

ANALYSIS THE EFFECT OF SERVICE QUALITY DIMENSIONS ON CUSTOMER SATISFACTION OF TRANSJAKARTA PUBLIC TRANSPORTATION

Farhan Faturrachman Indra ^{a*)}, AMA Suyanto ^{a)}

^{a)}Telkom University, Bandung, Indonesia

^{*)}Corresponding Author: farhanfaturrachmanin@student.telkomuniversity.ac.id

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Abstract. The issue of traffic congestion in DKI Jakarta remains unsolved by the local government. Data from the Indonesian National Police reveals a continuous rise in motorized vehicles, particularly motorcycles and cars, from 2020 to 2022. This is corroborated by the 2023 rankings from TomTom, which position Jakarta as the 29th most congested city worldwide in terms of traffic. The DKI Jakarta Provincial Government has introduced public transportation options, including the Jakarta MRT, Jakarta LRT, Mikrotrans, and Transjakarta, to address traffic congestion. Transjakarta has gained popularity, carrying over a million passengers daily in August 2022, indicating a growing acceptance of government-owned public transit services. This study aims to assess how various aspects of service quality impact customer satisfaction within the context of Transjakarta public transportation. A sample of 391 respondents was analyzed using multiple linear regression through IBM SPSS 25 software. Data was collected via Google Forms. Findings reveal that several dimensions, including Tangibility, Responsiveness, Assurance, and Empathy, positively influence Customer Satisfaction. However, the Reliability dimension has no significant impact on Customer Satisfaction. Importantly, collectively, the SERVQUAL dimensions (Tangibility, Responsiveness, Reliability, Assurance, Empathy) demonstrably affect Customer Satisfaction with Transjakarta Public Transportation.

Keywords: service quality; customer satisfaction; Transjakarta

I. INTRODUCTION

Finding unique methods to maintain customer satisfaction should be the foremost priority in running a business. Nevertheless, companies face the challenge of creating new approaches to enhance their service quality as customer loyalty decreases and customer demands increase. Customer satisfaction itself can be interpreted as the key to building customer loyalty. With meeting customer needs, individuals or organizations will only attain loyalty if they focus on product and service quality as drivers of customer satisfaction [1]. Service quality is based on the assumption that customer expectations and perceptions of service quality change over time. In the book by [1] and the journal by [2], Service Quality has several dimensions, including Tangibility, Responsiveness, Reliability, Assurance, and Empathy. This study explains that service quality positively and significantly affects customer satisfaction in beauty e-commerce. Therefore, based on these previous studies, service quality positively affects customer satisfaction [3]. Traffic congestion in DKI Jakarta remains a problem that the Jakarta Provincial Government has yet to overcome. According to data from TomTom's website (2023), traffic congestion in Jakarta is currently ranked 29th in the world. It has also been demonstrated that the traffic congestion scenario in Jakarta during 2022 saw a rise in the average travel duration for every

10 km by 2 minutes and 50 seconds compared to 2021. This contrasts with the situation in 2021 when Jakarta's congestion ranked 46th among 56 nations. According to data quoted from Jakarta.bps.go.id, the number of motor vehicles in DKI Jakarta has continued to increase from 2020 to 2022 [4]. This data explains many motor vehicles in DKI Jakarta, especially motorcycles, which amounted to 17,304,447 vehicles in 2022, and passenger cars, which amounted to 3,766,059 vehicles in 2022. This indicates that motorcycles and cars dominate the motor vehicle population in DKI Jakarta.

In addition to implementing the odd-even policy, the Jakarta Provincial Government continues to develop public transportation facilities such as MRT Jakarta, LRT Jakarta, Mikrotrans, and Transjakarta. Currently, transportation in DKI Jakarta is becoming favoured by Jakarta residents. This fact is supported by data from the Jakarta Provincial Government's Environmental Agency, displayed on databooks.katadata.co.id website in 2022 [5]. Based on this data, it is shown that in August 2022, Transjakarta could carry an average of 1,006,579 passengers per day. This indicates that the public has begun to realize and get used to using the public transportation services provided by the Jakarta Provincial Government. However, the mobility of using Transjakarta must be balanced with its service quality. Nevertheless, Transjakarta faces numerous problems related to service quality, including frequent bus accidents. According to the Jakarta Transportation Agency, there were

827 bus accidents involving Transjakarta buses from January to September 2022. Given the frequent incidents of bus accidents, numerous users and members of the public express their opinions on news posts through comments on Instagram. They not only comment on the frequency of accidents but also emphasize the importance of the health of Transjakarta bus drivers. Apart from accidents, Transjakarta buses also face issues like queuing at bus stops due to the new "tap in - tap out" rule. Many Transjakarta users complain about this new rule as it leads to long queues at the stops, consuming a significant amount of time for "tapping in" and "tapping out."

As previously explained, customer satisfaction is crucial for Transjakarta's retention. The dimensions of service quality influence customer satisfaction. Hence, based on the existing problems, coupled with previous studies related to the influence of Service Quality Dimensions on Customer Satisfaction, the author conducts a research study on this topic titled "Analysis of the Influence of Service Quality Dimensions on Customer Satisfaction (Case Study of Transjakarta Public Transportation)."

The goals of this research are : Analyze and determine the influence of Tangibility on Customer Satisfaction in Transjakarta Public Transportation. Analyze and determine the influence of Responsiveness on Customer Satisfaction in Transjakarta Public Transportation. Analyze and determine the influence of Reliability on Customer Satisfaction in Transjakarta Public Transportation. Analyze and determine the influence of Assurance on Customer Satisfaction in Transjakarta Public Transportation. Analyze and determine the influence of Empathy on Customer Satisfaction in Transjakarta Public Transportation. Analyze and determine the combined influence of Tangibility, Assurance, Reliability, Responsiveness, and Reliability Empathy on Customer Satisfaction in Transjakarta Public Transportation.

Marketing Management

Conducting marketing activities is the primary responsibility that every company, whether offering products or services, needs to carry out to ensure optimal operational continuity. The presence of capable management in controlling marketing strategies becomes a determining factor for a company's success [6]. Marketing Management involves skills and knowledge in selecting target markets to attract, retain, and develop customers through creating, communicating, and providing unique customer value [1]. Marketing Management is an activity that conveys a product or service, starting from the producer to the consumer [7]. Considering the explanations provided by experts, it can be perceived that Marketing Management is the primary responsibility of every company in ensuring optimal operational efficiency.

Marketing of Service

A service is a product that is not visible or tangible, but rather an activity offered to others that provides benefits and satisfaction to those individuals [8]. Service is a step that is not visible, cannot be touched, and is invisible to the eye, yet it can be transferred from one individual to another [9]. After considering the explanations provided by experts, it can be perceived that a service is an activity or action that lacks physical form, is not visible, but can be felt and beneficial for

users, usually provided by one party (individual or organization).

Service Quality

Service quality has become the primary focus that companies need to consider in the current era, which prioritizes their customers. In other words, companies can be deemed more competent if they can provide services that align with the desires of their customers [6]. Service quality fundamentally revolves around efforts to meet customer needs and desires, as well as the accuracy of delivery to align with consumer intentions [10]. Service quality is a conceptual framework commonly used for evaluation based on perceived performance[11]. After considering the explanations provided by experts, it can be concluded that service quality is the primary focus for companies in an era that prioritizes customers. Companies capable of providing services in line with customer desires are considered superior.

Service Quality Dimensions

Service quality includes five dimensions: Tangibility, Responsiveness, Reliability, Assurance, and Empathy[1][2]. The explanations related to these dimensions are: 1. Tangibility, This dimension includes physical services, human resources, equipment, and communication facilities. 2. Responsiveness, This dimension aims to help customers and provide fast service if they get customer requests. 3. Reliability, This dimension aims to deliver the promised service with accuracy and trustworthiness. 4. Assurance, This dimension aims to describe the wisdom, ethics of employees and the capabilities of employees in building confidence and trust. 5. Empathy, This dimension aims to pay attention to the problems of its customers and establish relationships with customers.

Customer Satisfaction

Satisfaction is critical in building customer loyalty [1]. While customer satisfaction is the main element that has the potential to influence customer loyalty to the quality of goods or services [12]. Impulse buying will affect consumer preferences in choosing a public transformation mode, one of which is Transjakarta. Impulse buying itself is an activity in determining purchasing decisions. The decision occurs suddenly and instantly moments before making a purchase [3].

Research Hypothesis

The hypothesis is a statement about a population condition that will be tested for validity using data collected from a research sample [13]. Based on the framework above, the initial hypotheses for conducting the research are as follows: Hypothesis 1 (H1): The Tangibility (Tangible) dimension significantly influences Customer Satisfaction. Hypothesis 2 (H2): The Responsiveness dimension has a significant direct influence on Customer Satisfaction. Hypothesis 3 (H3): The Reliability dimension has a significant direct influence on Customer Satisfaction. Hypothesis 4 (H4): The Assurance dimension has a significant direct influence on Customer Satisfaction. Hypothesis 5 (H5): The Empathy dimension has a significant direct influence on Customer Satisfaction. Hypothesis 6 (H6): Tangibility, Responsiveness, Reliability, Assurance, and Empathy collectively have a significant direct influence on Customer Satisfaction.

II. RESEARCH METHODS

This research uses quantitative methods to investigate a particular population. The population researchers use consists of all Transjakarta public transportation users represented by numerical numbers. The data were analyzed using multiple linear regression with IBM SPSS 25 software. This study used 391 respondents, with a minimum number of 384.16 respondents obtained from Sugiyono's formula, rounded up to 385 respondents, involving Transjakarta public transportation users who participated in the study. This data was collected using a non-probability sampling technique known as purposive sampling. The data collection method used was by distributing questionnaires online.

III. RESULTS AND DISCUSSION

A validity test is an examination that determines the measuring instrument's ability to measure what it should measure [14]. This validity test evaluates whether the collected data accurately represents valid data. In this research, 391 respondents were involved in the validity testing out of 400 respondents, with a significance level of 5%. Hence, the critical value (*r*-table) is found to be 0.099. The degrees of freedom (*df*) are calculated as (*N* - 2), resulting in *df* = 28, and the obtained *r*-table value is 0.099. result above presents the validity test results, indicating that 36 items from the questionnaire can be considered valid as they have a calculated *r*-value greater than the critical *r*-table value and significance less than 0.05. Therefore, it can be concluded that the items in this questionnaire have passed the validity test.

A questionnaire in a study can be considered reliable if the reliability coefficient value is > 0.6. With such a value, the questionnaire can be deemed reliable and suitable. The reliability test results for the six variables in this study, processed using SPSS 25 software, are presented in the following Table 1.

Table 1. Cronbach's Alpha Values For Each Variable

Variabel	Cronbach's Alpha	Jumlah Item	Kesimpulan
Tangibility	0.869	11	Good
Responsiveness	0.815	6	Good
Reliability	0.676	4	Fair
Assurance	0.797	7	Good
Empathy	0.790	4	Good
Customer Satisfaction	0.837	4	Good

The reliability test results for the six variables in this study, processed using SPSS 25 software, can be seen in the table, indicating that all six variables studied in this research are considered reliable.

This normality test determines Whether the residuals of the regression model or the influencing variables follow a normal distribution [15]. When measuring normally distributed

data, the data distribution is surrounded by a straight line with a sloping line from the lower left corner to the upper right corner, as shown in the P-P Plot chart of Regression Standardized Residual[16].

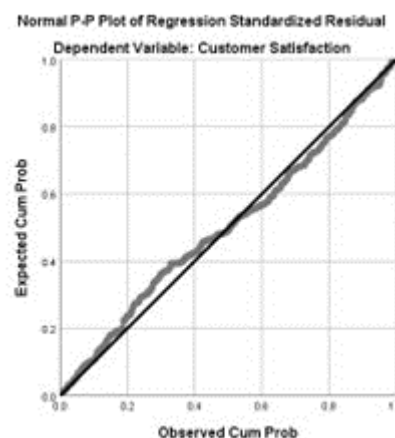


Figure. 1 Normality Test Results

Based on information from Figure 1, it becomes evident that this research involved 391 samples. The above data displays an average value, implying a reasonable assumption of a normal distribution due to the data trend approaching normality with an increased sample size.

Multiple Linear Regression Analysis

The results of the multiple linear regression analysis conducted using IBM SPSS 25 software on the variables Tangibility (X1), Responsiveness (X2), Reliability (X3), Assurance (X4), Empathy (X5), and Customer Satisfaction (Y) for Transjakarta users yielded regression coefficients that can be interpreted as follows:

$$Y = A + B_1X_1 + B_2X_2 + \dots + B_nX_n$$

$$Y = (-0.071) + (0.081)X_1 + (0.087)X_2 + (0.042)X_3 + (0.198)X_4 + (0.292)X_5$$

Explanation:

- Y = Customer Satisfaction Variable
- X1 = Tangibility Dimension Variable
- X2 = Responsiveness Dimension Variable
- X3 = Reliability Dimension Variable
- X4 = Assurance Dimension Variable
- X5 = Empathy Dimension Variable

The equation can be further elaborated as follows:

- 1) **A**: The constant value of -0.071, which means if the SERVQUAL dimension variables do not influence Customer Satisfaction, its value will be -0.071. This implies that the value of Customer Satisfaction will decrease and go below 0 if there is no influence from the independent variables.
- 2) **B₁**: The regression coefficient for the Tangibility dimension variable stands at 0.081, suggesting that there is a 0.081 influence on Customer Satisfaction attributed to the Tangibility dimension. In simpler

terms, when the Tangibility value rises, so does Customer Satisfaction.

- 3) **B₂**: The regression coefficient for the Responsiveness dimension variable is 0.087, signifying an effect of 0.087 on Customer Satisfaction attributed to the Responsiveness dimension. In other words, as the Responsiveness value increases, so does Customer Satisfaction.
- 4) **B₃**: The regression coefficient for the Reliability dimension variable is 0.042, denoting that the Reliability dimension exerts an effect of 0.042 on Customer Satisfaction. This implies that an increase in the Reliability value corresponds to a rise in Customer Satisfaction.
- 5) **B₄**: The regression coefficient for the Assurance dimension variable is 0.198, signifying that the Assurance dimension holds sway with a 0.198 impact on Customer Satisfaction. In simpler terms, when the Assurance value goes up, so does Customer Satisfaction.
- 6) **B₅**: The regression coefficient for the Empathy dimension variable stands at 0.292, suggesting that there is a 0.292 impact on Customer Satisfaction associated with the Empathy dimension. In other words, when the Empathy value rises, Customer Satisfaction also increases.

Table 1 Test Results T

		Coefficients ^a			
Model		Unstandardized Coefficients	Standardized Coefficients	t	Sig.
		B	Std. Error	Beta	
1	(Constant)	-.071	.645		.912
	Tangibility	.081	.021	.187	3.921
	Responsiveness	.087	.034	.122	2.592
	Reliability	.042	.060	.038	.837
	Assurance	.198	.034	.293	5.838
	Empathy	.292	.050	.284	5.848

a. Dependent Variable: Customer Satisfaction

H1: The Influence of the SERVQUAL Tangibility Dimension on Customer Satisfaction becomes apparent when examining the outcomes of partial hypothesis testing (T-Test) presented in Table 3. Here, the computed t-value (3.921) surpasses the critical t-value (1.966), and the significance value associated with Tangibility (0.000) is less than 0.05. Consequently, H₀ is dismissed in favor of H₁, signifying that the Tangibility Dimension variable has a meaningful partial impact on Customer Satisfaction. H₂: The Influence of the SERVQUAL Responsiveness Dimension on Customer Satisfaction is evident from the outcomes of partial hypothesis testing (T-Test) as shown in Table 3. Here, the computed t-value (2.592) exceeds the critical t-value (1.966), and the significance level for Responsiveness (0.010) is less than 0.05. Consequently, H₀ is dismissed in favor of H₁, suggesting that the Responsiveness Dimension variable has a meaningful

partial impact on Customer Satisfaction. H₃: The Influence of the SERVQUAL Reliability Dimension on Customer Satisfaction is discerned through an examination of the partial hypothesis testing (T-Test) outcomes presented in Table 3. In this analysis, the computed t-value (0.837) falls short of the critical t-value (1.966), and the significance level for Reliability (0.403) exceeds 0.05. Consequently, H₀ is affirmed, and H₁ is discarded, suggesting that the Reliability Dimension variable does not have a meaningful partial impact on Customer Satisfaction. H₄: The Influence of the SERVQUAL Assurance Dimension on Customer Satisfaction becomes apparent when reviewing the outcomes of partial hypothesis testing (T-Test) as shown in Table 3. In this examination, the computed t-value (5.838) exceeds the critical t-value (1.966), and the significance level for Assurance (0.000) is less than 0.05. Consequently, H₀ is invalidated, and H₁ is supported, signifying that the Assurance Dimension variable has a meaningful partial impact on Customer Satisfaction. H₅: The Influence of the SERVQUAL Empathy Dimension on Customer Satisfaction becomes apparent when analyzing the outcomes of partial hypothesis testing (T-Test) as illustrated in Figure 4.13. In this examination, the computed t-value (5.848) exceeds the critical t-value (1.966), and the significance level for Empathy (0.000) is less than 0.05. As a result, H₀ is dismissed, and H₁ is upheld, signifying that the Empathy Dimension variable has a substantial partial impact on Customer Satisfaction. H₆: The Influence of SERVQUAL Dimensions on Customer Satisfaction is evident from the results of concurrent hypothesis testing (F-Test) presented in Figure 4.12. The calculated F-value, recorded at 129.520, significantly surpasses the critical F-value of 2.237. Furthermore, the significance value (sig) measures 0.000, which is lower than the conventional threshold of 0.05. Consequently, the concurrent hypothesis testing decisively rejects H₀ in favor of H₁. In essence, this underscores that the combined impact of SERVQUAL Dimensions (Tangibility, Responsiveness, Reliability, Assurance, Empathy) has a substantial influence on Customer Satisfaction within Transjakarta Public Transportation. This suggests that if these SERVQUAL Dimensions (Tangibility, Responsiveness, Reliability, Assurance, Empathy) collectively improve, it will lead to an increase in Customer Satisfaction among Transjakarta users.

IV. CONCLUSIONS

From the results of research conducted on the Dimensions of Service Quality and their impact on the Customer Satisfaction variable using multiple linear regression calculations, this study has the following conclusions: For the Tangibility Dimension, the results reveal a positive effect, with a beta coefficient of 0.187, demonstrating a direct and favorable relationship between Tangibility quality and customer satisfaction. This suggests that higher Tangibility dimension quality corresponds to increased Customer Satisfaction among Transjakarta users. The results of partial hypothesis testing (T-test) show that the Responsiveness Dimension variable positively affects Customer Satisfaction. The beta coefficient

for the Responsiveness dimension is 0.122, indicating a positive and unidirectional relationship between the quality of Responsiveness and customer satisfaction, which means that the better the Responsiveness dimension variable, the higher the Customer Satisfaction of Transjakarta users. The results of partial hypothesis testing (T-test) show that for the Reliability variable, H0 is accepted and H1 is rejected, which means that the Reliability Dimension variable partially does not affect Customer Satisfaction. The outcome of partial hypothesis testing (T-test) show that the Assurance Dimension Variable positively affects Customer Satisfaction. The beta coefficient for the Assurance Dimension is 0.293, indicating a positive and unidirectional relationship between customer satisfaction and assurance quality customer satisfaction, which means that the better the Assurance dimension variable, the higher the Customer Satisfaction of Transjakarta users. The results of partial hypothesis testing (T-test) show that the Empathy Dimension variable positively affects Customer Satisfaction. The beta coefficient for the Empathy Dimension is 0.284, indicating a positive and unidirectional relationship between customer satisfaction and empathy quality. The F test (ANOVA) results show the Fcount value of 129.520 and the Ftable value of 2.237, which means $F_{count} > F_{table}$. Then, the sig value shows $0.000 < 0.05$. Thus, it is obtained that H0 is rejected and H1 is accepted. So, the SERVQUAL dimensions (Tangibility, Responsiveness, Reliability, Assurance, Empathy) simultaneously affect Customer Satisfaction with Transjakarta Public Transportation.

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