



## The Influence of Service Quality from PT Kereta Api Indonesia (Persero) on Customer Satisfaction at PT Bukit Asam Tbk



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### Abstract

This study examines the effect of service quality provided by PT Kereta Api Indonesia (Persero) on the level of corporate customer satisfaction, specifically PT Bukit Asam Tbk. As a user of railway transportation services for coal logistics, PT Bukit Asam requires quality services to ensure smooth and efficient operations. This research uses quantitative methods with a sample of 100 respondents consisting of PT Bukit Asam Tbk employees involved in the logistics process. Data obtained through questionnaires were analyzed using multiple linear regression. The results showed that the service quality of PT Kereta Api Indonesia has a positive and significant influence on PT Bukit Asam's customer satisfaction, with the indicator of friendly service and responsiveness of the officers scoring the highest. These findings suggest that improving service quality can strengthen customer satisfaction and loyalty.

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## 1 Introduction

Over time, humans have always required comfort and convenience in living their lives efficiently and effectively. Adequate infrastructure, such as transportation, communication, energy, and other public facilities, is essential to support daily activities and national development. Infrastructure plays an important role in supporting mobility, reducing disparities between regions, and accelerating the development of an area. Transportation, as part of infrastructure, functions to transport goods and people from one place to another (Biomantara & Herdiansyah, 2019).

In Indonesia, trains are one of the mainstay modes of transportation in addition to buses, planes, and ships, with advantages such as fuel-efficient, energy-efficient, low-pollution, capable of transporting passengers and goods in bulk and operating on dedicated lines (Martínez & Del Bosque, 2013; Chen et al., 2021). PT Kereta Api Indonesia (Persero), as a State-Owned Enterprise (SOE), is responsible for passenger and freight transportation services, including the leasing of facilities at stations. The company started its business with the transformation of its status from PJKA to Perumka in 1990 through Government Regulation No. 57, and then to Persero in 1998 with Government Regulation No. 19, which made it profit-oriented. However, to continue carrying out public service functions, the government provides Public Service Organization (PSO) funding support that covers the difference in costs, so that tariffs remain affordable for the wider community (Puteri, 2021).

Along with the increasing public interest in using train transportation, PT KAI continues to improve the quality of service for its customers. PT KAI not only pays attention to comfort inside the station but also provides superior facilities during the journey on the train. Various initiatives have been implemented, such as the smoking ban that supports a smoke-free environment inside the train, the implementation of up to 100 percent seating capacity for passenger safety and comfort, the provision of free charging facilities (chargers), and special rooms for nursing mothers. In addition, PT KAI also improves comfort in the platform area by providing more space, maintaining cleanliness and tidiness, and ensuring the area is free of hawkers to create an orderly and comfortable atmosphere (Levyda, 2021).

According to Kotler & Keller (2018) in Nurmala et al. (2023), satisfaction is a feeling of pleasure or disappointment that a person experiences after comparing the perceived product performance with the expected performance. In other words, someone is satisfied if the results obtained at least meet their expectations, while dissatisfaction arises if these results do not match expectations. The level of satisfaction experienced will affect a person's behavior to use the product again so that it can foster loyalty. The creation of customer satisfaction provides various benefits, including creating a harmonious relationship between the company and the customer, which underlies repeat purchases and brand loyalty and generates word-of-mouth recommendations that are beneficial to the company (Bodet, 2008; Chen, 2012; Chi & Gursoy, 2009).

One method of increasing customer satisfaction is through quality improvement because customers are the main focus in assessing satisfaction and service quality (Darmayasa & Yasa, 2021). Service quality reflects the overall characteristics of goods and services that demonstrate the ability to meet customer needs, both visible and hidden (Hastono & Diana, 2021). Therefore, companies need to start seriously considering the importance of service with a focus on improving quality, given that the quality of service to customers is increasingly recognized as a crucial factor for staying in business and competing effectively (Lantang & Keni, 2022). In addition, service quality also serves as an indicator of how good the level of service provided is and the extent to which the service can meet customer expectations. Thus, quality improvement efforts will not only have a positive impact on customer satisfaction but also the sustainability and competitiveness of the company in the market (Darmawan et al., 2023).

For PT Kereta Api Indonesia (Persero), customer satisfaction is a crucial factor that not only impacts individual consumers but is also very influential for corporate customers such as PT Bukit Asam Tbk. The company is a major player in the coal mining industry in Indonesia, with strategic locations in Tanjung Enim, Lawang Kidul District, Muara Enim Regency, and Lahat Regency, South Sumatra Province. PT Bukit Asam Tbk. manages several mining units, including the Aira Layas, Muarak Tiga Besar, and West Bankol Mines, which contribute significantly to domestic and international coal supply (Saputra et al., 2024). For this reason, the relationship between the quality of service provided by PT Kereta Api Indonesia (Persero) and subscription satisfaction at PT Bukit Asam Tbk. is very important to study. High service quality can increase customer satisfaction, which in turn will have a positive impact on customer loyalty and long-term relationships between the two companies. Given that PT Bukit Asam Tbk. has complex logistics needs for coal transportation, optimal service quality from PT Kereta Api Indonesia will greatly affect the company's operational efficiency (Centobelli et al., 2017). The purpose of this study is to further explore the impact of these factors on customer satisfaction, with the hope of contributing to the development of more effective

service strategies and assisting PT Kereta Api Indonesia (Persero) in improving its performance and competitiveness in the Indonesian transportation and logistics industry.

## 2 Materials and Methods

The population in this study were employees of PT Bukit Asam Tbk who understood the business process of PTBA coal transportation using wagons owned by PT Kereta Api Indonesia (Persero). The sample used in this study was 100 respondents with a purposive sampling method. This amount is considered sufficient to represent the population to be studied because it meets the maximum limit of the research sample (Sugiyono, 2019). In this study, the authors used qualitative data collected through questionnaires which were quantified using a Likert scale. The data sources used in data collection in this study are primary data and secondary data as follows:

- a) Primary data in this study were obtained from respondents who are customers of PT Bukit Asam, Tbk regarding the quality of service from PT Kereta Api Indonesia (Persero) in 2023-2024.
- b) The secondary data used in this study were obtained from reports and supporting documents.

## 3 Results and Discussions

Table 1  
Normality Test Results

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residuals
N		100
Normal Parameters	Mean	.0000000
	Std. Deviation	.55723030
Most Extreme Difference	Absolute	.096
	Positive	.096
	Negative	-.041
Kolmogorov-Smirnov Z		.096
Asymp. Sig. (2-tailed)		.125

Data Source: Processed from Questionnaire, 2024

Based on the normality test results in the table, shows that the data is normally distributed. This is indicated by the *Kolmogorov-Smirnov* test which shows results that have a significance level of 0.125 which is above 0.05.

### *Multicollinearity Test Results*

Table 2  
Multicollinearity Test Results Table

Test Of Multicollinearity	VIF		Cutt Off	Description
Service Quality	1.839	<	10	No Multicollinearity
Price Perception	1.720	<	10	No Multicollinearity
Product Quality	1.651	<	10	No Multicollinearity

Data Source: Processed from Questionnaire, 2024

Based on the results of the table, show that there is no multicollinearity between the independent variables because it shows the VIF value is less than 10. Thus, in this model, there is no multicollinearity problem

### Multiple Linear Regression Analysis Results

Multiple linear regression analysis was performed to determine the effect of service quality variables (X) on customer satisfaction (Y). Based on the test results obtained as follows:

Table 3  
Multiple Linear Regression Analysis Results

Model	Coefficients			
	Unstandardized Coefficients	Std. Error	Standardized Coefficients	Sig.
1				
	<b>Constant</b>	.845	.271	
	Service Quality	.722	.078	.639

Data Source: Processed from Questionnaire, 2024

Based on the table, the results of multiple linear regression analysis can be expressed with the following equation:

$$Y = 0,845 + 0,722X_1 + 0,633X_2 + 0,592X_3 + e$$

The linear regression equation above can be explained as follows:

- The constant value shows a positive value with a value of 0.845. This shows that customer satisfaction is considered without the influence of service quality, the magnitude of the customer satisfaction variable is 0.845.
- The regression coefficient value of the service quality variable is 0.722 with a value of 7.872.  $t_{hitung}$  value of 7.872 states that service quality has a positive effect on customer satisfaction. This shows that the higher the quality of service carried out, the higher the customer satisfaction at PT Bukit Asam, Tbk.

### Test Results of Correlation Coefficient (r) and Coefficient of Determination (R<sup>2</sup>)

Table 4  
Correlation Coefficient Test Results (r) and Coefficient of Determination (R<sup>2</sup>)  
Model Summary<sup>b</sup>

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.820	.672	.662	.565870

Data Source: Processed from Questionnaire, 2024

Based on the *summary model output* in the table, the results of the correlation coefficient test (r) show that the magnitude of the influence of the service quality variable on customer satisfaction is 0.820 or 82%. The magnitude of the R square number (R<sup>2</sup>) is 0.672 or 67.2%, this figure is used to see how the service quality of PT Kereta Api Indonesia (Persero) on customer satisfaction at PT Bukit Asam, Tbk. This figure means that how the service quality variable shows what factors can affect customer satisfaction together by 67.2% while the remaining 32.8% is influenced by other factors.

### F Test Results

The F test in this study was conducted to identify whether the regression equation model was feasible or not feasible to use to explain the effect of the independent variables on the dependent variable. Based on the test results and data processing, the test results are as follows:

Table 5  
F Test Results

Model		ANNOVA <sup>b</sup>				
		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	63.013	3	21.004	65.596	.000 <sup>a</sup>
	Residuals	30.740	96	.320		
	Total	93.753	99			

Data Source: Processed from Questionnaire, 2024

Based on the results in Table 4.12, a significance value of 0.000 was obtained because the significance value of 0.000 < 0.05, it can be said that the linear regression model obtained is feasible to be used to explain the effect of service quality from PT Kereta Api Indonesia (Persero) on customer satisfaction at PT Bukit Asam, Tbk.

#### Results of the t-test

The t-test is carried out to determine how much influence the independent variables individually have on the dependent variable. This study with a significance of 5% or  $\alpha = 0.05$ . The t-test results can be seen in Table 6 as follows:

Table 6  
t-test results

Model		Coefficients			t	Sig.
		Unstandardized Coefficients		Standardized Coefficients		
1		B	Std. Error	Beta		
	(Constant)	.845	.271			
	Service Quality	.722	.078	.639	7.872	.000

Data Source: Processed from Questionnaire, 2024

Based on the results of the analysis calculations in Table 4.13, it can be described as follows, the service quality variable (X), has a beta value of 0.722 with a significant value of 0.000 which is smaller than 0.05. This shows that the service quality variable of PT Kereta Api Indonesia (Persero) has a positive and significant influence on customer satisfaction at PT Bukit Asam, Tbk. This shows that the service quality variable of PT Kereta Api Indonesia (Persero) has a positive and significant influence on customer satisfaction at PT Bukit Asam, Tbk. This proves that the first hypothesis on service quality variables has a positive and significant effect can be accepted.

#### *The Effect of Service Quality from PT Kereta Api Indonesia (Persero) on Customer Satisfaction at PT Bukit Asam, Tbk*

Service quality has a positive and significant effect on customer satisfaction. The relationship between service quality and customer satisfaction is very close and mutually influencing (Nelson et al., 2010). Service quality includes various aspects, such as reliability, responsiveness, assurance, empathy, and physical evidence, all of which contribute to the customer's overall experience. When customers receive high-quality service, they tend to feel more satisfied because their expectations are met or even exceeded. Conversely, if service quality is low, customers will feel disappointed, which can lead to dissatisfaction and potentially loss of customers (Bahar & Sjahrudin, 2022). The importance of this relationship is seen in how customers evaluate their experiences. For example, if the service provided is accurate and consistent, customers feel confident that the company is reliable, which increases satisfaction. In addition, positive interactions with friendly and responsive staff can create a deep emotional connection, thus increasing customer loyalty (Ladhari, 2010; Meesala & Paul, 2018; Brady et al., 2002). Companies that focus on improving service quality not only succeed in increasing customer satisfaction but also gain a good reputation, attract more customers, and ultimately improve their financial performance (Harjati & Venesia, 2015).

Respondents' responses to the indicator of PT Kereta Api Indonesia make customers feel safe and satisfied if they use the services offered to show the lowest value. This shows that some respondents who are customers who use the

services of PT Kereta Api Indonesia (Persero) in choosing coal transportation say they are less satisfied with the services offered. Where this occurs with the condition of train cars that are not by customer needs such as inadequate quality of cars, as well as the number of cars that are not too many to make delays in delivery which are still considered inefficient.

Respondents' responses to the indicator of PT Kereta Api Indonesia treating customers well and friendly showed the highest score. This shows that the employees and service officers of PT Kereta Api Indonesia (Persero) have provided good service following company standards. Service employees and officers provide their best service to provide satisfaction for customers.

#### **4 Conclusion**

Based on the results of research and analysis that has been done, it can be concluded that the quality of service from PT Kereta Api Indonesia (Persero) has a positive and significant effect on customer satisfaction at PT Bukit Asam, Tbk.

##### *Conflict of interest statement*

The authors declared that they have no competing interests.

##### *Statement of authorship*

The authors have a responsibility for the conception and design of the study. The authors have approved the final article.

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