



The Impact of Perceived Service Quality on Customer Satisfaction and Customer Loyalty in Ferry Transportation

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ABSTRACT

The rapidly increasing number of passengers and competition in maritime transportation have made it imperative for maritime companies to understand their customers' expectations. For firms wishing to achieve a competitive position in the passenger transportation sector of maritime operations, customer satisfaction is considered one of the most important factors. This study aims to analyse, using a holistic approach, the structural relationships between perceived service quality, customer satisfaction, and loyalty in the maritime passenger transportation industry. In the study, perceived service quality in the participating maritime company was measured using the SERVQUAL scale. The study sample consists of passengers of a maritime passenger transportation company located in the Aegean Region of Turkey. Face-to-face interviews were conducted with 100 passengers of different nationalities, and a questionnaire was administered. Primary data obtained through survey techniques during the data collection process were analyzed using the SPSS statistical program. The analysis revealed that among the factors of perceived service quality in maritime transportation, the Trust and Empathy factors influenced customer satisfaction, while only the Trust factor directly and significantly influenced customer loyalty. The findings indicate a statistically significant correlation between customer satisfaction and customer loyalty. According to the results, the dimension with the strongest influence on both variables is the Trust Factor.

1. Introduction

A service can be defined as an intangible benefit offered by one party to another [1]. According to Palmer, a service is a benefit offered or proposed from one person to another [2]. According to Kuriloff, a service is a product created to meet the needs of the customer, and it does not have a tangible quality [3]. Transportation services are known as one of the services with high levels of supply and demand, both globally and in Türkiye, due to the rapid increase in population and tourist numbers. Disney [4], has stated that customer expectations from various transportation companies include the continuity and reliability of the service, sincerity of the service, cleanliness of the vehicle, comfort of the vehicle, reasonable price, ease of payment, and fixed departure times [4-5].

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To reduce uncertainty about future profitability and gain a competitive advantage, businesses must develop positive long-term relationships with their customers [6]. The prerequisite for developing positive long-term customer relationships is to provide a high-quality service that meets their expectations and desires [7]. However, the intangible nature of the service and its reliance on customers' personal evaluations makes providing quality service challenging for businesses. Therefore, service providers need standardized, systematic, and measurable data to assess and determine the impact of their service quality on customers [8]. A review of current studies in the literature reveals that perceived service quality, satisfaction, and loyalty, as well as the relationships between these factors, are frequently discussed in the Turkish transportation sector [9-15], the number of studies conducted in the field of maritime passenger transportation is significantly lower compared to the overall research volume.

This research aims to reveal the multifaceted relationships between perceived service quality, customer satisfaction, and customer loyalty variables in the context of maritime passenger transportation. To this end, the literature review section theoretically examines these concepts in light of previous research, and seven different hypotheses are developed to test the research model. The methods section details the research population, sample, data collection tools, and analysis techniques. Data collected through interviews were analyzed using SPSS software and reported in the findings section. The conclusion section discusses the empirical findings and offers recommendations for industry practitioners and future academic studies.

2. Literature Review and Hypothesis Development

It is widely accepted in the literature that service quality is a driving force in the financial and marketing performance of businesses [16]. Since the 1980s, the understanding of the role of service quality in the success of businesses has made it a frequently discussed topic among researchers. Service quality is defined as the various differences between the service that customers expect to receive from the service provider and the service they actually receive [17-18]. According to Parasuraman [19], service quality generally means that the firm meets or exceeds customer expectations. When customer expectations are met or even exceeded, customer satisfaction levels increase. Customers who are satisfied with the service provided tend to choose the firm again and share their positive attitudes towards the firm with those around them. Situations resulting from customer satisfaction strengthen businesses in their sector and create an advantage over other businesses. In highly competitive sectors and markets, businesses seeking to be strong, competitive, and advantageous have been driven to improve the quality of their services and enhance their quality standards. Measuring service quality is of critical importance, particularly in the highly competitive maritime sector, which can require large-scale and strategic investments.

The literature contains various proposals for measuring service quality. The most widely accepted are the comparison of "perceived service and expected service" proposed by Grönroos [20], the SERVQUAL model proposed by Parasuraman et al. [18], and the SERVPERF models proposed by Cronin and Taylor [21], Karadeniz et al. [5]. In their study, Parasuraman et al. [19] initially stated that service quality consists of ten dimensions, while in their later studies, Parasuraman et al. [18] grouped these into five factors: Physical, Reliability, Trust, Enthusiasm, and Empathy. Parasuraman et al. [18] stated that service quality can be measured using the SERVQUAL model by comparing customers' expectations and perceptions regarding these five factors. It is common to see the SERVQUAL model frequently used in studies aimed at measuring service quality in the literature.

2.1 The Relationship Between Perceived Service Quality and Customer Satisfaction in Maritime Passenger Transportation

In the 21st century, where supply and demand dynamics are rapidly changing, the importance of transportation is steadily increasing. Sea passenger transportation, as a type of transport, is preferred because it is less polluting, consumes less energy, and is more reliable compared to other modes of passenger transport [22]. Existing studies primarily focus on road and air transportation, while research on maritime passenger transportation remains limited. Furthermore, the fact that most studies are conducted in the Istanbul region, the majority of participating passengers are Turkish, and the sea transportation discussed in these studies takes place within the city, makes this study highlights the contribution of the present study.

A study conducted by Karadeniz and Ünver [23] aimed to examine the perceptions and satisfaction levels of customers using Istanbul City Ferry Lines regarding the services offered. The study indicated that customers' perceptions of service were at a good level. It was also noted that there was a significant difference between customers' perceptions of service and their satisfaction levels based on their demographic characteristics [23].

In a study conducted by Karadeniz et al. [5] within the scope of maritime passenger transportation, the relationship between perceived service quality and customer satisfaction among passengers using fast ferry transportation services in the Istanbul region was investigated. The research concluded that the most important factor affecting customer satisfaction was the trust factor. It was stated that businesses should make customers feel safe, ensure timely maintenance of their vessels, provide training to their employees on safety issues, and establish trust-building training with customers [5].

In the study conducted by Göktaş [24], the improvements made by a sea passenger transportation company, which was dissatisfied due to problems experienced in its business processes, in order to eliminate the problem, and the related problems were discussed [24].

In the study conducted by Kircova et al. [14], the components of perceived service quality in Istanbul City Lines were investigated and the connections between perceived service quality, company image, customer satisfaction and customer loyalty were examined. In the study, it was stated that the most basic determinants of customer loyalty in public transportation services are, respectively, perceived service quality, company image and customer satisfaction [14].

In a study conducted by Tanasale et al. [25], the study was conducted with 100 passengers using path analysis. The results revealed that service quality performance has a positive and significant direct effect on customer satisfaction.

In their study investigating passenger ferry transport in Bangladesh, Sourav et al. [26] analyzed factors related to perceived service quality using the Relative Importance Index (RII) method and evaluated the impact of these factors on customer satisfaction. The study classified service quality dimensions into six main groups and identified terminal and route management, as well as fare and satisfaction factors, as the elements that most significantly influence perceived quality in ferry transport. Based on the literature reviewed above, the following hypotheses were developed:

H₁: Regarding perceived service quality, "Physical Factors" have a direct impact on customer satisfaction.

H₂: Regarding perceived service quality, the "Enthusiasm Factor" has a direct impact on customer satisfaction.

H₃: Regarding perceived service quality, the "Reliability Factor" has a direct impact on customer satisfaction.

H₄: Regarding perceived service quality, the “Trust Factor” has a direct impact on customer satisfaction.

H₅: Regarding perceived service quality, the “Empathy Factor” has a direct impact on customer satisfaction.

2.2 The Relationship Between Perceived Service Quality and Customer Loyalty in Maritime Passenger Transportation

Oliver [27] defined customer loyalty as a deeply held commitment to repurchase or continue using a preferred product or service despite situational influences and competitors' marketing efforts. A review of the literature on maritime businesses indicates that studies have reported varying findings regarding the relationship between perceived service quality and customer loyalty.

Kılıçhan and İlhan [28] examined service quality in the food and beverage departments of passenger ships and investigated its effects on customer satisfaction and loyalty. The findings show that, it was emphasized that there is a positive correlation between the three variables and that service quality increases satisfaction and loyalty, and these concepts feed each other bidirectionally [28].

Yüksel and Önaçan [29], in their study, examined the effects of service quality offered by a maritime company providing sea passenger transportation between Istanbul and surrounding provinces on customer satisfaction. The study indicated that all dimensions of perceived service quality, particularly reliability, had a positive effect on customer satisfaction [29].

In their study focusing on ferry transport, Sakti et al. [30] examined the relationship between service quality and passenger loyalty using regression analysis and revealed a positive linear relationship between the two variables. Based on this finding, any unit increase or decrease in operational performance or service quality within ferry operations directly influences passengers' tendencies to choose the service again and recommend it to others (i.e., customer loyalty).

In their study on ferry transportation, Hanafiah and Asyraff [31] found based on an examination of structural equation modeling applications that service quality holds strategic importance in shaping customer loyalty. The hypothesis developed in this context is stated below:

H₆: In sea passenger transportation companies, there is a positive relationship between perceived service quality and customer loyalty.

2.3 The Relationship Between Customer Satisfaction and Customer Loyalty in Maritime Passenger Transportation

One indicator of whether a business provides high-quality service is customers' willingness to choose the business again [32]. Customer satisfaction after receiving a product or service does not necessarily mean that customers will choose that business again. However, satisfied customers are more likely than dissatisfied customers to choose the same business again. Customer loyalty can contribute to firms' long-term growth, sustainability, profitability, and overall success.

Arılı [33], in his study, identified the factors determining perceived service quality in marina management and discussed the effects of these factors on customers' intention to choose again, their intention to recommend, and their overall satisfaction levels. Among the factors identified in the study, he stated that physical, enthusiasm, safety, and empathy factors have an effect on the intention to choose and recommend the maritime business again [33].

In their study, Karaosmanoğlu and Kazançoğlu [34] examined the relationship between service quality, a key factor in the choice of marinas, and the loyalty of yacht owners and captains—a significant segment of the potential customer base for marina operators—towards the marina. The study concluded that there is a significant relationship between the service quality of marina

operators and customer loyalty, and that the most influential factors affecting loyalty to marina operators are reliability and professional service for yachts [34].

In their study, Hanafiah and Asyraff [31] revealed that the satisfaction levels of ferry passengers exert a very strong and positive influence on passenger loyalty. The findings reported in the study demonstrate that ensuring passenger satisfaction through positive experiences in ferry transport is the fundamental factor driving their decision to choose the same mode of travel and operator in the future (loyalty).

Although service quality was not measured as a direct variable in the study by Tehci and Şenbursa [35], the findings directly support the positive impact of customer satisfaction on customer loyalty. This finding, tested via structural equation modeling, demonstrates that passenger or customer satisfaction with the service provider is one of the most significant determinants in transforming that satisfaction into consistent support and loyal behavior toward the business in the maritime transport sector.

The hypothesis developed in this context is stated below:

H₇: In maritime passenger transportation companies, there is a positive relationship between customer satisfaction and customer loyalty.

3. Research Objective and Methodology

This study primarily identifies three objectives. The first is to examine the relationship between perceived service quality and customer satisfaction in maritime passenger transportation using Physical, Enthusiasm, Reliability, Trust, and Empathy factors; the second is to examine the relationship between perceived service quality and customer loyalty using Physical, Enthusiasm, Reliability, Trust, and Empathy factors; and the final objective is to examine the relationship between customer satisfaction and customer loyalty. In this study, the relationship between perceived service quality factors and customer satisfaction and customer loyalty in maritime passenger transportation was investigated through customers who utilize a maritime company operating in the Aegean Region. The research model, which includes all the variables and seven different hypotheses to be tested regarding the relationships between these variables, is presented in Fig. 1.

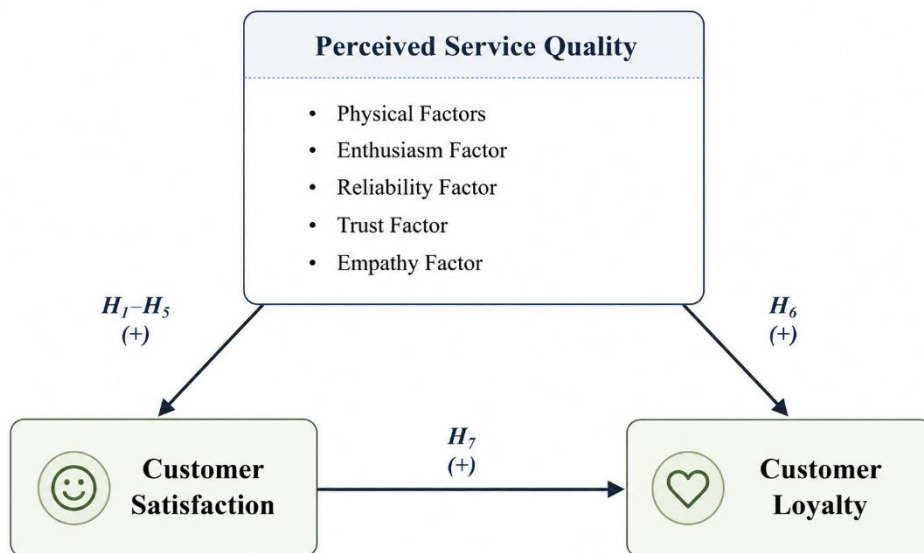


Fig. 1. Research model.

3.1 Sampling and Data Collection Tool

The study population consists of passengers of various nationalities using the services of a maritime passenger transportation company operating in the Aegean Region of Türkiye. Passengers were interviewed face-to-face and asked various questions. The final sample consisted of 100 participants.

The research data were collected using a questionnaire administered during face-to-face interviews. The survey form given to passengers consists of three different parts. The first part includes questions about the demographic information of the participants, such as gender, age, and education level. The second part includes questions aimed at measuring the quality of service provided by the business. In order for customers to evaluate the quality of service provided, 28 statements, created by adding 6 more statements to the 22-item, five-dimensional SERVQUAL scale first developed by [18], were presented to the participants using a 5-point Likert scale (Strongly disagree=1, Undecided=3, and Strongly agree=5). The third and final part of the survey consists of statements related to customer satisfaction and customer loyalty. The statements used to measure customer satisfaction are (1) "How would you rate your overall satisfaction with this trip?", (2) "How would you rate your satisfaction with this shipping company compared to other shipping companies?", (3) "How would you rate your satisfaction level with the quality of service you received from this company?", and the statements used to measure customer loyalty are (4) "I would recommend this shipping business to my friends", (5) "I would choose this shipping company again", (6) "This shipping company will be my first choice compared to others". The 5-point Likert scale used in the second part of the study was used in the same way when measuring customer satisfaction and customer loyalty.

Following the development of the survey instrument, data were collected through face-to-face administration of questionnaires to customers immediately after they had experienced the transportation service. A total of 109 questionnaires were obtained. After data screening, 9 questionnaires were excluded due to invalid or incomplete responses, and the remaining data were coded in Microsoft Excel and analyzed using SPSS.

4. Results and Findings

The suitability of the scales determined in the study for factor analysis was tested. The Kaiser-Meyer-Olkin (KMO) test was used to conduct this test. The KMO ratio was obtained as 0.85. This result indicates that the statements in the scale are very well suited for factor analysis. The internal consistency of the scales used in the study was measured using the Cronbach's Alpha coefficient. According to the obtained values, the scales appear to be quite reliable. The calculated Cronbach's Alpha coefficient findings are presented in Table 1.

Table 1. Cronbach's Alpha coefficients.

Scale Used	Total Number of Questions	Cronbach's α
Perceived Service Quality	28	0,977
Customer Satisfaction	3	0,861
Customer Loyalty	3	0,895

The gender distribution of the survey participants is shown in Fig. 2.

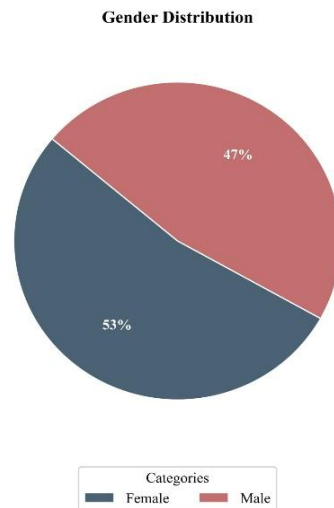


Fig. 2. Gender distribution.

Fig. 2 shows that 53% of the participants in the study were women and 47% were men. The age ranges of the participants are given in Fig. 3.

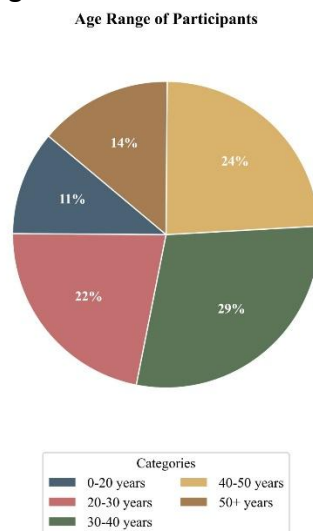


Fig. 3. Age range of participants.

When age ranges are examined, it is seen that 11% of the participants are in the 0-20 age range, 22% in the 20-30 age range, 29% in the 30-40 age range, 24% in the 40-50 age range, and 14% are 50 years and older. The educational status of the participants in the study is shown in Fig. 4.

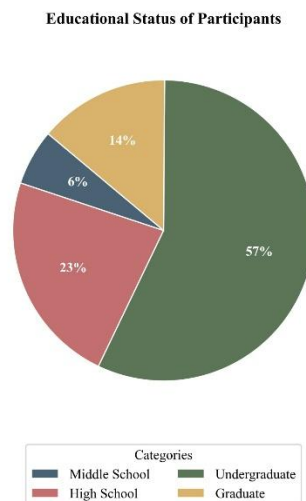


Fig. 4. Educational status of the participants.

Regarding the educational background of the participants, it was found that 6% were middle school graduates, 23% were high school graduates, 57% were bachelor's degree graduates, and 14% were postgraduate degree graduates. The average monthly earnings of the participants in the study are shown in Fig. 5.

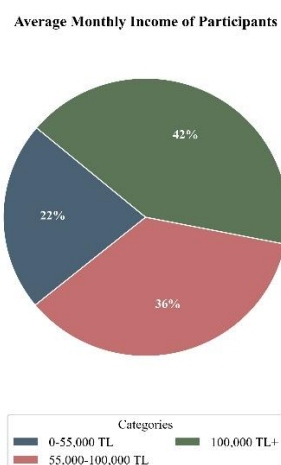


Fig. 5. Average monthly earning of the participants.

Regarding the participants' average monthly income, 22% reported earning between 0 and 55,000 TL, 36% reported earning between 55,001 and 100,000 TL, and 42% reported earning more than 100,000 TL. The reasons why the participants chose the company are presented in Fig. 6.

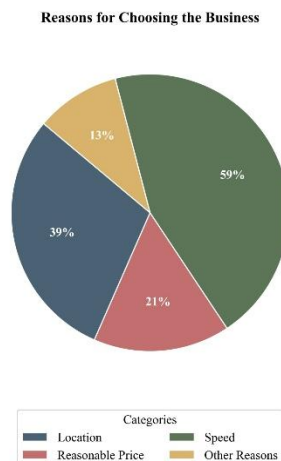


Fig. 6. Reasons for choosing the company.

The results show that 39% of participants chose the business due to location, 21% due to affordable prices, 18% due to speed, 13% due to other reasons, and 9% due to service quality.

Customers' evaluations of the perceived quality of service provided by the maritime company were measured by comparing them with their expectations from the company. The main reason for applying factor analysis at this stage is to reduce the findings obtained regarding service quality in the maritime company to meaningful variables. Table 2 presents the findings of the factor analysis conducted on the quality of service provided by the maritime company.

Table 2. Findings of the factor analysis conducted on the quality of service.

Factors	Factor Weights	Cronbach's α	Mean $\bar{x}$
Physical Factors		0,88	4,72
Common areas in this maritime facility are clean and hygienic.	0,89		4,69
The staff of this maritime company are well-dressed, well-groomed, and clean-looking.	0,92		4,55
This shipping company's vessels are suitable for passenger transport.	0,88		4,77
The piers and buildings of this maritime company are visually appealing.	0,90		4,87
Enthusiasm Factor		0,94	4,68
The staff at this maritime company are always friendly and helpful.	0,91		4,79
This maritime company fulfills its advertising/brochure/social media etc. commitments.	0,84		4,86
An emergency action plan has been prepared for any potential disruptions that may occur in this maritime operation.	0,85		4,75

An emergency action plan prepared for potential disruptions that may occur on this maritime service is shared with passengers.	0,85	4,59
The staff of this maritime company shows the utmost diligence in adhering to the specified timeframes.	0,94	4,52
Time scheduling is strictly followed in this maritime company.	0,92	4,40
This shipping company takes passenger suggestions into account using modern methods (e-suggestions, etc.).	0,91	4,75
This maritime company takes passenger suggestions into account using traditional methods (suggestion, request, complaint box, etc.).	0,95	4,78
Reliability Factor	0,85	4,75
This maritime company maintains accurate customer information.	0,90	4,87
In this maritime company, when passengers have a problem, the staff is involved in resolving the issue.	0,86	4,75
I feel my personal information (email, mobile phone, etc.) is secure at this maritime company.	0,85	4,79
This shipping company fulfills its promise exactly as stated.	0,92	4,75
In this maritime company, services begin and end at the specified times.	0,84	4,59
Trust Factor	0,91	4,74
The area where this vessel is located is protected from natural events.	0,81	4,76
In this maritime company, when customers encounter a problem, the relevant staff are willing to resolve the issue and put the passengers at ease.	0,91	4,73
This shipping company strives to instill confidence in its passengers.	0,87	4,61
The staff of this maritime company strives to instill confidence in passengers.	0,88	4,66
This maritime company takes measures regarding international safety regulations.	0,82	4,84
This maritime company pays close attention to safety measures aimed at protecting passengers.	0,90	4,85
In this maritime company, attention is paid to safety measures aimed at protecting the ship.	0,89	4,76
Empathy Factor	0,87	4,80

The staff of this maritime company are knowledgeable about the needs and desires of their customers.	0,83	4,79
This shipping company is committed to protecting the interests of its passengers to the highest degree.	0,92	4,73
This shipping company is sensitive to understanding the wishes and needs of its passengers.	0,89	4,77
This shipping company addresses passengers' problems promptly.	0,78	4,89

Table 2 shows that all factors constituting service quality, and the recommendations associated with these factors, have arithmetic means above 4. The lowest average, at 4.4, belongs to the "Time planning is implemented exactly as planned" statement within the Enthusiasm Factor, while the highest average, at 4.89, belongs to the "Passengers' problems are addressed promptly" statement within the Empathy Factor.

Factor analysis reveals that the factor loadings of the five-factor perceived service quality scale range from 0.78 to 0.96. Reliability analysis of the statements used to measure perceived service quality in a maritime business shows that the lowest factor is the Reliability Factor with a coefficient of 0.84, while the highest factor is the Enthusiasm Factor with a coefficient of 0.94. These values indicate that the scale has a very high internal consistency.

Factor analysis was used to explain the customer satisfaction and loyalty assessments of customers who benefited from the services offered by the maritime company. Subsequently, data regarding customer satisfaction levels with the maritime company were examined first, followed by data on customer loyalty. After the examinations, it was understood that the participants' evaluations of the suggestions regarding customer satisfaction were similar. Table 3 presents the findings of the factor analysis conducted on customer satisfaction and customer loyalty in the maritime company.

Table 3. Findings of the factor analysis conducted on customer satisfaction and customer loyalty.

Factors	Factor Weights	Cronbach's α	Mean $\bar{x}$
Customer Satisfaction		0,86	4,82
How would you rate your overall satisfaction with this trip?	0,83		4,84
How would you rate your satisfaction with this company compared to other maritime companies?	0,94		4,82
How would you rate your satisfaction level with the quality of service you received from this business?	0,91		4,81
Customer Loyalty		0,89	4,86
I would recommend this maritime career to my friends.	0,92		4,84
I would choose this shipping company again.	0,96		4,89
This shipping company will be my first choice over the others.	0,95		4,84

Table 3 shows that the factor analysis results for customer satisfaction and customer loyalty indicate that the factor loadings for both range from 0.83 to 0.95. Overall satisfaction level is rated highest at 4.84, and based on the averages of the responses, it is understood that passengers are satisfied with the shipping company. Regarding passenger loyalty to the shipping company, the response "I would choose this shipping company again" had the highest average.

Regression analysis was applied to the data obtained to examine the relationship between perceived service quality and customer satisfaction. In this context, customer satisfaction was considered the dependent variable, while the Physical, Enthusiasm, Reliability, Trust, and Empathy factors were included as independent variables. The regression analysis yielded an R^2 value of 0.88, indicating that the perceived service quality factors explained 88% of the variance in customer satisfaction. Furthermore, the ANOVA results showed that the regression model was statistically significant ($p < 0.001$), confirming its overall adequacy. The detailed results of the regression analysis are presented in Table 4.

Table 4. Regression analysis findings on the relationship between perceived service quality factors and customer satisfaction.

Dependent Variable	Independent Variable	Standardized β	t Value	$P > t $
Customer Satisfaction	Physical Factors	-0,18	-0,17	0,87
	Enthusiasm Factor	0,36	0,41	0,68
	Reliability Factor	0,80	0,61	0,54
	Trust Factor	0,52	5,58	0,00
	Empathy Factor	0,17	2,57	0,01

When the findings in Table 4 are examined, hypotheses H4 and H5 established within the scope of the research model are confirmed, and it is seen that the dimensions of Trust and Empathy statistically significantly affect customer satisfaction. In contrast, since no significant effect of the Physical, Enthusiasm, and Reliability factors on satisfaction was observed, hypotheses H1, H2, and H3 were rejected. When the analysis results are detailed, it was determined that a one-unit change in the Trust dimension resulted in a 0.52-unit increase in satisfaction level, while a change in the Empathy dimension resulted in a 0.17-unit increase.

Regression analysis was applied to the data to examine the effect of service quality on customer loyalty. In this context, customer loyalty was considered the dependent variable, while the independent variables were Physical, Enthusiasm, Reliability, Trust, and Empathy factors. The R^2 value obtained from the regression analysis was calculated as 0.82. This result indicates that the perceived service quality factors explain 82% of the variance in customer loyalty. Furthermore, the ANOVA results showed that the model was statistically significant ($p < 0.001$), indicating that the regression model was acceptable. The detailed results of the regression analysis are presented in Table 5.

Table 5. Regression analysis findings on the relationship between perceived service quality factors and customer loyalty.

Dependent Variable	Independent Variable	Standardized β	t Value	P> t
Customer Loyalty	Physical Factors	0,25	0,20	0,84
	Enthusiasm Factor	0,15	1,42	0,16
	Reliability Factor	-0,01	-0,01	0,99
	Trust Factor	0,43	4,00	0,00
	Empathy Factor	0,11	1,36	0,17

Table 5 shows that, among the perceived service quality factors, only Trust has a statistically significant positive effect on customer loyalty, whereas the Physical, Enthusiasm, Reliability, and Empathy factors do not have statistically significant effects. Therefore, hypothesis H₆, which proposes that perceived service quality factors influence customer loyalty, is only partially supported, as statistical significance was observed only for the Trust factor. Furthermore, the regression coefficient indicates that a one-unit increase in the Trust factor is associated with a 0.43-unit increase in customer loyalty ($\beta = 0.43$).

Regression analysis was applied to the data to examine the relationship between customer satisfaction and customer loyalty. In this context, customer loyalty was considered the dependent variable, while customer satisfaction was included as the independent variable. The regression analysis yielded an R² value of 0.87, indicating that customer satisfaction explained 87% of the variance in customer loyalty. Furthermore, the ANOVA results showed that the regression model was statistically significant ($p < 0.001$), confirming its overall adequacy. The detailed results of the regression analysis are presented in Table 6.

Table 6. Regression analysis findings on the relationship between customer satisfaction and customer loyalty.

Dependent Variable	Independent Variable	Standardized β	t Value	P> t
Customer Loyalty	Customer Satisfaction	0,35	25,83	0,00

Table 6 shows that customer satisfaction has a statistically significant positive effect on customer loyalty. Therefore, hypothesis H₇ is supported. Furthermore, the regression coefficient indicates that a one-unit increase in customer satisfaction is associated with a 0.35-unit increase in customer loyalty ($\beta = 0.35$).

5. Discussion and Conclusion

With the technological innovations in maritime transportation today, customers consider not only the safety, speed, and affordability of the services offered by maritime companies, but also the overall quality of service provided, and can easily change their preferences based on their perceived service quality. As in other service sectors, ensuring customer satisfaction is necessary for maritime companies engaged in sea passenger transportation to be considered successful. It is generally

believed that achieving customer satisfaction will positively affect customer loyalty, and maritime companies may benefit from increased customer preference and long-term customer retention.

This study was conducted to examine the relationship between perceived service quality and customer satisfaction and loyalty in maritime companies engaged in sea passenger transportation, as well as the link between customer satisfaction and customer loyalty. It is considered that this study will provide significant benefits to the marketing strategies of maritime companies engaged in sea passenger transportation.

A research model was developed based on previous studies in the literature. The SERVQUAL measurement model was adopted to evaluate customers' perceptions of service quality in maritime transportation. The original SERVQUAL scale developed by [18], consisting of five dimensions and 22 items, was expanded by adding six items, resulting in a 28-item perceived service quality scale. In addition, customer satisfaction and customer loyalty were each measured using three items, resulting in a total of 34 questionnaire items. The questionnaire was administered through face-to-face interviews with passengers using the services of a maritime transportation company in the Aegean Region. The collected data were entered into Microsoft Excel and analyzed using SPSS. Subsequently, factor analysis, reliability analysis, correlation analysis, and regression analysis were conducted to evaluate the proposed research model.

The findings indicate that the data is highly suitable for factor analysis, and the reliability analysis for all 5 factors show a high degree of reliability. The regression analysis indicates that maritime passenger transportation companies should prioritize the Trust factor to improve customer satisfaction. Maritime companies must ensure that passengers feel safe during the transportation services they provide. If passengers encounter any problems, the company's relevant personnel should be willing to resolve them. They should comply with international safety regulations and standards and ensure the safety of both passengers and vessels.

Among the other dimensions examined in the study, Empathy factor also had a significant relationship with customer satisfaction. Based on this finding, maritime companies should accurately understand passengers' needs, act in their best interests, respond promptly to their problems, and actively seek to understand their expectations. When the relationship between customer satisfaction and customer loyalty is examined, it can be said that there is a statistically significant relationship between them. This result also supports the findings of the studies conducted by [28] and [34]. Higher customer satisfaction is expected to enhance customer loyalty. It has been concluded that an increase in customer loyalty will also increase the likelihood of a maritime company being preferred again. It is considered that companies actively operating in the service sector, especially in the maritime field, will benefit from prioritizing the wishes and needs of passengers regardless of market or sector.

Future studies could address how businesses engaged in maritime passenger transportation can maximize profit while maintaining customer satisfaction and loyalty levels. In the context of cruise transportation, which involves longer journeys, the relationship between perceived service quality, customer satisfaction, and loyalty could be compared across different operators. Such comparisons could contribute to the development of common service quality standards in maritime passenger transportation.

Author Contributions

Conceptualization, B.G, Ş.D. and A.T.; methodology, formal analysis, resources, writing—original draft preparation B.G. and Ş.D.; investigation, writing—review and editing, Ş.D. and A.T. All authors have read and agreed to the published version of the manuscript.

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Conflicts of Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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