

# SERVICE QUALITY AND CUSTOMER SATISFACTION INCREASING LOYALTY OF PASSENGERS RO-RO FERRY BAKAUHANI

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## ABSTRACT

This study uses a quantitative method with descriptive analysis, distributing questionnaires to passengers or users of the ro-ro ship in Bakaheuni, Merak. This research was conducted with the objectives of the research being: To find out how the online ticket sales system is based, To find out the handling of delays on ro-ro ferries, To find out how to set up parking management at the wharf, To find out how to optimize the dock operation, To find out the process of managing the operating fleet.

Result of this research the magnitude of the positive relationship of service quality and customer satisfaction with service passenger loyalty of 75.8%, while the rest is the relationship of other factors that are not analyzed in this model.

**Keyword:** *Service Quality, Customer Satisfaction, Passenger Loyalty*

## 1. INTRODUCTION

Indonesia is an archipelagic country, so sea transportation facilities have an important role to play in connecting one region to another. One of the means of sea transportation that is widely used by the community is Ferry. Ferry is a type of sea transportation that can be used as passenger and goods transportation using certain routes or routes. The advantages offered by using the ferry, namely the passengers who will cross to areas that are limited by waters or the sea are speed and comfort. Ferry ships not only transport people but also motor vehicles, cars, trucks and buses. To serve people who need sea transportation, PT. ASDP Indonesia Ferry (Persero) already has several service branch offices throughout Indonesia, one of which is in the Merak Banten Port. PT. ASDP Indonesia Ferry Persero is a crossing service company and managing ferry ports for passengers, vehicles and goods. The main function of the company is to provide access to public transportation between islands and to unite large islands as well as to provide access to public transportation to areas that do not have a crossing in order to accelerate development.

Companies that want to grow and always survive must provide customers with products, both goods and services of better quality, competitive prices, faster delivery, and better service than competitors. To meet customer satisfaction in the service industry, it is important that the quality of service is well managed by the company. Service quality is the level of excellence expected and control and control over the level of excellence to meet customer desires.

One of the goals of the company is to create loyalty because satisfied customers are the basic capital for the company that can provide benefits, including the relationship between the company and customers being harmonious, providing a good basis for repurchasing, creating service user loyalty and forming word of mouth (word of mouth) which is beneficial for the company, service user loyalty is determined by customer perceptions of what they get from the service in terms of meeting customer expectations, with this the customer will be loyal to the company they use and use the company repeatedly, customers are satisfied with Good quality products and services will be happy to make repeat purchases and are happy to introduce and provide recommendations to other parties regarding the good things of the product / service or company.

The quality of service (service quality) can be identified by comparing the perceptions of consumers on the real service they receive / get with the real service they expect / want for the service attributes of a company. If the service received or perceived (perceived service) is as expected, then the service quality is perceived as good and satisfying, if the service received exceeds consumer expectations, then the service quality is perceived to be very good and quality. Conversely, if the service received is lower than expected, then the quality of service is perceived as poor.

One thing that has recently been questioned is in the field of public service, especially in terms of the quality or quality of sea ferry services to the public. ASDP as a service provider for the community is required to provide quality services. The quality and innovation of INFA's services will be increasingly challenged to be optimal and able to answer the increasingly high demands of the community, both in terms of quality and quantity of services. In developing countries we can see the quality of public transportation services is a problem that often arises, because in developing countries generally the demand for services far exceeds.

the government's ability to fulfill it so that the services provided by the government to the community are not fulfilled both in terms of quality and quantity.

Quality is basically a word that has a relative meaning because it is abstract, quality can be used to assess or determine the degree of adjustment of a thing to its requirements or specifications. If the requirements or specifications are met, it means that the quality of something in question can be said to be good, on the other hand, if the requirements are not met, it can be said to be not good. Indicators are needed to determine the quality. Because the specification which is an indicator must be designed, it means that the quality is indirectly the result of the design which has the possibility to be repaired or improved.

The strategy of continuous improvement by means of Plan-Do-Check-Act and Standard-Do-Check-Act focuses the evaluation on improving operational performance, service quality and customer satisfaction to create passenger loyalty on ro-ro ferries. Seeing this, service quality and customer satisfaction must be improved towards achieving service user loyalty which is one of the main targets to be able to maintain this inter-island shipping transportation service business, customer loyalty increases if service quality and customer satisfaction are met. Efforts to improve the competitiveness of the services provided require continuous evaluation and improvement both from the internal side of the company, in terms of operational performance, service quality and customer satisfaction, which are still far from customer expectations, so the company must be able to change the work system that has been implemented previously with Plan-Do. -Check-Act and Standard-Do-Check-Act are added with new innovations that focus on speed of berth time, travel accuracy, safety of goods, employee friendliness, comfort and to increase employee productivity, competent human resources can improve, service quality and satisfaction customers who refer to service user loyalty, this can be achieved easily if the skills possessed by employees are optimal, for that all employees are required to attend education and training according to their position

One popular service quality approach used as a reference in marketing research is the SERVQUAL (Service Quality) model developed by Parasuraman, Zeithaml, and Berry (1990). SERVQUAL is built on a comparison of two main factors, namely customer perceptions of the real service they receive (Perceived Service) with the actual service expected / desired (Expected Service). If the reality is more than expected, then the service can be said to be of quality, whereas if the reality is less than expected, then the service is said to be of poor quality. If the reality is the same as the expectation then the service is satisfactory. The general definition of service quality or what is often abbreviated as SERVQUAL is stated by Zeithaml (1990), namely "a customer's judgment of the overall excellence or superiority of a service".

Thus service quality can be defined as how far the difference between reality and customer expectations for the service they receive / get. Customer expectations are basically the same as what kind of service a company should provide to customers. These customers' expectations are based on word of mouth, personal needs, past experiences, and external communications (advertising and other forms of corporate promotion).

Parasuraman, et al (1990) used a scale of 1-7 (to respond to a statement on one aspect of service quality), namely strongly disagree (1) to strongly agree (7). According to research conducted by Parasuraman and friends, it is concluded that from the 5 dimensions there are different relative interests.

According to Parasuraman (1990), there are 5 SERVQUAL dimensions as follows:

1. Tangibles, or physical evidence, namely the ability of a company to show its existence to external parties. The appearance and ability of the physical facilities and infrastructure of the company and the condition of the surrounding environment are clear evidence of the services provided by the service providers. This includes physical facilities (buildings, warehouses, etc.), technology (tools and equipment used), as well as the appearance of the employees. In short, it can be interpreted as the appearance of physical facilities, equipment, personnel, and communication materials.

2. Reliability, or reliability, namely the company's ability to provide services as promised accurately and reliably. Being in accordance with customer expectations means on time performance, error-free service, sympathetic attitude and high accuracy. In short, it can be interpreted as the ability to provide the promised service accurately, on time, and can be trusted.

3. Responsiveness, or responsiveness, which is a willingness to help and provide fast (responsive) and accurate service to customers, with clear information delivery. Leaving consumers to wait for no apparent reason causes negative perceptions of service quality. In short, it can be interpreted as the willingness to help customers by providing good and fast service.

4. Assurance, or guarantee and certainty, namely the knowledge, courtesy of compensation, and the ability of company employees to foster customer trust in the company. Consists of components: communication, credibility, security, competence and courtesy. In short, it can be interpreted as knowledge and friendliness of personnel and the ability of personnel to be trusted and trusted.

5. Empathy, namely giving sincere and individual or personal attention to customers by trying to understand consumer desires where a company is expected to have an understanding and knowledge of customers, understand specific customer needs, and have a comfortable operating time for customers. In short, it can be interpreted as an effort to know and understand the needs of individual customers.

Measuring the gap in SERVQUAL The service quality model created by Parasuraman et al identifies the reasons for the gap between consumer perceptions and expectations. There are five gaps (Gap) and it should be noted in advance that Gap 5 is the product of Gap 1, 2, 3, and 4. If Gap 1 to Gap 4 can be closed, then Gap 5 will automatically close. The gaps are as follows:

Gap 1 is the gap between what consumers expect and what company management assumes as consumer expectations.

Gap 2 is a gap that occurs when management fails to design service standards that meet consumer expectations.

Gap 3 occurs when the company's service delivery system consisting of HR, technology, and processes fails to meet predetermined standards.

Gap 4 occurs when the communication that occurs between companies and consumers promises a level of service that cannot be provided by human resources, technology, and processes.

In order for Gap 5 to be found, the SERVQUAL model consisting of 22 items plays an important role.

The benefits of SERVQUAL in Marketing can also be used for internal marketing purposes. The rationale is that every individual in the organization, especially service companies, must understand that they have customers to serve. Based on research, there is a positive relationship between internal and external service quality with customer satisfaction, customer loyalty, and company profits.

Marketing research can be adapted for employee relations purposes. Employees can be given the opportunity to provide input to management regarding the work environment, company policies, and employees' personal understanding of the meaning of quality for consumers.

Satisfaction (satisfaction) is the feeling of happy or disappointed someone that arises because of comparing the perceived performance of services (results) against their expectations. If performance fails to meet expectations, customers will be dissatisfied. If the performance is as expected, the customer will be satisfied. If the performance exceeds expectations, the customer will be very satisfied. Customer ratings of service performance depend on many factors, especially the type of loyalty relationship the customer has with a

company name. Consumers often form a more favorable perception of a service with a company name that they already perceive as positive.

Customer-centric companies strive to create high customer satisfaction, but that is not the end goal. If a company increases customer satisfaction by lowering its prices or improving its service, perhaps profits will decrease. The firm may be able to increase its profitability in ways other than increasing satisfaction (for example by improving manufacturing processes or investing more in R&D). The company also has many stakeholders, including employees, distributors, suppliers and shareholders. Spending more effort to improve customer satisfaction can divert funds away from increasing the satisfaction of other “partners”. Finally, the company must operate on the philosophy that the company strives to deliver a higher level of customer satisfaction while delivering a level of satisfaction that is acceptable to other stakeholders / stakeholders, based on its total resources.

PT ASDP Indonesia Ferry operates the executive dock of Bakauheni Port, Lampung, during the first three months PT ASDP is still introducing promotional rates, these rates will be reviewed after evaluation while preparing all facilities so that when the regular rates apply, all facilities are functioning properly. This executive pier is directly connected to the Trans Sumatra toll road or JTTS and offers convenience and accuracy of crossing after service users are tired of traveling long distances via the Trans Sumatra toll road. This executive pier is indeed to serve passengers / small vehicles, there is a boarding lounge, valet parking, as well as food and beverage retail. This executive dock service can not only be enjoyed by service users who wish to cross, but various commercial and lifestyle facilities can also be enjoyed by non-crossing visitors. Passengers who pass this executive dock are promised to get a special passenger ship without mixing with trucks and buses.

There are several problems in the field that really inconvenience customers, these must be addressed and corrected immediately. Because if it is left unchecked, it will damage the image of the services provided by the company. In the end, it is feared that customers will move to a competing company. Services provided by PT. ASDP Indonesia Ferry (Persero) Banten Merak Branch on board the ferry includes: safety, security, convenience, or affordability, equality. Apart from implementing service standards, people will choose sea transportation that has good security, and affordable ticket prices in the community. The above problems underlie the need for this research.

Based on the background of the problems described above, the identification of the problems in this study are ;1) There are still queues for manual ticket purchase, 2) There are still delays on ro-ro ferries, 3) There are still long queues of vehicles when entering the ship 4) There are still piers that are not being used optimally, 5) There is still a lack of an operating fleet.

In the formulation of this research problem, the research question is put forward as follows; 1) How do you do an online ticket sales system ?, 2) How can you prevent delays on the ro-ro ferry?, 3) What is the strategy for managing parking at the pier?, 4) How do you optimize the dock operation?, 5) How is ASDP's effort to balance the needs of ships?

Research purposes, This research was conducted with the objectives of the research being; 1) To find out how the online ticket sales system is based, 2) To find out the handling of delays on ro-ro ferries, 3) To find out how to set up parking management at the what, 4) To find out how to optimize the dock operation, 5) To find out the process of managing the operating fleet.

## 2. LITERATURE REVIEW

Service quality which consists of interaction quality, physical quality, and service comfort has a direct role in shaping customer satisfaction and customer loyalty of ship passengers. PT. PELNI. Maintaining the quality of service that has successfully combined elements of interaction quality, physical quality, and service comfort appropriately so as to increase passenger satisfaction. Things such as friendliness, alertness, and employee competence must be maintained. As for what needs to be improved are inadequate facilities. Such as cleanliness of toilets, room capacity, and waiting room facilities that must be added and repaired. (Yushar Reza, 2015, Journal of the Influence of Service Quality and Company Image on Customer Satisfaction and Loyalty of Ship Transportation Service Users).

The quality of services at the Gapura Surya Nusantara Passenger Terminal at PT Pelindo III (Persero) Tanjung Perak Branch can be said to have been good as seen from the dimension of reliability concerning the ability of officers to provide services quickly and precisely (accurately), responsiveness regarding the responsiveness and concern of the officers in helping customers, assurance which includes the competence and attitude of the employees of the Gapura Surya Nusantara Passenger Terminal, empathy relating to the ease of

obtaining information and concern for customer needs, and tangibles which include the availability of modern international standard facilities as well as the appearance of good and polite employees. However, there are still some shortcomings related to the unavailability of a suggestion box and a special website to accommodate customer complaints which are part of the responsiveness dimension, and related to the condition of the roof of the building which is damaged due to wind rains and the condition of smoking areas that are not ready to use which are part of the dimensions. tangible. (Meirinawati, 2014, Journal of Service Quality of Gapura Surya Nusantara Passenger Terminal Services at Pelindo III (Persero) Tanjung Perak Surabaya Branch).

According to Crosby, as quoted by Prihantoro (2012: 3), quality (quality) or quality is conformity to requirements. The requirements need to be clearly specified so that everyone knows what to expect. Product quality is one of the main positioning tools for marketers. Quality has a direct impact on product or service performance, therefore quality is closely related to customer value and satisfaction. So quality can be defined as free from damage, but most customer-centric companies define quality based on value creation and customer satisfaction.

Kotler and Stanton as quoted by M. Adam (2015: 2) state that service is basically something intangible, which can meet the needs and desires of consumers. In producing a service, you can use the help of a physical product but you may not. Services do not result in a physical or tangible transfer of rights to an item. So if someone who provides services to other people, there is no transfer of physical property rights. Good service is service that is done in a friendly, fair, precise, and with good ethics so as to meet the needs and satisfaction of those who receive it. So if quality is managed properly, customer satisfaction and loyalty will be realized in the company.

Therefore, According to Buchari Alma (2016: 282) "Service quality will encourage customer satisfaction and customer satisfaction is a determining factor for loyalty, if customer satisfaction is formed then the company growth is guaranteed".

Furthermore, Abdurrahman (2015: 423) says that to win the competition, companies must be able to provide value and satisfaction to customers through the delivery of quality products and services and competitive prices. All organizations have strategies that are taken for the future, all of these strategies are expected to bring significant progress to the organization or company, meaningful progress is reflected in market success. Marketing success occurs because of good quality, consumer response to products is also good. Of course, with the quality principle, employee involvement is absolute and important and in the end the goal of all of this is to create customer satisfaction. Efforts to realize quality services cannot be separated from the important role of employees and human resources owned by the company. Every employee needs to be given understanding and motivation to always provide the best service for consumers. In addition, employees must also be aware that those who provide them with salaries are actually consumers, not companies. Companies get income because there are consumers who are willing to consume the company's products and services. Therefore, every company needs to make efforts to improve the quality of human resources in the hope that the better the quality of service they provide to consumers. Good service is the company's ability to provide services that can provide satisfaction to customers with predetermined standards. What is said to be the ability in it can be seen from the human resources and facilities and infrastructure owned. So it can be concluded that the quality of service is anything that can bring full satisfaction to every passenger who uses a crossing service in accordance with the expectations and needs desired by a passenger.

Dimensions of Service Quality and Service Basics There are five main dimensions of service quality according to marketing experts, Berry and Parasuraman, as quoted by Rianto Al-Arif (2010: 197), including the following: 1) Tangibles include physical facilities and means of communication, 2) Reliability, namely the ability to provide the promised service immediately and satisfactorily, 3) Responsiveness, namely the desire of the staff to help them customers and provide services with responsiveness., 4) Assurance, including the ability, courtesy and trustworthiness of staff, free from danger, risk or doubt, 5) Empathy, which includes the ease of making relationships, good communication, and understanding the needs of customers. Basically, service to consumers depends on the employee's background, be it ethnicity, education, experience, culture, or customs. However, in order for service to be of high quality and uniformity, every employee needs to be equipped with in-depth knowledge of the basics of service. In serving consumers, a marketer should be able to understand and understand the characteristics of each consumer. This is because each person has different characteristics which are influenced by ethnicity, religion, education, experience and others.

However, in general, every consumer has the same desires, namely wanting to fulfill their wants and needs and always wanting to get attention. Here are the characteristics of consumers that must be recognized, namely, 1) Consumers want to be considered a king This means that a king must be fulfilled all his wants and needs. The services provided must be like serving a king in the sense that they are still within the boundaries of ethics and

morals without degrading the company, 2) Want to be fulfilled wants and needs. The arrival of consumers to the company is so that their needs and desires are met, 3) Do not want to be debated and do not want to be offended. Try to provide every service in a relaxed and family atmosphere. A marketer must be wise in expressing opinions so that consumers are not offended, 4) Consumers want to be noticed Consumers who come to the company essentially want to get attention. Never underestimate or ignore them, give them your full attention so that they really feel cared for, 5) Consumers are a source of income for the company. The main income of a company comes from the sale of its products and services. Therefore, if consumers are not used optimally, it means wasting the company's revenue sources.

As a provider of sea transportation services, the community is required to fix and improve the safety and comfort of service users. The problem of the gap between the service perceived by the customer and the quality of service provided must be fixed so that the customer gets the best service. The main thing that must be prioritized is passenger satisfaction, so that the company can survive, compete and dominate market share. Improved services to achieve customer satisfaction must be achieved through various supporting activities, including setting minimum service standards both at the port and on board, as well as the addition of port public facilities as an effort to support the improvement of production and service quality. (Suwandi, 2010, Journal of Analysis of the Influence of Customer Satisfaction on Crossing Services of PT. ASDP Indonesia Ferry (Persero) Bakauheni Branch)

Basically, various programs implemented by the company will create customer satisfaction. Customers who get satisfaction in service are the basic capital for the company in forming customer loyalty. Choosing loyal customers is the ultimate goal of all companies, but most of the companies or service providers do not know that customer loyalty can be formed through several stages. Starting from looking for potential potential customers to advocated customers who bring great benefits to the company. The concept of customer satisfaction occupies a central position in marketing thinking and practice. Satisfaction is the main result of marketing and service activities to link marketing processes culminating in purchase and consumption with post-purchase phenomena such as change in attitude, repeat purchases, and brand loyalty. The centrality of the marketing concept is reflected in the benefits generated through consumer satisfaction and desires (Gilbert A. Churchill, Jr. and Carol Surprenant, 2013).

Customer satisfaction is known as a result of service quality, in the sense that the quality of the product or service is provided to customers in a positive way. It is also believed that the level of customer satisfaction will increase along with the increase in the quality of the product or service that customers perceive. In particular, customer satisfaction is considered an intrinsic variable that explains customer return and post-purchase behavior for products and services (Oliver, 1980; Lee, 2000; Szymanski, and Henard, 2001).

Customer satisfaction is one of the main goals of the company because the long-term benefits obtained if the customer is satisfied is a positive word of mouth, customer loyalty and creates sustainable profitability for the company. (Greenwell et al., 2002; Liu and Jang, 2009). Customer satisfaction is considered to be the main driver of the long-term relationship between suppliers and buyers (Lam et al. 2004; Castillo and Benitez 2013).

Meanwhile, Kotler and Keller (2009, p. 789) explain customer satisfaction as a person's feeling of pleasure or disappointment resulting from comparing the performance or perceived results of the product with its expectations. (Chou, Lu and Chang, 2014) measure customer satisfaction of High-Speed Rail (HSR) in Taiwan with 3 (three) indicators, namely: 1) satisfied with HSR services; 2) wise decision to travel with HSR; 3) traveling with HSR was the right decision.

Customer loyalty needs to be earned because loyal customers will actively promote, provide recommendations to family and friends, make products the first choice, and are not easily moved. Researchers seem to agree that customer satisfaction is the main factor that can attract customer loyalty. Customer satisfaction can be seen from the pride in the institution, the fulfillment of customer desires, the institution is already ideal for customers and customer satisfaction with the product provider institution. Please note that a satisfied customer does not necessarily become a loyal customer. (Ahmad Mardalis, 1998, Journal of Reaching Customer Loyalty)

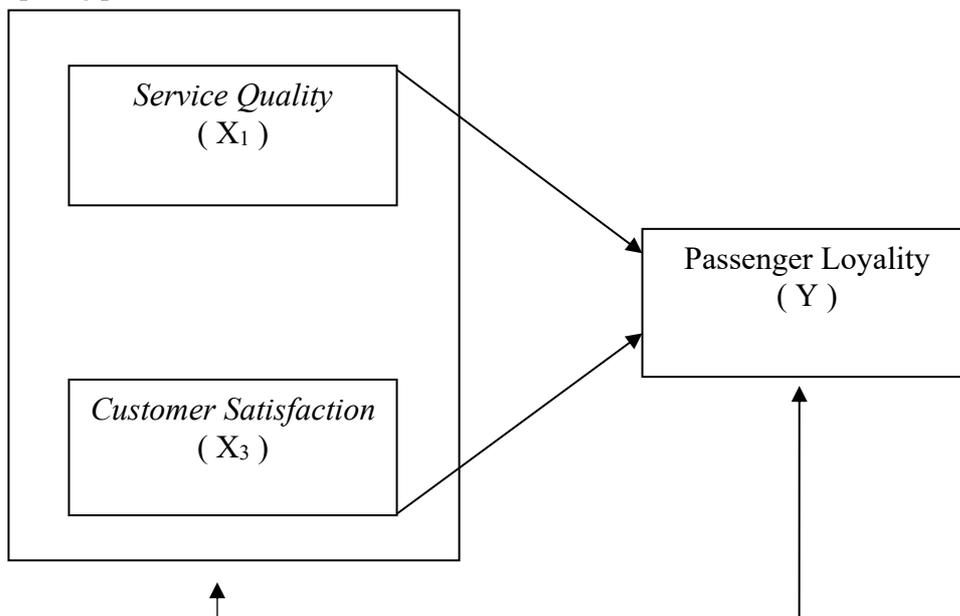
According to Fandy Tjiptono (2000: 110) Consumer Loyalty is a customer commitment to a brand, store or supplier based on very positive traits in long-term purchases. From this understanding, it can be interpreted that brand loyalty is obtained because of a combination of satisfaction and complaints. Meanwhile, customer satisfaction comes from how much the company's performance is to cause this satisfaction by minimizing complaints so that long-term purchases made by consumers are obtained.

Loyalty in the Oxford English Dictionary quoted in Ratih Huriyatti (2010: 126) is a strong feeling of support and allegiance; a person showing firm and constant support. From this definition, there is the word strong feeling,

which means the depth of human feelings towards something, whether family, friends, organizations or brands. This feeling is what determines customer closeness and loyalty.

According to Hendarso Sucipto (2009: 163), customer loyalty is a commitment to persevere deeply to make repeat purchases or re-subscribe to selected products or services consistently where in the future, although the influence of the situation and marketing efforts have the potential to cause changes in behavior. It can be said that loyal customers have a kind of fanaticism that is relatively permanent in the long run towards a product or service that they have chosen.

Customer loyalty needs to be earned because loyal customers will actively promote, provide recommendations to family and friends, make products the first choice, and are not easily moved. Researchers seem to agree that customer satisfaction is the main factor that can attract customer loyalty. Customer satisfaction can be seen from the pride in the institution, the fulfillment of customer desires, the institution is already ideal for customers and customer satisfaction with the product provider institution. Please note that a satisfied customer does not necessarily become a loyal customer. Because in essence humans have curiosity and try something new. Therefore there needs to be an appropriate strategy in order to prevent customers from moving to competing products. For example, by giving discounts to loyal customers. Barriers to moving are made of course with due regard to prevailing business ethics. Customer loyalty at the cognitive stage can be maintained by increasing the value of the product, especially reducing prices and increasing the benefits and quality of the product. Customer loyalty at the affective stage can be maintained by providing satisfaction, adding value and creating switching barriers, such as discounts for loyal customers. Meanwhile, customers whose loyalty is at the conative and action stage, in addition to providing satisfaction, loyalty can be achieved by having a sustainable relationship so that in the end there will be emotional costs if they want to switch to competing products.



**Picture 1.** Model Constilation Problem

Based on the theory and frame of mind stated above, the hypothesis in this study can be formulated as follows:

H1: It is suspected that there is a relationship between the online-based ticket sales system and the loyalty of ro-ro ferry passengers

H2: It is suspected that there is a relationship between handling delays in ro-ro ships and the loyalty of passengers on ro-ro ferries

H3: It is suspected that there is a relationship between the way parking management at the dock affects the loyalty of passengers on ro-ro ferries

H4: It is suspected that there is a relationship between operating the way of optimizing the dock and the loyalty of passengers on ro-ro ferries

H5: It is suspected that there is a relationship between the influential fleet management process and the loyalty of passengers on ro-ro ferries.

### 3. METHODS

The characteristics that will be tested in this study are service quality and customer satisfaction which are thought to have a positive and significant effect on the loyalty of ro-ro ferry passengers. This research was conducted in 2019 by conducting a survey of the Bakauheni Merak River Transportation sector company. The purpose of survey research is to generalize a population from several samples so that conclusions or provisional conjectures can be made from the characteristics, behaviors or attitudes of the population (Babbie, 1990). The survey was chosen as a type of data collection procedure in this study because of the relatively low cost and speed of presenting research data. The nature of the survey in this study is cross-sectional (one-shot) by collecting data one by one at a time. Referring to the research objectives to be carried out, namely to examine more deeply the research variables to be studied, namely service quality and customer satisfaction, this research is descriptive verification. Descriptive research in this study aims to obtain a description or description of service quality and customer satisfaction. Meanwhile, verification research is to determine the relationship between variables through a hypothesis testing based on field data.

The unit of analysis in this research is the Merak-Bakauheni River, Lake Transportation Company. Meanwhile, the observation unit in this research is a ro-ro ferry passenger in the inter-island shipping sector. The population in this study were all passengers using the Merak-Bakauheni sea crossing services.

The determination of the number of samples to be used is based on the Slovin formula as follows (Umar, 2004: 108):

Information :

$N$  = sample size

$N$  = population size

$e$  = desired critical value (accuracy limit) (percent allowance of inaccuracy due to draw errors

sample). With a critical value ( $e$ ) of 10%, the research sample is obtained:

The sampling technique used is probability sampling, which is a sampling technique that provides equal opportunities for each element (member) of the population to be selected as a member of the sample, a sample of 56 people.

### 4. RESULT AND DISCUSSION

#### Validity Test

##### a. Quality of Service (X1)

In the table above where  $df = 30-2 = 28$ , the  $r$  table is 0.3379 with  $\alpha = 0.05 / 2$  after being compared with  $r$ count it turns out that 28 questions are valid.

##### b. Customer Satisfaction (X2)

In the table above where  $df = 30-2 = 28$ , the  $r$  table is 0.3525 with  $\alpha = 0.05 / 2$  after being compared with  $r$ count it turns out that 28 questions are valid.

##### c. Passenger Loyalty (Y)

In the table above where  $df = 30-2 = 28$ , the  $r$  table is 0.3942 with  $\alpha = 0.05 / 2$  after being compared with  $r$ count it turns out that 28 questions are valid.

#### 2. Reliability Test

Reliable means consistent or stable. After all questions are declared valid, the next test is to test the reliability of the questionnaire. The following are the results of the reliability test for each variable:

##### a. Quality of Service (X1)

Because  $0.736 > 0.60$  so that the questionnaire is reliable. Because the questionnaire has been declared valid and reliable, the questionnaire is worthy of analysis.

##### b. Customer Satisfaction (X2)

Because  $0.742 > 0.60$  so that the questionnaire is reliable. Because the questionnaire has been declared valid and reliable, the questionnaire is worthy of analysis.

##### c. Passenger Loyalty (Y)

Because  $0.703 > 0.60$  so that the questionnaire is reliable. Because the questionnaire has been declared valid and reliable, the questionnaire is worthy of analysis.

Questionnaire testing has been tested with the number of respondents 30 with good results, namely the reliability of 0.736, 0.742 and 0.703. Then the researchers distributed 30 questionnaires to 30 respondents (passengers of the Merak-Bakauheni ferry route).

1. Regression Test

Aims to determine whether or not there is a linearity between the independent variable and the dependent variable.

a. X1 and Y Regression (Simplified)

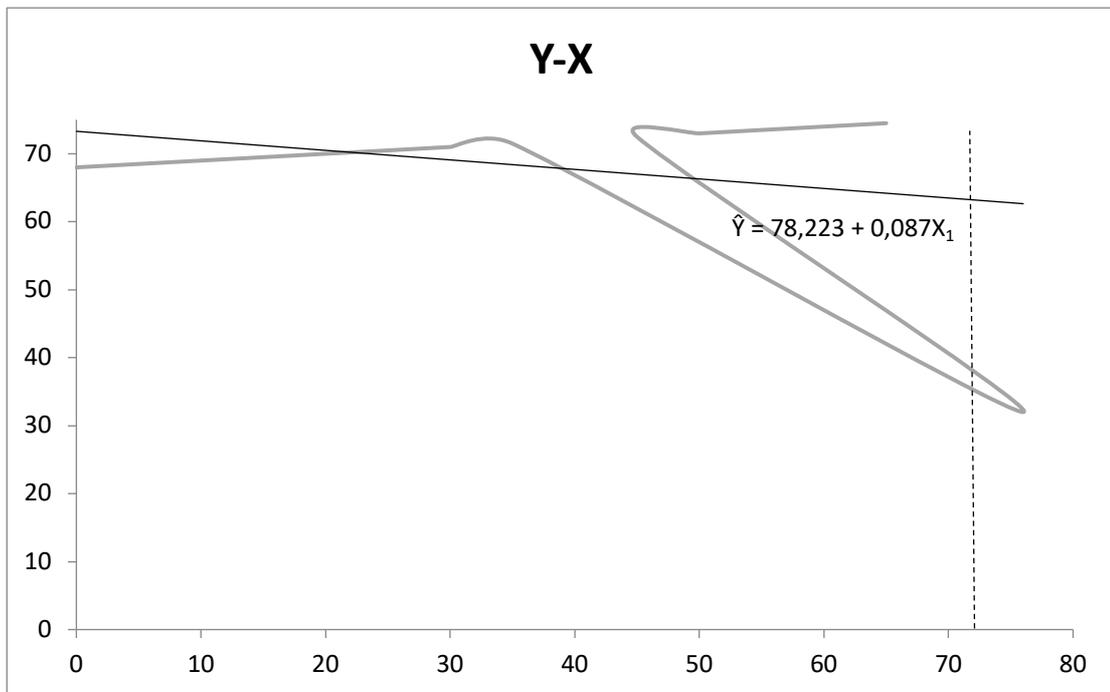
The results of the calculations carried out with SPSS V.25 are as follows:

Model	Coefficients <sup>a</sup>				T	Sig.
	Unstandardized Coefficients		Standardized	Beta		
	B	Std. Error				
1	(Constant)	78.223	14.670		.567	.574
	X1	.087	.168	1.095	5.421	.000

a. Dependent Variable: Y

Based on the results of the calculations carried out, it is obtained a of 78.223 and b of 0.087, the form of a simple linear regression equation is as follows:

$$\hat{Y} = 78,223 + 0.087X_1$$



From the regression equation, it can be seen that the relationship between service quality and passenger loyalty is unidirectional (positive), this is shown in the regression coefficient or the value of b in the regression equation which shows a positive number of 0.087 which means that each increase in operational performance is 0.087 units. Likewise, if the quality of service has decreased by 1 unit, the quality of service will tend to decrease by 0.087 units. And the value of the coefficient a (intercept) is 78.223 which means that if there is no quality of service (X = 0), it is estimated that passenger loyalty is 78.233 units.

b. X2 and Y Regression (Simplified)

The results of the calculations carried out with SPSS v.25 are as follows:

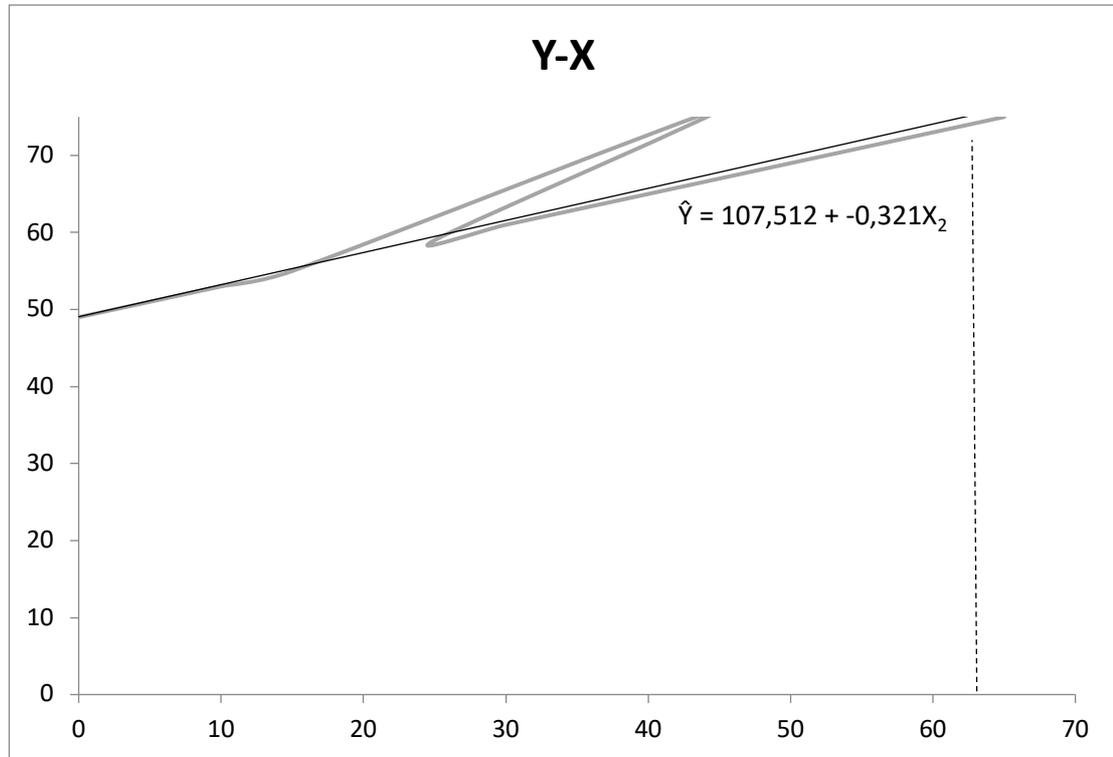
Coefficients <sup>a</sup>		
Standardized Coefficients	T	Sig.
Beta		

	-1.490	.145
1.244	7.461	.000

a. Dependent Variable: Y

Based on the results of the calculations carried out, it is obtained that a is 107.512 and b is -0.321 the form of a simple linear regression equation is as follows:

$$\hat{Y} = 107,512 + -0,321X_2$$



From the regression equation, it can be seen that the relationship between customer satisfaction and passenger loyalty is unidirectional (positive), this is shown in the regression coefficient or the value of b in the regression equation which shows a positive number of -0.321 which means that each increase in service quality is -0.321 units. . Likewise, if the loyalty of service passengers has decreased by 1 unit, then the loyalty of passengers will tend to decrease by -0.321 units. And the value of the coefficient a (intercept) is 107.512 which means that if there is no customer satisfaction (X = 0), it is estimated that passenger loyalty is 107.512 units.

c. X1 and X2 with Y (Multiple)

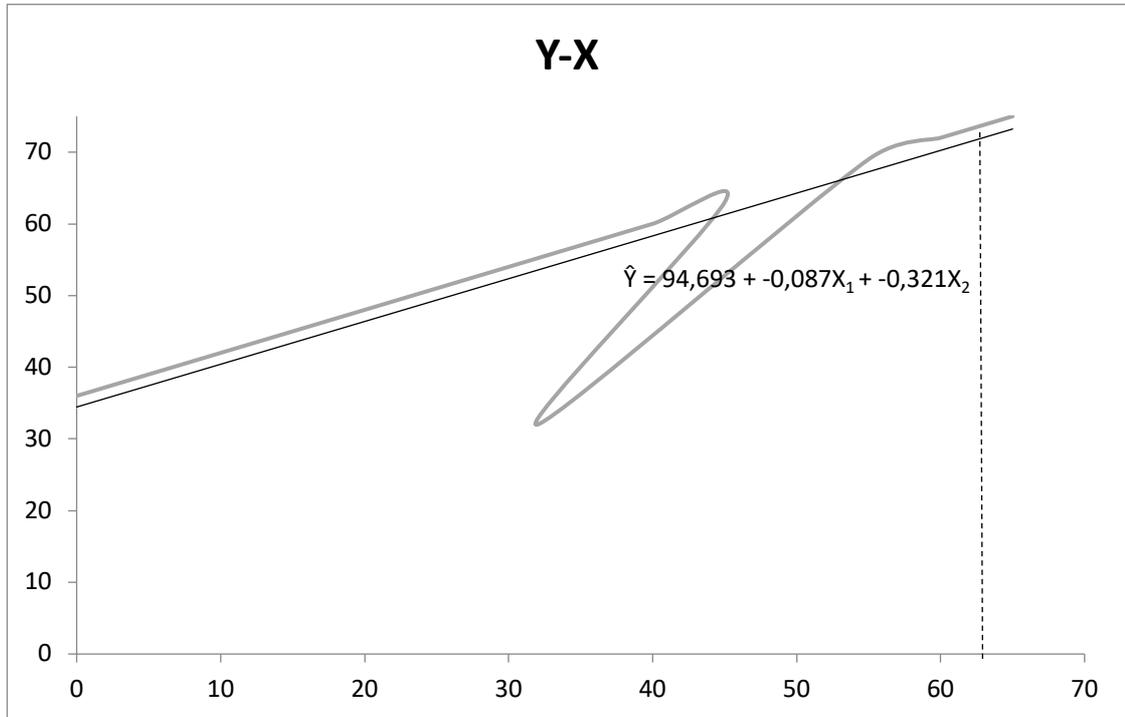
The results of the calculations carried out with SPSS v.21 are as follows:

Model	Coefficients <sup>a</sup>				T	Sig.
	Unstandardized Coefficients		Standardized Coefficients			
	B	Std. Error	Beta			
	(Constant)	94.693	21.878		4.328	.000
1	X1	-.087	.177	-.087	-.116	.909
	X2	-.321	.177	-.321	-1.857	.072

a. Dependent Variable: Y

Based on the results of the calculations carried out, it was obtained a of 94.693; b1 equal to -0.087 b2 -0.321 the form of the multiple linear regression equation is as follows:

$$\hat{Y} = 94.693 + -0.087X_1 + -0.321X_2$$



- a) From the regression equation, it can be seen that the relationship between service quality and passenger loyalty is unidirectional (positive), this is shown in the regression coefficient or the value of b1 in the regression equation which shows a positive number of 0.087 which means that every 1 unit increase in service quality will be followed by an increase in passenger loyalty which decreased by 1 unit, then passenger loyalty would tend to decrease by 0.087 units.
- b) From the regression equation, it can be seen that the relationship between customer satisfaction and passenger loyalty is unidirectional (positive), this is shown in the regression coefficient or the value of b1 in the regression equation which shows a positive number of -0.321 which means that each increase in customer satisfaction is 1 unit. will be followed by an increase in passenger loyalty, which has decreased by 1 unit, so passenger loyalty will tend to decrease by -0.321 units.
- c) From the regression equation, it can be seen that the relationship between service quality and customer satisfaction with passenger loyalty is unidirectional (positive), this is shown in the regression coefficient or the values of b1 and b2 in the regression equation which shows a positive number of 94.693 which means that any increase 1 unit of service quality and customer satisfaction will be followed by an increase in passenger loyalty, a decrease of 1 unit, so passenger loyalty will tend to decrease by 94.693 units.

Correlation Test, Correlation of X1 and X2 with Y (Double)

	Y	X1	X2
Y	Pearson Correlation	1	1.055
	Sig. (2-tailed)		.574
	N	30	30
X1	Pearson Correlation	.095	1
	Sig. (2-tailed)	.574	.653
	N	30	30
X2	Pearson Correlation	-.244	-.076
	Sig. (2-tailed)	.145	.653
	N	30	30
	Pearson Correlation	.169	.341*
			.285

From the calculation of multiple correlations, it is obtained r equal to 1 from these results, it appears that the quality of service and customer satisfaction with passenger loyalty is very strong and unidirectional (positive). The Coefficients of Determination X1 and X2 with Y (double), Following are the results of the coefficient of determination from R square:

By looking at the results of the above calculations where the R square is 0.758 or 75.8%. This shows the magnitude of the positive relationship of service quality and customer satisfaction with service passenger loyalty of 75.8%, while the rest is the relationship of other factors that are not analyzed in this model.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.446 <sup>a</sup>	.758	.042	4.84163	1.130

a. Predictors: (Constant), X2, X1  
b. Dependent Variable: Y

Based on the results of the calculations carried out, it is obtained that a is 107.512 and b is -0.321 the form of a simple linear regression equation is as follows:

$$\hat{Y} = 107,512 + -0,321X2$$

By looking at the results of the above calculations where the R square is 0.758 or 75.8%. This shows the magnitude of the positive relationship of service quality and customer satisfaction with service passenger loyalty of 75.8%, while the rest is the relationship of other factors that are not analyzed in this model.

Hypothesis Test X1 and X2 with Y (double)

Control Variables		X1	Y
X1	Correlation	1.000	.579
	Significance (2-tailed)	.	.645
	Df	0	30
X2	Correlation	.579	1.000
	Significance (2-tailed)	.645	.
	Df	30	0

It aims to determine whether or not there is a multiple relationship between service quality and customer satisfaction with passenger loyalty. The steps for testing the hypothesis are as follows:

Determining Ho and Ha (test form)

Ha:  $\beta_1 \beta_2 \leq 0$  Multipley, there is no relationship between service quality and customer satisfaction with passenger loyalty.

Ho:  $\beta_1 \beta_2 \geq 0$  There is a multiple relationship between service quality and customer satisfaction with passenger loyalty.

Setting the real level ( $\alpha$ ) / confidence level (1- $\alpha$ ) the level of confidence at 95% and the real level  $\alpha = 5\%$

Choose a statistical test

Using table F

$$F \text{ table} = F (1-\alpha) \{(dk-k), (dk = n-k-1)\}$$

$$= F (1-\alpha) \{(dk = 2), (dk = 30-2-1)\}$$

$$= F (1-0.05) (2,27)$$

How to find Ftable = 2, as the numerator

= 27, as the denominator

$$F_{table} = 3,335$$

Calculating the value of the F test statistic

$$F_{count} = (R^2 / k) / ((1-r^2) / (n-k-1)) = (0.057 / 2) / (0.943 / 27) = 0.0285 / 0.034 = 0.838$$

Comparing the value of the test statistic with the critical area.

Limitations of instrument testing

The research instrument made was only tested once, although based on statistical calculations the instrument was valid and reliable. Therefore, the weaknesses of the instruments used still exist, including in this case only 30 respondents, The limited number of respondents the accuracy of the respondent's answers. This research was only conducted on service users or passengers on the roro ferry on the other hand, the number of respondents taken as a representative research object was 30 people.

In addition, the instrument made in the form of a questionnaire, resulting in the answers faced is very dependent on the honesty of the respondent, even though the research has anticipated these weaknesses by (a) not including the identity of the respondent on the answer sheet (b) appealing to the respondent to answer the answer sheet honestly. (c) inform the respondent that the results of the answers are not related to occupation and position.

## 5. CONCLUSION AND RECOMMENDATION

This shows the magnitude of the positive relationship of service quality and customer satisfaction with service passenger loyalty of 75.8%, while the rest is the relationship of other factors that are not analyzed in this model.

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