

A Study on Service Quality Evaluation towards Container Terminal Services with Special Reference to Chennai

Pavithran A, Dr Dhivya Sathish

Final Year, Department of MBA, PG & School of Management Studies, Sathyabama Institute of Science and
Technology, Chennai, Tamil Nadu, India

Associate Professor, Sathyabama Institute of Science and Technology, Chennai, Tamil Nadu, India

ABSTRACT: Service quality evaluation allows companies to find out about customer opinion on different aspects of the service which have an influence on satisfaction levels. Container terminals are logistics platforms where unitized cargo - such as containers, swap bodies and ISO tanks - are handled, stored and transferred from one transport modality to another. The objective of the study is to analyse the study on service quality evaluation towards container terminal services with special reference to Chennai. The study based only on the opinion and expectation of customers. Total number of sample taken for the study is 217 respondents. Descriptive research design and Convenience sampling techniques were used for the study. Primary data and secondary data have been used in the study. Simple percentage analysis, chi square analysis and correlation analysis have been applied in this study to reach the finding of the study. It is found that 56.7% of the respondents said that excellent towards the focus on customer satisfaction. It is suggested that the company must have the sophistication to track the online tracking of the customers' details and shipment details. It is concluded that the company must allocate resources and utilize the same for offering quality service as well as it must ensure for quality centric services.

KEYWORDS: Service Quality, Container Terminal Services, Port Operations, Customer Satisfaction, Logistics Performance.

I. INTRODUCTION

Terminal is a meeting place between land and sea transportation modes which are responsible for the transfer of containers from land to sea transportation modes or vice versa. Container terminals are logistics platforms where unitized cargo - such as containers, swap bodies and ISO tanks - are handled, stored and transferred from one transport modality to another. The standardization of containers allows goods to be handled quickly, safely and efficiently, using gantry cranes, forklifts and reach stackers, to transfer cargo between different transport modalities, reducing transfer time and cost. Container terminals are a vital part of the supply chain for many businesses. It is fair to say that maritime shipping is the backbone of world trade, as hard data estimates that 80-90% of all goods are shipped by sea. A container terminal is a facility where cargo containers are transferred between different modes of transportation. There are maritime container terminals located inside a port, and intermodal terminals, located inland. Maritime container terminals transfer containers between ships and other modes of transport, while intermodal terminals transfer containers between different modes of transport, such as trains and trucks. Container terminals can be located inside a port (maritime container terminals) or inland (**intermodal terminals**, also called dry ports). The main activity of a container terminal is the transfer of cargo units from one transport modality to another; auxiliary activities include the temporary storage of containers and value added services, such as cargo units maintenance and repair, and sometimes cargo consolidation and deconsolidation activities, performed in dedicated areas known as Container Freight Stations.

OBJECTIVES OF THE STUDY

- To understand the service quality in customer requirement
- To evaluate the service quality in technical measures
- To measure the service quality towards customer relationship management
- To measure the customers satisfaction in reliability of the concern

- To obtain suggestions from the respondents to enhance service quality in the company

II. REVIEW OF LITERATURE

Min Wan (2022), The research on the competitiveness of container multimodal transport port hub, comprehensively considering the software and hardware strength of port hub, is of great significance to analyze the competitiveness of specific goods sources of port hub. Based on this, this paper adopts a multi-attribute decision-making modeling method to construct a port hub competitiveness evaluation model from four aspects: business capabilities, capacity resources, infrastructure, and service quality, and conducts empirical research on container transportation in Northeast China as an example. Studies have shown that the key factors affecting the competitiveness of multimodal port hubs have changed from traditional infrastructure factors to flexible factors such as transportation service quality, transportation capacity resource integration capabilities, and transportation business efficiency. Strengthening inter-industry integration will promote the core competitiveness of port hubs. Formation has obvious effects. The research results have enriched the theoretical system of multimodal transport port hub competitiveness research, and provided reference suggestions for port companies, government authorities and other relevant entities in strategic formulation and policy planning.

Ni Yao (2021), With the rapid development of e-commerce and information technology, the express package volume in the Chinese market keeps an explosively increasing tendency. Terminal delivery plays a significant role on the business and reputation promotion of express brand. To identify the service quality of delivery service, an integrated SERVQUAL-AHP-TOPSIS approach is developed to evaluate the quality of service (QoS) of the city express industry. Firstly, the QoS criteria system is established through SERVQUAL-based dimensions. Secondly, the AHP method is employed to derive the relative weights of criteria. Then, the two stages are embedded into the TOPSIS steps to evaluate the service quality of the express alternative. An application case study is conducted following the detailed steps of the proposed integrated decision-making framework, and results demonstrate the effectiveness and validity of the proposed approach on the QoS of terminal delivery evaluation problem.

Jedrzej Charlampowicz (2020), Modern economy is an extremely complex structure of different links between globally located participants across the supply chain. In the last decade, the global containerized trade has noted growth of approximately 55,5 per cent, with an average pace of growth of about 5 per cent yearly. The role of maritime container terminals, as an integrator and facilitator of global trade, in the global supply chains is undisputed. The role of services provided by maritime container terminals have grown in importance. Each type of terminals' customer perceive the quality of received service subjectively although they are using similar criteria of evaluation. Even though, in the modern economy service quality is an essential feature of achieving competitive advantages, the literature does not cover the problem of maritime container terminal service quality with respect to different stakeholders. Therefore the purpose of this paper is, based on literature review concerning research of maritime container terminals service quality, to provide more suitable methodology for evaluating terminal's service quality.

III. RESEARCH METHODOLOGY

This study adopts a descriptive research design. Convenience sampling is adopted in this study. Both primary data and secondary data are applied to the study. The size of the sample to be used in this study is 217 respondents. Simple percentage analysis, chi square analysis and correlation has been used in this study.

Data analysis and interpretation

Table No. 1 GENDER OF THE RESPONDENTS

Gender	No. of Respondents	Percentage (%)
Male	135	62.20%
Female	82	37.80%
Total	217	100%

Source: primary data

Interpretation

The gender distribution of respondents shows that 62.2% are male and 37.8% are female. This indicates a higher participation of male respondents compared to female respondents. Overall, the sample reflects a moderately balanced gender representation, though males form the majority of the respondents.

Table No. 2 AGE OF THE RESPONDENTS

Age Group	No. of Respondents	Percentage (%)
Below 20 years	22	10.10%
20 – 30 years	96	44.20%
31 – 40 years	54	24.90%
41 – 50 years	27	12.40%
Above 50 years	18	8.30%
Total	217	100%

Source: primary data

Interpretation

The age-wise distribution indicates that the largest proportion of respondents, 44.2%, belong to the 20–30 years age group, followed by 24.9% in the 31–40 years category. Respondents aged 41–50 years account for 12.4%, while 10.1% are below 20 years and 8.3% are above 50 years. Overall, the findings suggest that the sample is predominantly composed of young and early-career respondents, providing relevant insights into the study.

Table No. 3 SERVICE QUALITY IN CUSTOMER REQUIREMENT

Statements	Excellent	Good	Average	Bad	Poor	Total
Speed to respond customer’s request	90 (41.5%)	85 (39.2%)	25 (11.5%)	10 (4.6%)	7 (3.2%)	217 (100%)
Ability to provide global and local service	82 (37.8%)	90 (41.5%)	28 (12.9%)	10 (4.6%)	7 (3.2%)	217 (100%)
Ability to deliver freight to customer’s warehouse or designated location	95 (43.8%)	80 (36.9%)	25 (11.5%)	10 (4.6%)	7 (3.2%)	217 (100%)
Speed and easiness of documentation handling	85 (39.2%)	88 (40.6%)	28 (12.9%)	9 (4.1%)	7 (3.2%)	217 (100%)
Provide sophisticated dynamic or online tracking	88 (40.6%)	86 (39.6%)	27 (12.4%)	9 (4.1%)	7 (3.2%)	217 (100%)

Source: primary data

Interpretation

Respondents reveal that 41.5% rate speed to respond to customer requests as excellent and 39.2% as good, while 11.5% rate it as average, 4.6% as bad, and 3.2% as poor. Regarding the ability to provide global and local service, 37.8% rated it excellent and 41.5% good, with 12.9% average, 4.6% bad, and 3.2% poor. For the ability to deliver freight to customer’s warehouse or designated location, 43.8% rated it excellent and 36.9% good, while 11.5% average, 4.6% bad, and 3.2% poor. In terms of speed and ease of documentation handling, 39.2% rated it excellent and 40.6% good, with 12.9% average, 4.1% bad, and 3.2% poor. For providing sophisticated dynamic or online tracking, 40.6% rated it excellent and 39.6% good, while 12.4% average, 4.1% bad, and 3.2% poor. Overall, the findings indicate that respondents perceive service quality in customer requirements as highly satisfactory, particularly in responsiveness, logistics delivery, documentation handling, and tracking systems, with very few negative responses.

Table No. 4 CUSTOMERS SATISFACTION IN RELIABILITY OF THE CONCERN

Statements	Highly Satisfied	Satisfied	Neutral	Dissatisfied	Highly Dissatisfied	Total
The company adheres to the terms of the contract	92 (42.4%)	88 (40.6%)	20 (9.2%)	10 (4.6%)	7 (3.2%)	217 (100%)
The company is sensitive to customer needs	85 (39.2%)	90 (41.5%)	25 (11.5%)	10 (4.6%)	7 (3.2%)	217 (100%)
The company performs each order in a timely manner	88 (40.6%)	86 (39.6%)	24 (11.1%)	12 (5.5%)	7 (3.2%)	217 (100%)
The company fully accomplishes the orders	90 (41.5%)	87 (40.1%)	22 (10.1%)	11 (5.1%)	7 (3.2%)	217 (100%)
Documentation regarding the order is flawlessly carried out by the company	86 (39.6%)	89 (41.0%)	25 (11.5%)	10 (4.6%)	7 (3.2%)	217 (100%)

Source: primary data

Interpretation

The analysis of customer satisfaction in reliability of the concern shows a highly positive perception among respondents. For adherence to contract terms, 42.4% are highly satisfied and 40.6% are satisfied, while only a small proportion report neutral or negative responses. Regarding sensitivity to customer needs, 39.2% are highly satisfied and 41.5% are satisfied, indicating strong customer-centric practices. In terms of timely order execution, 40.6% are highly satisfied and 39.6% are satisfied, reflecting efficient operational performance. For order completion, 41.5% are highly satisfied and 40.1% are satisfied, showing strong reliability in fulfilling commitments. Similarly, documentation accuracy is rated positively, with 39.6% highly satisfied and 41% satisfied. Overall, the findings indicate that customers perceive the company as highly reliable, responsive, and consistent in fulfilling contractual and operational commitments, with very minimal dissatisfaction levels.

IV. CHI-SQUARE ANALYSIS: RELATIONSHIP BETWEEN THE GENDER OF THE RESPONDENTS AND SERVICE QUALITY IN CUSTOMER REQUIREMENT

HYPOTHESIS TESTING

Null hypothesis (Ho): There is no significant relationship between the gender of the respondents and service quality in customer requirement.

Alternative hypothesis (H1): There is some significant relationship between the gender of the respondents and service quality in customer requirement.

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	17.258 ^a	14	0.243
Likelihood Ratio	17.711	14	0.22
Linear-by-Linear Association	6.362	1	0.012

N of Valid Cases	217		
a. 17 cells (56.7%) have expected count less than 5. The minimum expected count is .57.			

INTERPRETATION:

As per the above table, it is inferred that the P value is 0.243; it is not significant to 5% (0.05) significant level. The minimum expected count is 0.57. Thus null hypothesis is accepted and it is found that there is no significant relationship between the gender of the respondents and service quality in customer requirement.

V. CORRELATION ANALYSIS: RELATIONSHIP BETWEEN AGE OF THE RESPONDENTS AND CUSTOMERS SATISFACTION IN RELIABILITY OF THE CONCERN

Correlations			
		AGE OF THE RESPONDENTS	SATISFACTION
AGE OF THE RESPONDENTS	Pearson Correlation	1	0.105
	Sig. (2-tailed)		0.124
	N	217	217
CUSTOMERS SATISFACTION IN RELIABILITY OF THE CONCERN	Pearson Correlation	0.105	1
	Sig. (2-tailed)	0.124	
	N	217	217

INTERPRETATION:

The Above table indicates that out of 217 respondents, co-efficient of correlation between age of the respondents and customer’s satisfaction in reliability of the concern is 0.105. It is below 1. So there is positive relationship between age of the respondents and customer’s satisfaction in reliability of the concern.

VI. SUGGESTIONS

- The company must contribute their services to respond the customer’s request.
- The company must have the ability to provide global and local services to have competitiveness in the market.
- The company must prepare the documents for customers and it must be provide them at the tome properly.
- The company must have the sophistication to track the online tracking of the customers’ details and shipment details.
- The company has to implement proper system for sharing information. There must be paperless and simple procedure to offer the quality service for the customers.
- The new technologies must be applied in the concern to improve efficiency of cargo operation.
- There must be environmental friendly transport and low Co2 emission.
- There must be trained employees in the concern to resolve the technical solutions.
- The company must have sufficient number of staff members to provide the competitive services.
- The relationship must be strengthened with the supply chain partners.
- The company must often get the feedback from the customers to measure their perception towards the services.
- There must be transparent service and transactions in order to satisfy the customers.
- The company must keep in their mind the customer needs and design the service to provide.
- The company must deliver its services at the promised services. The document prepared by the company must be an error free one.

VII. CONCLUSION

Service quality and customer satisfaction are important aspects of business since a company's growth is largely dependent on how well it maintains its customers through service and how well they keep their customers satisfied. Freight forwarders are an integral part of the supply chain and act as intermediaries between the company that makes the shipment and the final destination of the goods. It is the coordination and shipment of goods from one place to

another via single or multiple carriers via air, marine, rail, or highway. Since the customers depends its timely services, the freight forwarding company plays major role for the business. In order to survive in the industry, the company needs to show differentiation in its services as well the service must be a quality one. The company in the study must be concentrated to train their employees to offer excellent services to the customers. It must ensure its delivery at the promised time. It is concluded that the company must allocate resources and utilize the same for offering quality service as well as it must ensure for quality centric services.

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