

# Study of Satisfaction of Customers for the Quality of Sea Transport Services: Case in Tan Cang Shipping Joint Stock Company - Da Nang Branch

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**Abstract**—The objectives of this study indicate the factors that affect satisfaction when using ocean shipping services at Tan Cang Shipping Joint Stock Company- Da Nang Branch include: (1) Resources; (2) results; (3) service process; (4) management; (5) Brand. From then on, solutions to improve the quality of service delivery to customers.

**Keywords**— Shipping, quality of service, Tan Cang Company, Da Nang.

## I. INTRODUCTION

Vietnam has joined the World Trade Organization (WTO), ASEAN and most recently ratified the CPTPP, which has created a foundation for the development of the country's trade in general and the shipping industry in particular. Moreover, with its long coastline and a gateway to many oceans, this facilitates the import and export of goods by road.

Da Nang is the main seaport of the Central region, so most of the world's major shipping lines such as MESK, YML, SITC, Hyundai, CMA ... all have offices and regular operations here. In addition, according to forecasts of the Vietnam Shipping Corporation, "the container fleet of the world in 2018 will increase by 9.2%, exceeding the demand growth of only 6-7%, and do increase supply surplus". This shows that the supply is exceeding demand in the coming years and the competition in the shipping industry among the shipping lines is increasingly fierce. Therefore, the survey of customers' opinions to improve the quality of shipping services is very urgent.

## II. BACKGROUND STUDIES

In the world, there are many studies on service quality and satisfaction when using services in general and shipping services in particular. In the field of sea freight forwarding, researchers often use models and recent SERQUAL new models appear more ROPMIS (Thai Van Vinh and Devinder Grewal, 2007). According to the ROPMIS model, service quality consists of six components: resources, outcomes, process, management, image and social responsibility.

The superiority of this method is that the model is derived from the theoretical synthesis of many different models. In addition, the original ROPMIS model was developed in the context of the Vietnamese maritime transport industry. While other models are mainly tested in other sectors, in other countries. It shows that applying the ROPMIS model is appropriate because it is very close to the research scope of the topic. Based on the research objectives, the theoretical basis

and the model proposed, the article suggests: There are relationships positively between components quality of services and satisfaction of customers when using services Sea freight forwarding

Over the past decade, we have gained recognition from transport operators to improve the quality of transport services that are important in achieving a distinct advantage over competitors (Cotham et al., 1969).

Pearson (1980) points out that the most important criteria are flexibility, port priority, transport speed, reliability and regularity. The issue of choosing a shipping line carrier was examined by Brooks (1985, 1990), where the criteria for selecting service providers were the frequency of trips, transit times, time delivery and delivery, service costs, employee attitudes, service flexibility and speed, reputation of the firm, advertising information, and service delivery.

Slack (1985) is perhaps the pioneering scholar who examined the criteria that shippers use in their decision to select containers, which include the size of containers, proximity to ports, port charges, security ports security. According to Murphy et al. (1989, 1991, 1992) showed that the devices available, information delivery, loss and efficiency are the three elements selected providers the most important in forwarding freight, while for with the international port selection factors are equipment availability and performance, large carrying capacity, the convenient delivery and delivery time

Meanwhile, Frankel (1993) found that the following nine criteria demonstrate the high quality concerns associated with ocean shipping services: reliability of service, time of service safety and maintain delivery time, container availability or advertising, security and maintenance, inventory control and tracking, documentation and flow of information (timely and accurate) cost control, billing and cost management, service status control and multilateral management.

The concepts of quality of shipping services now far exceed the scope of the selection criteria for ship or port decisions. In a wide range of materials on quality in transport, quality has a broader definition than purely quality service delivery, and contains many other factors.

## III. RESEARCH METHODOLOGY

### A. Objectives of the Study

The objective of this study is to clarify the following two objectives through systematizing the basis of customer

satisfaction on the quality of shipping services: First, What factors affect the satisfaction of customers when using shipping services at Tan Cang Shipping Joint Stock Company - Da Nang branch. Secondly, from the research results, there are implications and policies to improve the quality of transport services in the coming time.

**B. Research Model**

Each service sector in each market will have its own characteristics, so preliminary qualitative research through in-depth interviews of a number of specialists (including employees and corporate clients) is conducted with section Targeted adjustment and added ROPMIS service quality scale to match the current shipping service. Specifically, the author identifies aspects that affect customer satisfaction with the shipping service (see Figure 1).

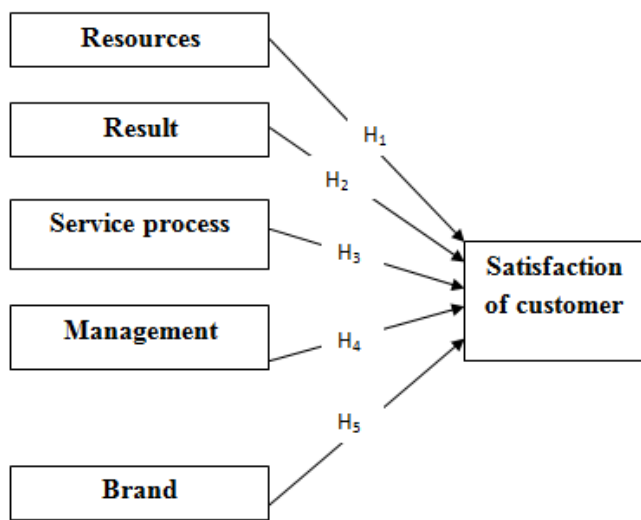


Fig. 1. Suggested research model

+ *Resources*: includes means and resources related to the process of providing services such as transaction locations, equipment in the enterprise, working positions of employees, places of receipt of business records.

+ *Results*: Include results in the process of providing shipping services with sufficient reliability, consistency and accuracy provided by the documents.

+ *Service process*: includes skill and skill to complete the assigned tasks, this is very important criteria, showing the decisiveness in the shipping service.

+ *Management*: for marine transport, the application of scientific and technical means to the management process is very important, the manager's level is also an aspect to study carefully, besides people Managers must have good relations with customers and close relationships with stakeholders such as seaports, customs, etc.

+ *Brand*: It is the expression of the relationship between the brand and the association of customers about the attributes of the brand. The image of an enterprise or organization is reflected in the prestige, prestige and trust of the service users towards the brand name of the organization or enterprise. It is a signal to customers about the reliability of the organization and the services the organization provides. Business or

organizational image has a positive or negative impact on the customer's perception of service and customer satisfaction.

**C. Data Collection**

The overall objective of the study was that customers were directly involved in ocean shipping services, so all questionnaires were used for direct interview techniques through group discussions, Voluntary. Samples were selected by random sampling. The data in this study utilizes the EFA factor analysis. According to Hair & ctg (1998), in order to be able to perform factor analysis, it is necessary to collect data with sample size of at least 5 samples per observation variable, preferably over 10 samples. However, in order to improve sample quality and reasonable sample distribution, the team selected 12 observations for each variable. The model of the study with the observation variable is 24. If the standard of five samples for an observation variable is  $n = 24 \times 10 = 320$ , the sample size is required, currently survey 400 customers.

**IV. RESEARCH RESULTS**

**A. Describe the Research Sample**

In this study, the survey was conducted in a convenient manner. The total number of questionnaires distributed to customers in Danang and customers with business transactions nationwide is 400. The total number of questionnaires was 389 (97.25% of total votes). Result of distribution of surveyed subjects according to different characteristics as above Table I.

TABLE I. Sample survey statistics

Characteristics	Frequency	Ratio %
<b>1. Position</b>	N = 389	100%
Import-Export staff	268	68.9%
Chief or deputy	71	18.3%
Manager	13	3.3%
Others	37	9.5%
<b>2. Type of business</b>	N = 389	100%
State enterprises	7	1.8%
Private enterprise	71	18.3%
Foreign-invested enterprises	311	79.9%
<b>3. Production items</b>	N = 389	100%
Furniture, interior and exterior	149	38.2%
Apparel	156	40%
Devices	27	7.1%
Agriculture and forestry	5	1.2%
Others	52	13.5%
<b>4. Time</b>	N = 389	100%
< 1 year	34	8.9%
1 year – 3 year	128	32.9%
> 3 year	227	58.2%

Source: Author synthesis

As shown in Table I, with 389 individuals on the surveyed list, the number of exporters was 68.9%, followed by the head of 18.3%. 3.3%, the remaining 9.5%. In particular, the sample of the research sample was distributed mainly to foreign invested enterprises (79.9%) and private enterprises (18.3%). very little, accounting for 1.8% and ensuring the type of business.

Business lines of the sample are mainly wood, interior and exterior (38.2%) and garment (40%). Other industries account for a lower proportion and this is one of the statistical samples. It is important to ensure the study of the business sector.

Choosing service-based time templates is very important in the study of service quality satisfaction. We will rely on the group of long-term customers to find out about their satisfaction with the new customer group. This sample does not really exceed the difference in terms of time spent using the service with the group of customers using the service over 3 years accounted for 58.2% and the lower group was about 41.8%. Statistic statistics are meant to ensure that the study is time-consuming.

TABLE II. Results of reliability analysis of variable groups by Cronbach'Alpha coefficient

No	Group variables	Symbol	Number of observation variables	Cronbach's Alpha
1	Resoure	NL	6	0.760
2	Result	KQ	4	0.844
3	Service process	QT	3	0.724
4	Management	QL	7	0.848
5	Brand	HA	3	0.778
6	Satisfaction of customer	HL	4	0.796

Source: Author synthesis

Based on the Cronbach's Alpha coefficient analysis, the five components of the customer satisfaction scale and the reliability factor of greater than 0.6 are reliable for use. This shows that the scale is statistically significant and the reliability coefficient is required. Should be further included in the EFA discovery factor analysis.

*Analyzing the EFA factor*

First, to check if the independent factors are relevant for inclusion in the EFA discovery factor analysis, we conduct Bartlett's test and the KMO coefficient:

Based on Table III, the KMO value is 0.911 > 0.5 and the Bartlett's Sig value of 0.000 < 0.05 indicates that the variables

are correlated, so the model is suitable for inclusion in exploratory factor analysis.

TABLE III. The KMO coefficient and Bartlett's test of the independent factors

KMO		.911
Bartlett's test	Approx. Chi-Square	3454.750
	Df	210
	Sig.	.000

The extraction method in factor analysis requires that extracts of Eigenvalue be greater than 1 to be retained in the analytical model. The extracted factors have an Eigenvalue value greater than 1 and a stop when extracts at factor 5 have an Eigenvalue of 1.023 > 1. The total deviation of the 5 factors equals 63.013% > 50% of this. The ability to use these five factors explained 63,013% variability of the observed variables.

The results of the EFA exploratory factor analysis with KMO are 0.795 and 0.5 and Bartlett's test has a sig value of 0.000 < 0.05, so it is possible to confirm the appropriate data for factor analysis (Table IV).

TABLE IV. KMO Coefficients and Bartlett's Test of Satisfaction Factors

KMO		.795
Bartlett's Test	Approx. Chi-Square	440.459
	Df	6
	Sig.	.000

*Regression analysis*

In the analysis of the variance above, it was found that the F value was significant for Sig. F = 0.000 (< 0.05), which means that the linear regression model is consistent with the actual data collected and the variables included in the statistic are statistically significant at 5%.

TABLE V. Statistics tables for regression coefficients

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.735a	.740	.726	.55603	.540	38.496	12	376	.000

a. Predictors: (Constant), KQ, QL, NL, QT, HA

TABLE VI. Statistical parameters in the regression equation

Model	Unstandardized Coefficients		Standardized Coefficients Beta	T	Sig.	Collinearity Statistics	
	B	Std. Error				Tolerance	VIF
(Constant)	.245	.259		.944	.346		
KQ	.151	.069	.146	2.201	.029	.641	1.561
QL	.289	.066	.294	4.394	.000	.625	1.601
NL	.187	.060	.201	3.115	.002	.671	1.491
QT	.184	.072	.172	2.552	.012	.614	1.628
HA	.158	.071	.150	2.228	.027	.615	1.627

Positive regression coefficients show the factors in the regression model on the positive proportional influence on customer satisfaction. From the above table we have normalized regression coefficients written in the form as follows:

$$HL = 0.146 * KQ + 0.294 * QL + 0.201 * NL + 0.172 * QT + 0.150 * HA$$

V. CONCLUSION

*Recommendation Group to Improve the Level of Management*

This is the strongest factor affecting the satisfaction of customers when using the shipping service at the company. Thus, the company first needs to focus on improving the

proactive communication to customers about the changes related to the shipment. Whenever there is any information regarding shipment delays such as ship delays, vessel delays, etc., the company staff will immediately notify the customer, as well as the parties involved, so that all parties have timely information. Time whenever it occurs, it will be the customer's representative to work with the shipping company and the parties involved to protect the interests of the customer.

With the shipping industry in particular and logistics in general, two key factors that make up that advantage are time and cost. Understanding this, the company has set the criteria for all customer requirements are responded quickly. Specifically, employees should reply to the email within 15 minutes after receiving the request of the customer, or will immediately call the customer to confirm in the emergency, to avoid incurring costs to guests. Such as editing the document after the data transfer period. With the current customer response time of 2 hours, this improvement is considered a significant improvement, contributing to the increase in serviceability and quality of service provided by the company, thereby Increase customer satisfaction.

In some cases, customers have problems arising from their errors such as errors in customs clearance, inward transportation not timely in order to complete the customs formalities, the company will support Customers work with the parties to catch the ship, try to incur the lowest cost (if any).

In peak seasons, the company needs to have a plan of preparation and redundancy to minimize employee overload, minimize delays and errors when serving customers. The company may recruit more employees or allow employees to work overtime, and also have compensation policies for employees to work overtime to keep their work well, as well as customer service. , devoted.

Warranty is also an important factor for customers to be assured when using the service of the company. The company always check and monitor the goods to ensure delivery on time, in the right place, the right quantity and ensure the status of goods as the receipt.

Every year the company needs to conduct a customer survey to find out what the quality of service the company is offering, how satisfied the customers are, how dissatisfied they are. sewing ... and collect the comments of customers.

#### *Recommendation Group to Enhance Resource Elements*

Resource factors (such as transaction counters, human resources, website and agency systems, and office space) are also important factors contributing to customer satisfaction. Convenient trading desks will help customers to trade quickly. At present, the company is gradually improving the transaction time is shorter, with the goal of a maximum of 5 minutes when customers pick up bill of lading, delivery orders ..., contributing to shorten the time for customers.

The company should design the name of the employee, including the name and title so customers can contact, reminiscent to easily contact the next time. Besides, the lighting system at the counter should also be added so that the counter becomes more eye-catching, brighter and more

luxurious, thereby creating added value, increasing professionalism and Customers will become more satisfied.

Along with the increasing development of shipping and electronic logistics, the website is an indispensable tool. The company's website has updated new functions such as customer can look up merchandise information, update new information on related fields. Website is a useful tool where customers can check direct information about the shipment anywhere, but customers do not need to call or email to check, significantly reduce the time for customers. However, the number of customers know the website and how to find information is not much, most of them keep traditional habits in work - that is to directly contact the staff by email or telephone. Therefore, there is a delay in responding to the customer for not receiving the email or working hours, resulting in costs to customers and unnecessary disputes. Therefore, to overcome the above situation, employees when dealing with customers need to introduce the website and specific instructions for access to customers, so that customers can update the status of goods wherever they are. When you need. This is also considered a way to create value added services for customers, from which customers will be more satisfied with the service of the company.

Since it is a major trading company in the Asian market, the company has extensive network of offices and agents, especially in Japan and Asia. In the future, the company needs to partner with a number of partners in both the European and American markets because sometimes the company has customers who travel to these two markets, in order to provide fast and convenient customer support, reducing Minimize through intermediaries. This will contribute to prompt customer support at the port of entry if any issues arise that need to be addressed urgently. Customers are always updated information goods at destination ports quickly, giving them peace of mind on their shipments.

In recent years, the company has focused on training and developing human resources. The company should send staff to attend courses such as Customs, industry seminars ... to be able to update the new regulations, to improve skills, as well as update the general trend of the market. World class logistics to support customers timely, contributing to increased customer satisfaction.

#### *Recommendations Group to Improve the Process*

Customer insight is another factor that keeps customers staying longer with the business. The company needs to enhance the listening and sharing of customers 'wishes and special attention to customers' specific requirements such as: prolonging the time of delivery to the port, time for correction of documents, Empty containers near the factory area to reduce container towing costs.

When conflict occurs, the problem should be viewed objectively, in the spirit of priority to solve the problem for the goods, ensuring the interests of customers in the spirit always cooperate with customers to deal with. All problems arise.

Deferred debt is applied to many customers with large amount of goods, stable is also a way to support customers significantly, helping customers do not have to rush payment

to receive documents, receive goods. Large customers, stable inventory, the company can support the 30-day deferred debt, contributing to increase the ability to revolve and reduce the payment pressure immediately.

*Recommendation Group to Improve Results and Images*

The thorough handling of the complaints, questions remain the biggest wish of the customer. In transportation, sometimes occurrence of force majeure or loss or damage of goods. Therefore, company's branch should set up a division to resolve complaints and compensation for customers, so that they can resolve quickly and provide satisfactory support to customers. In addition, the company should have a record of customer contributions, as well as complaints and grievance redress, so that every employee can know how to resolve the issues that arise in order to be satisfied. To increase the prestige of the company, as well as make customers more satisfied.

In terms of reliability, in order to ensure the proper delivery of the service to the customer, the Company needs to manage the subcontractors well. For trucking, the company has to outsource. The status of subcontractors does not provide the service as committed, such as delaying the car, failing to provide sufficient driver information, etc., will affect the plan and the arrangement of the customer. Therefore, the company needs to review, evaluate and review the quality of services of subcontractors every three months to make timely adjustments.

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