Facilities and Service Quality's Impacts on Satisfaction:
A Case of Indonesian Train Service Customers

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Abstract: - Trains in Indonesia are one of the most popular modes of transportation and have an extensive network throughout Indonesia. PT Kereta Api Indonesia (KAI), a state-owned company that oversees all train operations in Indonesia, is in charge of managing trains in Indonesia. Trains in Indonesia are also a transportation option that is safe for the environment because of the relatively low emission pollution compared to other vehicles. The train is also a safer and more comfortable mode of transportation, especially for traveling long distances. The goal to be achieved in this study is to determine the effect of the variables of facilities and environmental awareness at PT Kereta Api Indonesia (KAI). The research methodology uses descriptive research with a quantitative approach and uses primary data in the form of questionnaires to 102 respondents. The data analysis used the Partial Least Square (PLS) approach with SmartPLS software as a data analysis tool. The findings of this study can be taken into consideration when assessing the level of service provided to customers. This will help determine whether the service quality and facilities services provided are on target or require further evaluation.

Key-Words: - Service, Facilities, train service, transportation, customer satisfaction, Indonesia.

1 Introduction

The businesses and activities of moving passengers, goods, or both from one location to another are the essence of transportation in this modern era. Transportation has changed such as public transportation, [1]. In several foreign countries, people prefer to use MRT trains or taxis and avoid private vehicles because in their opinion, they are less efficient in terms of parking, tolls, and fuel costs, and one of them contributes to road congestion also air pollution, [2].

In Indonesia, there are many different modes of transportation, from public transportation such as buses and taxis to online transportation like motorcycle taxis and online taxis. Indonesia also has important ships and planes for sea and water transportation. Traffic jams, public transportation delays, and inadequate transportation security are just a few of Indonesia's transportation challenges,

particularly in urban areas, [3]. However, the Indonesian government continues to work toward enhancing transportation services by constructing toll roads, railways, seaports, airports, and railways that are more up-to-date and effective.

The newest service from the Indonesian Rail Service is the Jakarta-Bandung high-speed train (KCIC, 2023). The most recent CR400AF generation will be used. The Jakarta-Bandung Fast Train has four stations at Halim, Karawang, Padalarang, and Tegalluar along its 142.3 km track, which runs from Jakarta to Bandung. The train's only depot is situated in Tegalluar. Every station will be connected to local mass transit systems, [4]. While the project has been inaugurated, the construction is still being carried out massively to achieve operational targets at the end of 2022. Over 80 km of the fast rail route's overall length is elevated, with the remaining 13 km being made up of tunnels and subgrades. To facilitate the speeding

of the development process, several temporary facilities, including the Batching Plant and Casting Yard, were established at various crucial locations.

The development and improvement of transportation services from year to year is indeed increasingly becoming a public concern, [5]. Transportation services compete to provide satisfaction for each of their customers. This can be seen in the intense competition that is influenced by things like customer perceptions of quality, how well a product meets a customer's needs, word of mouth from other customers, past experiences with products and company promises, service quality, and prices to make customers happy, [6].

To attract customers, numerous transportation companies offer and strive to improve the quality of their services. The main key to maintaining the market in competition is to provide customer satisfaction something that the company has always wanted to achieve. Consumer satisfaction is the emotion that results from comparing the predicted performance (outcome) of a product to the actual performance, either positively or negatively, [7].

The train is an illustration of a very popular mode of transportation at the moment. This is because the train itself is a fast, efficient mode of transportation that is operated by BUMN (state-owned company). Because it can efficiently connect multiple regions and is relatively less expensive than air travel, railway transportation is one of Indonesia's most important modes of transportation, [8]. Additionally, rail transportation can transport a large number of passengers and goods due to its large capacity. PT. Kereta Api Indonesia, which are state-sanctioned shareholders, carries out good mass transportation. PT. Kereta Api Indonesia was created by adding satisfactory offices and expanding administration to shoppers.

In the case of review data, the COVID-19 pandemic has reduced the number of train passengers in Indonesia by 67.31 percent compared to the previous year, according to data on train passengers from Badan Pusat Statistik by 2020, [9]. In Indonesia, there were approximately 305.3 million passengers using rail services in 2019, but only 100.1 million people did so in 2020. According to data from the BPS, the majority of train trips in 2020 occurred in February, just before the pandemic reached its peak in Indonesia. As of November 2021, BPS reported that 15.32 million people had taken a train, a 15.6% increase from the previous month's 13.25 million passengers. The majority of these are commuter passengers on the Jabodetabek. Rail passengers increased by 12.73% in the Jabodetabek region, 32.22% in the Java-Non-Jabodetabek region, and 40.54% in the Sumatra region.

PT KAI Operations Area 2 Bandung kept a critical expansion in client volume in 2022. PT KAI Daop 2 Bandung transported 15,465,056 train passengers, which included; customers of Local Trains, Executive class trains (1,082,260), Business class trains (43,250), and Economy class trains (1,694,960). From 2021, this number has grown by 132% to 6,646,729 subscribers. There were several factors that contributed to the rise in customer volumes, one of which was the government's relaxation of travel requirements for rail passengers. In addition, the number of passengers will rise in 2022 due to the operation of four additional trains: the Baturaden Ekspres train for the Bandung-Purwokerto connection, the Cikuray train for the Pasarsenen - Bandung - Garut connection, and Ciremai train for the Bandung-Semarang Tawang connection.

PT. Kereta Api Indonesia is a state-owned company engaged in the field of rail transportation in Indonesia. PT KAI has the main task of operating passenger and freight trains throughout Indonesia. Currently, PT. KAI operates trains throughout Indonesia with several passengers reaching millions of people each year, [10]. PT KAI is also modernizing rail services, such as using electric trains and building more modern stations. PT. KAI as a mass transit service provider has three different classes namely, executive trains, business trains, and economy trains.

All three have in common, namely equipped with air conditioners, smoke-free carriages, toilets in each carriage, and free of hawkers. Each type of train has different facilities, starting from the prices for economy, business, or executive class. The train series has restoration carriages, which provide ready-to-eat food and drinks ready to serve the journey of rail service users.

1. In addition, PT KAI (Persero) also pays attention to the customer aspect where service quality is always being improved. Passengers will feel happy and satisfied when a service provided by the company can provide comfort to passengers. Examples of service quality at stations such as special information regarding train departures, and staff who are ready to help passengers. The amenities are another element that may have an impact on passenger pleasure. All physical equipment offered by service providers to enhance customer comfort is referred to as a facility Examples of facilities at the station, which means everything provided by the station to

facilitate service to consumers, include toilets, parking lots, prayer rooms, health posts, security guards, free mobile phone chargers, ATMs, and high platforms. Therefore, this research aims to know the customer satisfaction of PT. Kereta Api Indonesia (Persero) so that it becomes an illustration that can show the public's assessment of the performance of PT. KAI

2 Literature Review

Facilities

Before a service is provided to customers, facilities—which are tangible resources—must be available Facilities are all tangible items that the service provider offers to customers for their convenience. Facilities, on the other hand, are everything that can help with efforts and speed up labor to accomplish a goal. Facilities may also be seen as a way for customers to purchase benefits from the business that are provided in exchange for a financial charge. To accomplish a company's objectives, supporting tools must be utilized in the process or activity. Each business uses a different set of facilities, each with its own set of advantages. The more activities the company conducts, the more comprehensive its facilities for achieving its objectives are. Facilities are very important for the success of a company or organization because they can affect the quality of these services in the eyes of consumers, as well as affect customer or user satisfaction. Adequate and quality facilities can improve the quality of services provided to customers or users.

Service Quality

Service quality is another element that influences pleasure. Satisfying demands and requirements and meeting deadlines to satisfy customers are key components of providing high-quality service, [10]. The satisfaction of a customer's requirements and wants combined with precise delivery that meets their expectations is high-quality service. Thus, expected service and perceived service are the two primary criteria that affect service quality. The anticipated standard of excellence and the ability to regulate perfection to satisfy client demands is service quality, [11], [12]. To balance consumer expectations, service quality emphasizes both the accuracy of delivery and attempts to satisfy the wants and desires of the client. All services rendered by the business to clients while they are employed by it are considered to be of a high quality. A company's or organization's ability to provide high-

quality services is critical to its success since these services may boost client happiness and foster positive working relationships. Businesses and organizations may take several actions to enhance the quality of their services, including enhancing customer communication and responding to complaints more quickly and accurately.

Service quality states that there are 5 dimensions of Service Quality which are a simplification of the ten dimensions of service quality, namely:

1. Reliability

The capacity of the business to convince outsiders that it is accessible. The company's ability to deliver services on time and accurately the first time, without making any mistakes, is what we mean when we talk about reliability.

2. Responsiveness

Regarding the readiness and capacity of staff members to assist customers, address their needs, notify them of the anticipated delivery date, and expedite the provision of services.

3. Assurance

Assurance is the term used to describe the guarantees or promises made to clients or customers, such as helpful information sharing, security, and quality service. Additionally, a guarantee implies that staff members are polite at all times and have the expertise and abilities needed to address questions or issues from customers.

4. Empathy

This implies that the organization comprehends the issues of buyers and follows up on the desires of customers while giving individual regard for purchasers and having happy working hours.

5. Tangible

Service quality is also about the company's tangible assets, tools, and supplies being aesthetically pleasing as well as the way its personnel look.

Customer Satisfaction

The main key to maintaining the market in competition is to provide customer satisfaction which is something that the company has always wanted to achieve, [11]. A person's satisfaction level is determined by comparing the predicted performance of a product to its actual performance and evaluating the difference between the two. Customer satisfaction is the emotion that results from comparing views or impressions of performance that fall short of expectations, leaving consumers unhappy, [12]. Customer satisfaction is very important for the success of a company or

organization because satisfied customers tend to become loyal customers and recommend the product or service to others. Dissatisfied customers can affect a company's reputation and potentially lead to decreased revenue and lost customers. To increase customer satisfaction, companies or organizations can make various efforts, such as improving product or service quality, providing good customer service, dealing with customer complaints quickly and effectively, and innovating in the products or services offered, [13].

The following are indicators of customer satisfaction which are:

1. Repurchase: purchase once more whenever the business introduces new products or updates existing ones.

2. Efficiency of the product: the customer will be dissatisfied if performance falls short of expectations. The client will be pleased with the outcome if the performance meets expectations.

3. Needs: when a product or service meets a customer's requirements, desires, or objectives, the customer feels satisfied.

4. Expectations: the degree to which a product's perceived performance corresponds to the buyer's expectations, [14].

Influence Between Research Variables

The influence of each independent and dependent variable. The explanation of the conceptual framework drawing is as follows:

Influence of Facilities on Consumer Satisfaction

Facilities can have a significant effect on customer satisfaction. In many cases, the quality of a facility can be a determining factor in a consumer's decision to choose a business or use a particular service. Overall, facilities play an important role in determining customer satisfaction. By providing a comfortable, clean, and safe environment, a business can improve its reputation and increase customer loyalty, [15].

Facilities are one of the five dimensions of service quality that affect customer satisfaction, [16]. Good and adequate facilities can increase customer perceptions about the quality of services provided.

Influence of Service Quality on Customer Satisfaction

Customer happiness may be greatly impacted by the quality of the services provided. In general, customer happiness may be significantly influenced by the quality of the services provided, [17]. By offering prompt, dependable, sympathetic, and high-

quality service, a company may enhance its standing and boost client retention, [18].

The five aspects of service quality are tangibles, assurance, responsiveness, empathy, and consistency, [19]. They contend that enhancing service quality in each of these areas will raise consumer happiness.

Research Hypothesis

Based on the formulation of the problem, the hypothesis can be put forward as follows:

1. It is hypothesized that there is an influence of facilities on consumer satisfaction

2. It is hypothesized that there is an influence of service quality on satisfaction

3. It is hypothesized that there are facilities and service quality on customer satisfaction

Framework

Based on the theoretical basis and previous research, it can be described through a framework in the form of what is shown as Figure 1.
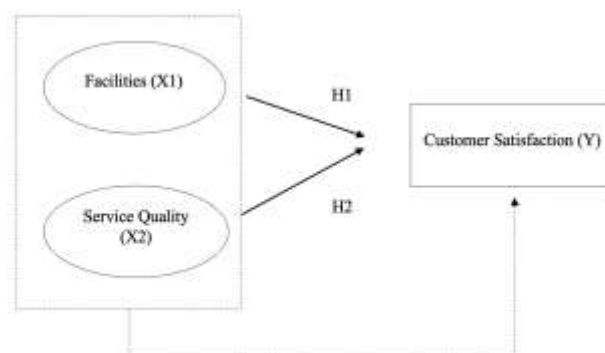

Fig. 1: Research Framework

3 Methodology

This research employs a quantitative methodology. Quantitative research is the methodical scientific study of components, events, and their interactions, [20]. Developing and applying mathematical models, theories, and/or hypotheses about natural phenomena is the aim of quantitative research. Google Forms was utilized to collect data for the study, and they were disseminated online. We gathered responses from 102 respondents.

The interval scale is the measuring system employed in this investigation. factors that are both independent and dependent, [21]. For the quantitative study, respondents were provided with five possible responses for each variable on a scale from 1 (strongly disagree) to 5 (strongly agree). The Partial Least Square (PLS) approach was employed in this work. PLS is a structural equation model

based on variance that may characterize latent variables, or factors that are not immediately observable and is quantified using indicators (manifest variables), [22].

A variant of PLS that simultaneously examines structural measurements and measurement models can serve as its foundation. Statistical software called SmartPLS, or Smart Partial Least Square, is used in SmartPLS 3.0 to assess the association between variables and with indicator variables, [23]. According to the aforementioned statement, it is known that the path analysis model evolved into the PLS analysis model. Using the PLS analysis model has several benefits, including the fact that the data does not need to fit into a specific distribution, the model does not need to be theoretically based, there is indeterminacy, and there are many small samples, [24].

4 Results and Discussion

Validity tests show that there is a relationship between the measures of the construct principles. A rule of thumb for convergent validity testing is a loading value greater than 07 squared greater than 05 and an extracted mean difference greater than 05. To assess the measurement instrument's internal consistency for this study, a reliability test was conducted, [25]. Two criteria may be used to assess PLS: Cronbach's Alpha and the Composite Reliability of the build indicator block. It is clarified that the composite dependability, or alpha value, as per the rule of thumb, must be larger than 0.7, even though a value of 0.6 is still acceptable. Table 1 shows results of tests for validity and reliability performed using the following SmartPLS software:

Table 1. Evaluation of Measurement Model

Factor	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
Customer Satisfaction	0.883	0.914	0.681
Facilites	0.877	0.911	0.672
Service Quality	0.876	0.910	0.671

We may use Cronbach's Alpha to gauge dependability. The dependability of each indication in the model is reflected in this number. While 0.8 or 0.9 is the optimal number, 0.7 is the minimum. High dependability is defined as having a Cronbach's Alpha value between 0.7 and 0.9, [26]. The item variable is reliable, as indicated by the

composite reliability value of > 0., [27]. Hence, it is plausible that the three latent variables (service quality, facilitates, and customer satisfaction) have CA and CR values higher than 0.7, indicating that all variables have a high degree of dependability and the data is dependable.

Additionally, the Average Variance Extracted (AVE) table reveals that the variable AVE values > 0.5 for each of the three variables—Customer Satisfaction, facilities, and Service Quality. When both the outer loadings value and the Average Variance Extracted (AVE) value are more than 0.70. Indicators are thought to satisfy convergent validity and have a high degree of validity. If the external loading indicator is more than 0.7, convergent validity is considered good, [27]. If the external loading value is less than 0.5, the indicator should be removed because it is considered insignificant. These are the results of the external loading test:

Based on the calculation results shown in Table 2 (Appendix), shows that there is no outer loading indicator that has a value less than 0.5. This means that the indicator is declared valid because the correlation coefficient is more than 0.5.

Table 3. Discriminant Validity

Variable	Customer Satisfaction	Facilities	Service Quality
X1.1	0.660	0.848	0.692
X1.2	0.776	0.827	0.710
X1.3	0.656	0.856	0.676
X1.4	0.700	0.818	0.694
X1.5	0.667	0.744	0.677
X2.1	0.641	0.647	0.723
X2.2	0.716	0.693	0.849
X2.3	0.784	0.662	0.834
X2.4	0.841	0.738	0.892
X2.5	0.739	0.713	0.787
Y1.1	0.805	0.650	0.603
Y1.2	0.844	0.708	0.673
Y1.3	0.794	0.692	0.671
Y1.4	0.792	0.652	0.841
Y1.5	0.888	0.787	0.916

Table 3 shows that it satisfies the cross-loading requirements. Every construct in the cross-loading test needs to be higher than the indicators of the other constructs. The cross-loading value of this variable is greater than the cross-loading values of its constituent variables. Therefore, it is reasonable to say that the study's measurements have strong discriminant validity, [27].

a. Structural Model Evaluation

The coefficient of determination of the endogenous construct is the R-squared number. The suggested research model for prediction is better the higher the R-Square score. R square is a number that ranges from 0 to 1, with the idea being that the closer it is to 1, the better. R square has value 0.7 (strong), 0.5 (moderate), and 0.2 (weak).

Table 4. R-Square

Variable	R Square	R Square Adjusted
Customer Satisfaction	0.855	0.852

Based on Table 4, the R square value in this study is 0.855. The R-Square value of the Customer Satisfaction variable is 0.855. which shows that 0.855 is influenced by the Facilities and Service Quality variable on factors that influence Customer Satisfaction, while the remaining 0.145 is influenced by variables outside the research. As a result, the indicators used in this research were only able to explain 85 percent of the variance in Customer Satisfaction, while the remaining 15% could be explained by other factors, [28].

b. Hypothesis Test Result

Table 5 shows that the t-statistic in this study is greater than 1.96. A hypothesis test is deemed significant if the t-statistics value is more than 1.96 and regarded as not significant if it is less than 1.96. The path coefficient table in the SmartPLS output contains the t-statistic, which we may use in structural model testing to determine the predictive model's significance between the independent and dependent variables.

Table 5. Hypothesis test

	Path Value	Sample Mean (M)	Standard Deviation	T-stat	P Values
Facilities -> Customer Satisfaction	0.272	0.274	0.087	3,148	**0.002**
Service Quality -> Customer Satisfaction	0.683	0.683	0.084	8,154	**0.000**

5 Conclusion

Based on the Table 5 in the previous chapter, the test results for each hypothesis are as follows:

The Influence of Facilities on Customer Satisfaction

The path coefficients value is positive 0.272, which indicates that there is a positive effect on customer satisfaction, according to the path coefficients table. Next, it displays a substantial influence with a t statistic of 3,148, a value more than 1.96, and a p-value of 0.000. a value less than 0.05. This indicates that there is a substantial and positive relationship between the facilities variable and customer happiness.

The Influence of Service Quality on Customer Satisfaction

The path coeficient value is positive 0.683, indicating a positive effect on customer satisfaction, according to the route coefficient in Table 5. Next, the t statistic is 8.154, meaning that the value is higher than 1.96. Thus, it can be said that customer pleasure is positively and significantly impacted by service quality.

We discovered that facilities and service quality had a favorable and significant impact based on the data analysis results. The study's findings support our hypothesis, which states that a facility's effect on customer satisfaction is both positive and substantial. Customer satisfaction is also positively and significantly impacted by the quality of the services provided. These findings suggest that customers and passengers will feel more comfortable, self-assured, and happy with their financial management both now and in the future when making judgments about choosing trains as their mode of transportation. According to this survey, the majority of respondents had positive experiences traveling by rail, which gives them confidence in the facilities and level of service provided, resulting in contentment.

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APPENDIX

Table 2. Outer Loading

Variable	Indicator	Questions	Outer Loading	Conclusion
Facilities	X1.1	The facilities are very adequate, such as air conditioning, toilets, and comfortable seating	0.848	Valid
	X1.2	The cleanliness of the cabin/carriage is always maintained	0.827	Valid
	X1.3	The steward always fulfills passengers needs, such as going around offering food and drinks	0.856	Valid
	X1.4	Availability of supporting facilities such as cellphone chargers	0.818	Valid
	X1.5	Availability of a prayer room or place of worship	0.744	Valid
Service Quality	X2.1	Clarity of information regarding train tickets	0.723	Valid
	X2.2	Steward are precise in serving consumers	0.849	Valid
	X2.3	The appearance of the staff and steward is neat and professional	0.834	Valid
	X2.4	Accuracy of train arrival and departure times	0.892	Valid
	X2.5	The company is quick to respond to consumer criticism and suggestions	0.787	Valid
Customer Satisfaction	Y1.1	Passengers are satisfied with the services offered by PT KAI	0.805	Valid
	Y1.2	The quality of train services in Indonesia has met customer satisfaction	0.844	Valid
	Y1.3	The punctuality of train arrival and departure times has met customer satisfaction	0.794	Valid
	Y1.4	Passengers are satisfied with the facilities offered by PT KAI	0.792	Valid
	Y1.5	Passengers suggested improving the quality of services and facilities to gain satisfaction	0.888	Valid