perceptions of service failure. Ocean Liner Company needs to train their front line employee to correctly assess the customer's situations. Customer perceptions of the magnitude of failure should then guild employee actions in resolving the problem to the customer's perception.

### **5.3 Recommendation**

Base on the results of this research, researcher has interview with 3 management of ocean liner in Laem Chabang area to understand the current strategy that they are currently used, also, reviewing from previous research. Researcher would like to commend as below.



## Service quality

Service quality becomes general requirement in the ocean liner business as there is only reliability that has significant relationship with customer retention. The reliability represent as a most important factor that exporters and importers are monitoring the performance ocean liner company as it will impact and cause them a big trouble if ocean liner fail in this dimension, (i.e. delay in vessel might cause their factory to shut down the plant). Thus reliability should not be fail as it will cause to service failure and dissatisfaction to customer. Researcher would like to recommend ocean liner to focus and improve the reliability as below.

Reliability as the most important attribution for service quality, company should be focus as below.

- Ocean liner's operation manager should monitor the sailing schedule for each service to make sure that vessel is depart/ arrive the origin/ destination on time. In case that there is any delay cause by the act of gods, accident or port congestion, operation team must relay the information to customer service team to update to customer.
- Sailing schedule that provide either in website or logistic magazine must be able to trust.
- Details in booking acknowledge that send to customer must be reliable enough for customer to process the customs or other relate export document the need to proceed in advance. In case that there is any change for the detail in booking acknowledge, customer service must immediately inform customer.
- Perform the right service at the first time. (Booking issue, destination, service routing)

- For the service that use transshipment at any port, ocean liner must make sure that service is connected as what promise to customer.

Although there is only reliability that has significant positive relationship with customer retention however service failure showing the very important to shipper which surely they do not want it to happen. In order to ensure that ocean liner offer the right service at the first time to meet the minimum requirement from exporter and importer, researcher would like to recommend ocean liner to not ignore the rest 4 service dimensions and focus and continue to provide the service to avoid the failure and dissatisfaction.

For Tangible, Ocean liner should prepare the container's quality or grade to match with the preference and product type of customer. Ocean liner also need to control and monitor their vendor to make sure the container are well prepare and in the good condition before release to customer also make sure that vendor prepare the container in advance before customer come to pick up the container at vendor. In order to make sure that container is available in every port, ocean liner company must focus on the equipment match back, which try to promote the to sell the container to region that need the container, in order to make the container available at the needed region also save the company cost for empty repositioning of the container. The example of empty container controlling system is as below figure.

Opzone/Region	Eq	Stats		Inventory			Current Week		
		03	Avg Imb	target Inventory	3S Ratio	MT Plan	Ending Balance	- Stock	
Bangkok	40GP	649		550	645	1.0	1S5	564	-136
			190						
Songkhla	40GP					5	0	5	

**Figure 5.1** Equipment control and monitoring system, Thailand 40 general propose container detail

Opzone/Region	Eq	03	Avg Imb	target Inventory	3S Ratio	MT Plan	Ending Balance	- Stock
Kota Kinabalu	40GP	0	2		3	0	3	3
Kuantan	40GP	0	0	-	0	0	2	2
Kuching	40GP	0	1	2	1	0	2	0
Pasir Gudang	40GP	50	-33	50	72	0.9	40	-60
Penang	40GP	51	-15	86	61	1.2	40	-40
Port Kelang	40GP	202	-15	170	185	0.9	178	22
Malaysia Total	40GP	333	-63	308	322	LO	265	-117

**Figure 5.2** Equipment<sup>s</sup> control and monitoring system, Malaysia 40 general propose container detail

The figure 5.1 and 5.2 imply that there is container surplus in Penang, Malaysia which deficit in Pasir Gudang and Port Kelang, Malaysia. With above detail, ocean liner can manage the flow of container by let sale team to promote the cargo to deficit area. Ocean liner must develop system to monitoring their equipment flow in each country to avoid the deficit in container. Beside, it will help ocean liner to save cost both opportunity cost and re-positioning cost. The above is the example of material controlling program of OOCL liner which it will help them to monitor their equipment in each region and provide the idea for sale team to push the container to right destination to avoid re-positioning cost. Anyway, in case that container type not available, ocean liner must flexible enough to provide substitute the container type for the trade lane that applicable.

For Assurance, ocean liner should give the well education for the company's product and service to employee and make sure that each employee can provide the confidence to customer for any transaction. Ocean liner service manager should teach each front line customer service to be able to handle the one stop service without unnecessary passing the customer's request to other. Beside, ocean liner should keep the confidential for each exporter and importer's information by not provide their information to customer's competitor.

For Responsiveness, ocean liner service manager should make sure that contact channel must be available. Front line employees much have knowledge to answer the question from customer. Also they must be able to handle complain and general request from customer. Ocean liner should have system to let employee to access the shipment information to answer customer question. Web base must be developing for customer to check the shipment detail by themselves. Those web bases should be able to reach the general information of the shipment also can proactive inform customer automatically. Automatically shipment checking is allowing ocean liner to improve the responsiveness to their customer. Moreover, it will reduce a day to day working for ocean liner's employee to answer some question. The example of cargo tracking and advance milestone alert is providing in appendix A.

For empathy, ocean liner sale manager should find out and give the level of important from overall customers whom currently support company. Then, assign specific sale and customer service to take care the most important customer. Beside, sale must obtain the specific need form their customer and rely to customer service in order to deliver the service as what they want. For reefer container, 7 days /24 hours emergency service should be providing for customer.

## **Service failure and service recovery**

Service failures are very important to customer. It will be measured by customer to consider whether they will stay with those liners or not. Base on result of this research, service recovery has positive relationship with customer retention. Tax and Brown (1998) view service failure as opportunity to learn, to develop better service system, and to develop comprehensive service recovery system. They suggestion service company should encourage customer to complaint, train customer how to complain, sets performance standard and communicate the importance of service recovery to employee. Therefore, the suggested steps to prevent service failure are as follow; (Canrage, 2004)

- Talk to customers; find out their need, want and expectations. What do they expect from the operation in terms of products and service. Then find out what they would expect if they did not receive these satisfactorily. Thus ocean liner sale should find out the above and develop the strategy to serve those customers.
- Truly analyze the operation. Look at the physical environment, processes and systems that can break down and cause service failure.
- Analyze the staff Are they the right person for the right job? Do they have skills? Have they been trained correctly and completely? Do they get support direction, and incentives they need to do their job well? Employees who are well trained, empowered to deliver quality service are be able to prevent service failure.

All of above can help ocean liner to prevent the service failure by try to make the service right at the first time. However, it is impossible to make 100 percent right.

Today's service managers are faced with more demanding customers when service problems arise. The generic service recovery strategies may be ineffective in retaining customer (Levesque, 2000). In other words, the effectiveness of service recovery effort depends on the situation. The results of this research indicate that ocean liners need to pay attention to customer's perceptions of seriousness of failure. Thus it is important for ocean liners to improve their service recovery strategies in order to improve their customer retention ratio. As the importance of perceived justice in service recovery can not be overlooked so researchers would like to recommend the ocean liner as below.

#### Interaction justice

It is the most concern factor from customer. Since the service failure happens, customer surely expects ocean liner employees to provide an effort to solve their problem. Moreover, the communication must be polite and show willingness to help the customer. Apology is extremely important once service failure occurs (Mattita, 2001). Clemmer and Schneider (1996) said that management of procedure of service recovery and deployment of trained and skilled personnel to handle customer complaints is important to ensure service satisfaction with service recovery which customer would be more satisfied when employees were polite and friendly. Interactional justice deals with interpersonal behavior in the enactment of procedures and delivery of outcomes, and covers the expectation offered by the service provider, and the honesty, politeness, effort and empathy shown by staff.

Thus ocean liners should focus as below to improve interactional justice.

- Ocean liner employees either customer service or sales representative must apologize to customer once they acknowledge the service failure. Wirtz (2004)



suggest that customer will be more satisfy when employees apologize in prompt respond.

- Ocean liner must train their front line to handle the complained and claim from customer in the professional way by showing the willingness to help, honesty, politeness, effort and empathy to customer. (Kou, 2006; Tax et al., 1998)
- Front line employee should show appropriately concerned about customer problem also put the effort to solve the problem.
- As the service failure happen, customer might be anger, so, front line employees must keep it in mind to communicate appropriately with those anger customer. (Kasper, 2006)
- Ocean liner should train their front line employee to indicate how seriousness of the problem and know how annoying of the customer in order to assess the customer's situation. Customer perceptions of the magnitude of failure should then be guild employee actions in resolving the problem to the customer's satisfaction (Clemmer and Schneider, 1996).

### **Procedural justice**

After failure happen, customer is need to know how to claim and how ocean liner going to solve their problem. Procedural justice deals with the service provider's decision making procedures and includes process control, decision control, accessibility, flexibility, and timing and speed of decision (Kua, 2006) Thus ocean liner should focus as below.

- Give an opportunity for customer to tell a story and express their feeling. (Watzels, 1998)

- Ocean liner should shows a great effort for problem resolution – that are accessible and respond with quickness are far more likely to repair the damage done to their quality reputations than are the firms that take a casual attitude flexibility in dealing with customer problem (Bies, 1987).
- Complaint process should easy is easy to access. Ocean liner should develop the ways to encourage customer to complain either by website or customer service.
- Ocean liner should empower their frontline employees to attend to customer needs by making on-the-spot decisions which it is essential goods for service recovery since they are the first to know about the problems and are the best position to determine what can be done to satisfy the customer (Plammer,1997).
- The length of time taken to solve customer's problem is not longer than necessary (Blodget et al., 1997).

### **Distributive justice**

Distributive deals with the outcomes and includes. As service failure might incur extra cost for the customer which is in term of actual cost or their opportunity cost, so shipper is concerning how ocean liner will compensate their lost. Thus, ocean liner must focus as below.

- Service failure, customer would prefer the service provider to compensate them to any tangible loss they suffered as a result of that service failure. Thus, company should find out the appropriate compensation to customer. Ocean service manager should focus on offering the right level of compensation whenever a service failure occurs (Kelley, 2000).

- Service firms might want to offer the dissatisfied customer a choice of service recovery options. Giving the customer opportunity to choose the preferred compensation method also avoid the potential problem of over-rewarding. Customer sometime feel uncomfortable with the reward, thus lessening the positive impact of atonement on satisfaction and loyalty (Smith *et al.*, 1999)
- Compensation must offer with polite manner. (Bies, 1987).

## 5.4 Conclusion

The results of this research show that service quality and service recovery has a positive relationship with customer retention. Since the customer retention is becoming more and more important for every organization, includes ocean liner; as it will save company cost and increase margin, make the stakeholder satisfy, create word of mouth from customer, create trust and create loyalty, so ocean liner, should pay more attention to develop strategy for make their customer to satisfy and stay with them.

Ocean liner should focus to continue to improve the service quality also educate their employee to understand the important of it, in order to make them delivery the satisfaction from their customer by provide the right service at the first time. Service recovery is also important for customer retention, as it is impossible for service firms to provide 100% service delivery without fail, the good practice to recover the service failure is show the significantly important for the decision of customer whether to stay or leave the service company. Ocean liner should train their front line employees to correctly assess the customer's situation. Customer perception of the magnitude of failure should then be guild employee action in resolving the problem to the customer's satisfaction.

## **References**

1. Alan, P. (1995), "Dimensions of Service quality: a study in Istanbul",  
*Managing Service Quality*, Vol. 5 No.6 pp. 39-43
2. Anna S. Mattila (2001), "The effectiveness of service recovery in a multi-industry setting", *Journal of service marketing*. Vol. 15 No.7, pp. 583-596
3. Ah-Keng Kau and Elizabeth Wan-Yiun Loh (2006), "The effect of service recovery on consumer satisfaction: a comparison between complainants and non-complainants", *Journal of Services Marketing*, Vol.20 No.2, pp.101-111
4. Barbara R. Lewis and Pamela McCann (2004), "Service failure and recovery: evidence from the hotel industry", *Journal of Contemporary*, Vol.16 No.1, pp.6-17
5. Burn and Bush. (2002). *The Research methodology*. Retrieved March 23, 2007, from <http://etd.rau.ac.za/theses/available/etd-09122005-110834/restricted/FinalChapter6.pdf>
6. Buttle, F (1996), : SERVQUAL: review, critique, research agenda", *European Journal of Marketing*, Vol. 30 No.1 pp. 8-32
7. Boshoff, C. (1997), "An experimental study of service recovery options",  
*International Journal of Service Industry Management*, Vol. 8 No.2, pp.110-30
8. Boshoff, C. (2005). "A re-assessment and refinement of RECOVSAT",  
*Managing service quality* Vol, 15 No. 5 pp. 410-425.
9. Barbara R. (2004). "Service Beyond failure and recovery: evidence from the hotel industry" *International Journal of Contemporary Hospitality Management* Vol. 16 No. 1 pp. 6-17

10. Brady and Cronin Jr., (2001), "Some new thoughts on conceptualizing perceived service quality: A hierarchical approach", *Journal of Marketing*, 65 (July), pages 35
11. Carman, J.M. (1990), "Consumer perception of service quality", *Journal of Retailing*, Vol. 66 pp. 33-55.
12. Clemmer. E.O and Schneider, B. (1993), "Managing customer dissatisfaction with waiting: applying social-psychological theory in the service setting", in Swartz, T., Bowen, D. and Brown, S. (Eds), *Advances in Services Marketing and Management*, JAI Press, Greenwich, CT, Vol, 2, pp, 109-26
13. Clemmer. E.O and Schneider, B. (1996), "Fair service", *Advances in service Marketing and Management*, vol5, pp. 109-26
14. Christo Boshoff (2005), "A re-assessment and refinement of RECOVSAT", *Management Service of Quality*, Vol.15 No.5, pp.410-425
15. Cronin, J.J. And Taylor, S.A. (1992), "Measuring service quality: a reexamination and extension" *Journal of Marketing*, Vol.56, pp.55-68.
16. Cronin J.J. and Taylor, S.A (1994) "SERVPERF versus SERVQUAL: reconciling performance-based and perception-minus-expectations measurement of service quality". *Journal of Marketing*, Vol.58 No., 1 pp.125-31.
17. Dabholkar, P.A.,(1996), "Consumer evaluations of new technology-based self-service operations an investigation of alternative models" *International Journal of Research in Marketing*, Vol. 13 No. 1, pp. 29-51.
18. Dabholkar, P.A., Shepherd, C.D. and Thorpe, D.I. (2000), A comprehensive framework for service quality: an investigation of critical conceptual and

measurement issues though a longitudinal study", *Journal of Retailing*, Vol.76 No.2, pp. 131-9.

19. David T. Kollat, James F. Engel, Roger D. Blackwell. (1970). *Journal of Marketing Research*. Retrieved January 28, 2007, from <http://links.jstor.org/sici?sici=0022-2437%28197008%297%3A3%3C327%3ACPICBR%3E2.0.CO%3B2-I&size=LARGE&origin=JSTOR-enlargePage>
20. Davis. (1996). *Correlation Analysis*. Retrieved March 23, 2007
21. David J. Bloomberg, Stephen and Lemay Joe B. Hanna (2002), "Logistics"
22. Dude, L. and Maute, M. (1998). "Defensive strategy for managing satisfaction and loyalty in the service industry", *Psychology and Marketing*, vol. 15 No 8, pp. 775-91
23. Fornell, C and Wernerfelt. (1987), "Defensive marketing strategy by customer complaint management" *Journal of Marketing Research*, Vol. 24, November, pp. 337-46
24. Goodwin, C and Ross, I (1992), "Consumer responses to service failures: influence of procedural and interactional fairness perceptions", *Journal of Business Research*, Vol. 25, pp. 149-63
25. Ghobadian, A (1993), "Service quality concepts and models", *International Journal of Quality and Reliability Management*, Vol.11 No. 9, 1993, pp. 43-66.
26. Gronroos, C. (1984), A service quality model and its marketing implications", *European Journal of Marketing*, Vol. 18 No.4, pp36-44.



27. Hallowell, R. (1996), "The relationships of customers satisfaction, customer loyalty and profitability: an empirical study", *International Journal of service Industry Management*, Vol.7 No.4, pp.27-42.
28. Hart, C.WL., Heskett,J.L. and Sasser, W.E Jr (1990), " The profitable art of service recovery", *Harvard Business Review*, July-August, pp. 148-56
29. Hocutt, M., Chakraborty, G., and Mowen, J. (1997), "The impact of perceived justice on consumer satisfaction and intention to complain in a service recovery" ,*Advance in Consumer Research*, Vol. 24 No. 4, pp. 57-463
30. Kenneth E. C. and John L. B. (1995), "Managing consumer expectations of low-margin, high-volume services", *Journal of Service Marketing*, Vol.9 No.1, pp.33-45
31. Kelley, S.W. and Davis, M.A. (1994) " Antecedents to consumer expectation for service recovery", *Journal of the Academy of Marketing Science*, Vol. 22 No.1 pp. 52-61
32. Kiff J.S. (2000), The lean dealership – a vision for the future: "from hunting to farming", *Marketing Intelligence & Planning*, Vol.18 No.3, pp.112-126
33. Kotler P. (2000), *Market Management* Prentice Hall International, New Jersey. Lovelock, C.H., *Service Marketing, (1998) Reading MA* Prentice Hall Upper Saddle River, NJ
34. Lasswe, W.C. and Sirikit A. (2002), " Service quality perspectives and satisfaction in private banking", *Journal of Service Marketing*, Vol. 14 N. 3, pp. 321-46
35. Levesque, T. and McDougall, G. (2000). " Service problems and recovery strategies: an experiment", *Canadian Journal of Administrative Sciences*, Vol. 17 No. 1 pp. 20-37

36. Mattila, A.S. (2001), "Service recovery's influence on consumer satisfaction, positive word of mouth and purchase intentions", *Journal of Business Research*, Vol. 54, pp. 11-24.
37. Michael R. Czinkota Ilkka A. Ronkainen Maria Ortiz-Buonofina (1998). "The Export Marketing Imperative".
38. McDougall, G.H.G. and Levesque, T.J. (1999), "Waiting for service: the effectiveness of recovery strategies", *International Journal of Contemporary Hospitality Management*, Vol.11 no.1, pp.6-15
39. Malhotra. (2002). *Marketing Research*. Retrieved March 23, 2007
40. Newman, K. (2001), "Interrogating SERVQUAL: critical assessment of service quality measurement in a high street of retail bank" *International Journal of Bank Marketing*, Vol.19 No., 3, pp.126-39
41. Nitin Seth and S.G.Deshmukh (2005), "Service quality model: a review", *Journal of Quality*, Vol.22 No.9, pp.913-949
42. Oh,H. (1999), "Service quality, customer satisfaction and customer value: a holistic perspective" *International Service of Hospitality Management*, Vol. 3 No.3 pp.18-33
43. Parasuraman, A., Berry, L.L.and Zeithaml, V.A.(1991), "Refinement and reassessment of the SERQUAL scale", *Journal of Retailing*, Vol.67 No.4, pp.420-50
44. Parasuraman, A., Zeithaml, V.A.and Berry, L.L. (1985), 'A conceptual model of service quality and its implications for future research", *Journal of Marketing*, Vol.49 No.3, pp.41-50

45. Parasuraman, A., Zeithaml, V.A. and Berry, L.L. (1988), "SERQUAL: a multiple item scale for measuring consumer perception of service quality", *Journal of Retailing*, Vol.64 No.1, pp.12-37
46. Parasuraman, A., Zeithaml, V.A. and Berry, L.L. (1994), "Reassessment of expectations as comparison standard in measuring of service quality: implications for future research", *Journal of Marketing*, Vol.58 No.1, pp.111-24
47. Pearson. (1908). *Multiple Regression*. Retrieved March 23, 2007, from <http://www.statsoft.com/textbook/stmulreg.html>
48. Reichheld, F. and Sasser, W.E. (1990), "Zero defections: quality comes to services", *Harvard Business Review*, September-October, pp, 105-11
49. Ronald H. Ballou (2004), "Business Logistics/Supply Chain Management", Fifth Edition.
50. Saleh, F. and Ryan, C. (1991), "Analysing service quality in the hospitality industry using the SERQUAL model", *Service Industries Journal*, Vol. 1, July, pp.324-43
51. Smith, A and Bolton, R. (1998), "An experimental investigation of customer reactions to service failure", *Journal of Service Research*, Vol. 1 No. 1, pp. 65-81.
52. Smith, A., Bolton, R and Wagner, J, (1999), "A model of customer satisfaction with service encounters involving failure and recovery", *Journal of marketing research*, Vol. 34, August, pp. 356-72
53. Schlesinger, L. and Heskett, J. (1991) "Breaking the cycle of failure in service", *Sloan Management Review*, spring, 1991, pp. 17-28.

54. Tax, S. and Brown, S. (1998), "Recovering from learning from service failure", *Sloan Management Review*, Fall, pp. 75-88
55. Tax, S. and Brown, S. (2000), "Service recovery: research insights and practices", *Handbook of Service Marketing and management*, Sage, thousand Oaks, CA, pp. 271-86
56. Tax, S., Brown, S. and Chandrashekaren M. (1998), "Customer evaluations of service complaint experiences: implications for relationship marketing", *Journal of Marketing* Vol. 62, April, pp. 60-76
57. Uma Sekaran. (1992). *Research Methodology*. Retrieved March 23, 2007
58. Weiers, R.M. (1988). *Marketing Research, 2nd ed.*, Prentice-Hall, Englewood Cliffs, NJ. Retrieved March 23, 2007
59. Zeitham V.A. Service Quality, Profitability, and the Economic Worth of Customers: What we know and what we need to learn. *Journal of the academy of Marketing Science*, Vol.28 No.1, pp.67-85
60. Zikmund. (2003). *Business Research Method*. Retrieved March 23, 2007, from [http://www.swlearning.com/management/zikmund/bus\\_research/zikmund.htm](http://www.swlearning.com/management/zikmund/bus_research/zikmund.htm)

## APPENDIX A

- A-1 Questionnaire
- A-2 Lists of the World's Busiest Container  
Seaports.
- A-3 Pretest table
- A-4 Multiple regression result
- A-5 Milestone notification - Empty container  
pick up
- A-6 Milestone notification - Full container  
return
- A-7 Milestone notification - Container load on  
board

Lists of the World's Busiest Container Seaports.

Rank	Port	Country	TEUs(000s)[1]	+/- from 2004	% change from 2004
1	Singapore	Singapore	23,192	1,863	8.73
2	Hong Kong	People's Republic of China	22,427	443	2.02
3	Shanghai	People's Republic of China	18,084	3,527	24.23
4	Shenzhen	People's Republic of China	16,197	2,582	18.96
5	Busan	South Korea	11,843	413	3.61
6	Kaohsiung	Taiwan (Republic of China)	9,471	0	0
7	Rotterdam	Netherlands	9,287	1,006	12.15
8	Hamburg	Germany	8,088	1,085	15.49
9	Dubai	United Arab Emirates	7,619	1,190	18.51
10	Los Angeles	United States of America	7,485	164	2.24
11	Long Beach	United States of America	6,710	930	16.09
12	Antwerp	Belgium	6,482	418	6.89
13	Qingdao	People's Republic of China	6,307	1,167	22.7
14	Kiang	Malaysia	5,544	300	5.72
15	Ningbo	People's Republic of China	5,208	1,202	30
16	Tianjin	People's Republic of China	4,801	987	25.88
17	New York/New Jersey	United States of America	4,785	307	6.86
18	Guangzhou	People's Republic of China	4,685	1,377	41.63
19	Tanjung Pelepas	Malaysia	4,177	157	3.91
20	Laem Chabang	Thailand	3,834	305	8.64

Sources: <http://www.answers.com>



## Pretest table

### 1. Reliability

#### Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.922	.925	5

#### Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
When your liner promise to do something by certain time, it does so	17.97	17.344	.730	.736	.918
When you have problem, your current liner show sincere interest in solving it.	17.97	14.585	.809	.787	.903
Your current liner performs the service right at the first time.	18.10	15.128	.861	.783	.891
When your liner promise to do something by certain time, it does so	18.03	15.137	.901	.841	.884
Your current liner insists on error free records	18.60	15.283	.723	.697	.921

### 2. Responsiveness

#### Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.842	.848	4

### Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Employees in your current liner give you prompt service.	13.67	8.299	.738	.562	.771
Employees in your current liner are always willing to help you.	13.43	9.909	.694	.512	.803
Employees in your current liner are never too busy to respond your requests.	13.90	8.093	.683	.473	.799
Employees in your current liner keep you inform about when the service will be performed	13.70	8.769	.626	.400	.823

### 3.Tangible

#### Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.917	.917	7

### Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Your current liner have modern looking equipment	26.63	27.689	.821	.699	.898
The physical facilities of your current liner are visually appealing	26.60	25.352	.878	.824	.889
Employee in your current liner appear neat	26.57	28.599	.633	.561	.916
Material associated with the service are visually appealing	26.80	27.890	.757	.727	.903
Your current liner has convenient service hours.	26.80	26.648	.769	.746	.902
Your current liner are able to provide equipment as required with no substitution carrier base on special container commitment.	26.63	29.551	.650	.532	.914
Your current liner are able to provide equipment without damage, clean and sea worthy 100% of the time	26.37	27.344	.721	.684	.907

## Empathy

### Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.830	.832	3

### Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Employees in your current liner give you personal attention	9.57	3.564	.700	.535	.761
Employee in your current liner have the best interest in heart	9.43	2.737	.768	.606	.685
Employee in your current liner understand your specific need	9.53	3.568	.620	.395	.831

## 5. Assurance

### Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.883	.888	4

### Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
the behavior of employees in your current liner instill confidence in you	14.37	8.171	.785	.733	.836
You feel safe when you have transaction with your current liner	14.00	6.897	.782	.692	.842
Employees in your current liner are consistency courteous with you.	14.37	8.378	.671	.551	.877
Employees in your current liner have knowledge to answer your question	14.27	8.478	.779	.670	.842

## 6. Distributive justice

### Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.837	.833	4

### Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
the outcome you receive is fair	12.60	7.145	.692	.744	.783
You do get what you deserve	13.67	9.126	.369	.410	.910
In solving the problem, your current liner give you what you need	12.47	5.982	.908	.841	.673
The outcome you receive is right	13.37	7.275	.754	.639	.758

## 7. Interaction justice

### Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.790	.798	4

### Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
The employees in your current liner are appropriately	11.83	7.109	.659	.490	.706
The employees in your current liner do put the proper effort when dealing with problem	13.03	6.378	.688	.476	.693
The employees communication in your current liner with you are appropriate	11.93	8.961	.640	.451	.738
When the problem happen, the employees in your not give you the courtesy as you are due	12.90	8.714	.470	.237	.798

## 8. Procedural justice

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.599	.578	4

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
The length of time taken to solve the problem is not longer than necessary	11.73	4.616	.494	.294	.429
Your current liner show adequate flexibility in dealing with your problem	10.37	5.137	.413	.398	.501
Complaint process of your current liner is easy to access.	10.50	4.603	.509	.432	.416
It is not hard for you to figure out to whome you shold complain to your current liner	12.50	7.017	.116	.185	.686

## 9. Word of mouth

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.658	.681	3

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Although you use your current liner service, you will recommend the other to use it	9.43	2.806	.304	.198	.819
Your recommendations about your current liner	8.60	2.386	.697	.576	.250
You will say positive things about the service of	8.70	3.045	.469	.504	.568

## 10. Loyalty

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.906	.909	5

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
You will continue to stay with your current liner	18.87	16.602	.574	.399	.922
You will consider your current liner to your first	18.50	13.569	.865	.763	.863
You will not change your current liner even after	18.77	14.461	.832	.711	.872
In the near future, you will intend to use more of	18.57	13.151	.750	.611	.895
You consider yourselves to be a loyal customer of	18.77	14.599	.847	.770	.870

## 11. Trust

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.726	.727	3

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
You do not feel pretty negative about your current liner	9.17	2.695	.504	.310	.699
You believe that your current liner can be relied on	8.93	3.375	.482	.300	.715
You believe that your current liner is trustworthy	8.43	2.392	.681	.467	.461



#### A-4 Multiple regression result

##### Service quality and service recovery with customer retention

###### Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.793(a)	.629	.626	.334

a Predictors: (Constant), Service quality, service recovery

###### ANOVA(b)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	46.637	2	23.318	209.580	.000(a)
	Residual	27.482	247	.111		
	Total	74.119	249			

a Predictors: (Constant), Service quality, service recovery

b Dependent Variable: Customer retention

###### Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta	B	Std. Error
1	(Constant)	1.124	.205		5.478	.000
	service recovery	.673	.044	.726	15.421	.000
	Service quality	.101	.044	.109	2.312	.022

a Dependent Variable: Customer retention

#### Multiple regressions of Service quality dimensions and service recovery indicators toward customer retention.

###### Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.804(a)	.646	.634	.330

a Predictors: (Constant), **Interaction** justice, **Reliability**, Procedural justice, Empathy, Tangibles, Distributive justice, Responsiveness, Assurance

###### ANOVA(b)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	47.887	8	5.986	54.994	.000(a)
	Residual	26.232	241	.109		
	Total	74.119	249			

a Predictors: (Constant), **Interaction** justice, Reliability, Procedural justice, Empathy, Tangibles, Distributive justice, Responsiveness, Assurance

b Dependent Variable: Customer retention

**Coefficients(a)**

Model		Unstandardized Coefficients		Standardized Coefficients	t		Sig.
		B	Std. Error	Beta	B	Std. Error	
1	(Constant)	1.110	.210		5.279		.000
	Reliability	.117	.039	.153	3.017		.003
	Responsiveness	-.055	.047	-.068	-1.164		.245
	Tangibles	-.010	.051	-.011	-.196		.845
	Empathy	-.007	.043	-.008	-.156		.876
	Assurance	.029	.034	.051	.862		.390
	Distributive justice	.211	.049	.228	4.302		.000
	Procedural justice	.191	.026	.328	7.333		.000
	Interaction justice	.295	.033	.400	8.868		.000

a. Dependent Variable: Customer retention



## Milestone notification

CargoSmart is pleased to provide you with the following Milestone Notification:

Empty container OOLU785393-3 has been picked up against the following booking 3037315400.

Date/Time of Pickup (approximate):	21 Aug 2008, 15:59 Local
Empty Pickup Facility:	Allied Container (Manufacturer
Full Return Facility:	PSA Corporation Limited
Full Return Cut Off:	23 Aug 2008, 16:30 Local

Carrier: OOCL-OOCL

Shipper Name:	Cardinal Health 222 (Thailand) Ltd.
Forwarder Name:	Amcor Flexibles Singapore Pte. Ltd.

Booking Number: 3037315400

Origin:	Singapore,Singapore
Port of Load:	Singapore
Departure at Port of Load:	27 Aug 2008, 02:00 Local (estimated)
1st Vessel Voyage:	OOCL ITALY 008E
Arrival at Port of Discharge:	28 Aug 2008, 16:00 Local (estimated)
Port of Discharge:	Laem Chabang
Arrival at Final Destination Hub:	29 Aug 2008, 15:08 ICT (estimated)
Final Destination:	Laem Chabang,Chon Buri,Thailand

Container Number:	00W785393-3
Container Type:	40' General Purpose Container

**Full Container returned.**

Date/Time of Return (approximate): 23 Aug 2008, 10:31 Local  
Full Return Facility: PSA Corporation Limited

Carrier: OOCL-OOCL

Shipper Name: Cardinal Health 222 (Thailand) Ltd.  
Forwarder Name: Amcor **Flexibles** Singapore Pte. Ltd.

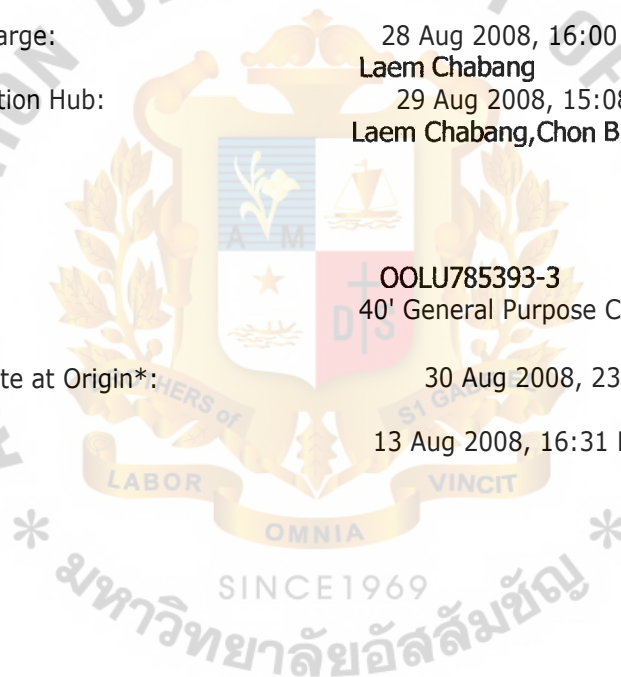
Booking Number: 3037315400

Origin: Singapore,Singapore  
Port of Load: Singapore  
Departure at Port of Load: 27 Aug 2008, 12:00 Local (estimated)  
1st Vessel Voyage: OOCL ITALY 008E

Arrival at Port of Discharge: 28 Aug 2008, 16:00 Local (estimated)  
Port of Discharge: **Laem Chabang**  
Arrival at Final Destination Hub: 29 Aug 2008, 15:08 ICT (estimated)  
Final Destination: **Laem Chabang,Chon Buri,Thailand**

Container Number: **OOLU785393-3**  
Container Type: 40' General Purpose Container

Detention Last Free Date at Origin\*: 30 Aug 2008, 23:59 Local  
(estimated)  
Earliest Return Date\*: 13 Aug 2008, 16:31 Local (estimated)



**Container loaded on board.**

Date/Time of Loading (approximate): 29 Aug 2008, 01:54 Local

Carrier: OOCL-OOCL

Shipper Name: Amcor **Flexibles** Singapore Pte. Ltd.  
Forwarder Name: Amcor **Flexibles** Singapore Pte. Ltd.  
Consignee Name: Cardinal Health 222 (Thailand) Ltd.

Booking Number: 3037315400  
Bill of Lading Reference Number: TLR

Origin: Singapore, Singapore  
Port of Load: Singapore  
Departure at Port of Load: 29 Aug 2008, 07:20 Local (actual)  
1st Vessel Voyage: OOCL ITALY 008E

Arrival at Port of Discharge: 30 Aug 2008, 12:00 Local (estimated)  
Port of Discharge: Laem Chabang  
Arrival at Final Destination Hub: 30 Aug 2008, 15:08 ICT (estimated)  
Final Destination: Laem Chabang, Chon Buri, Thailand

Container Number: OOLU741411-8  
Container Type: 40' General Purpose Container  
Cargo Nature: General  
Quantity: 20 Pallet  
Description of Goods Declared by Shipper: GDSM

Detention Last Free Date at Origin\*: 30 Aug 2008, 23:59 Local  
(estimated)  
Earliest Return Date\*: 13 Aug 2008, 16:31 Local (estimated)