Confirmatory Factor Analysis of Paratransit Service Quality in Jambi City

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Article Info

ISSN (online): 2582-7138
Volume: 06
Issue: 03
May - June 2025
Received: 23-04-2025
Accepted: 24-05-2025
Page No: 1821-1828

Abstract
This study focuses on analyzing the quality of paratransit services in Jambi City using the SERVQUAL model, integrated with Structural Equation Modeling (SEM) via Partial Least Squares (PLS) and Confirmatory Factor Analysis (CFA) second order. Paratransit, such as angkot (public minibus), plays a significant role in urban transportation, especially in cities like Jambi. However, despite its mportance, there are issues related to service quality that affect customer satisfaction, particularly among tourists and new users. The research aims to explore how the SERVQUAL dimensions reliability, responsiveness, assurance, empathy, and tangibles affect the quality of paratransit services and the level of customer satisfaction. A quantitative approach using online surveys and direct observations was conducted, and the data were analyzed using PLS-SEM to evaluate the relationships between service quality dimensions and customer satisfaction. The findings reveal that reliability and tangibles are the most significant factors impacting customer satisfaction, with satisfaction acting as a key mediator in the relationship between service quality and customers' intention to revisit. However, other factors such as empathy and assurance did not significantly affect satisfaction. The study concludes that improving service quality in areas such as reliability, travel time, and customer amenities is crucial for enhancing overall satisfaction and encouraging repeat usage of paratransit services in Jambi City.

Keywords: Paratransit, Service Quality, Jambi City, Confirmatory Factor Analysis, Customer Satisfaction

1. Introduction

Paratransit, as an informal mode of transportation, plays a strategic role in urban transportation systems, particularly in developing countries, by providing flexible and affordable services to various segments of the population (Cervero, 2000; Hine & Scott, 2000) [5, 14]. Paratransit often becomes an essential solution to address the limitations of formal mass transportation, especially in connecting suburban areas with central activity hubs (Mees, 2000) [15]. However, the operational characteristics of paratransit, which tend to be informal and less standardized, result in significant variations in the quality of services provided (Vuchic, 2007) [20]. In Jambi City, paratransit services such as angkot play a vital role in the daily mobility of residents. However, suboptimal service quality often becomes a major obstacle that reduces customer satisfaction, particularly for tourists and new users (Bakti & Sumaedi, 2015) [3]. Research on the quality of paratransit services in Indonesia is still limited, despite the fact that a deep understanding of the factors influencing customer satisfaction is crucial to supporting the sustainability and competitiveness of services (Susilo *et al*., 2011) [19]. Research by Cervero & Golub (2007) [6] emphasizes that paratransit service quality greatly affects users' mode choice and satisfaction levels, ultimately impacting the overall sustainability of the transportation system. Furthermore, aspects such as reliability, comfort, and safety are key factors that determine customers' perceptions of paratransit services (Corinne Mulley, 2016) [7]. In the Indonesian context, a study by (Susilo *et al*., 2011) [19] shows that although paratransit remains a primary choice for many users, there is an urgent need to improve service quality in order to compete with other increasingly developed transportation modes.

Service quality is a key determinant in shaping customer satisfaction across various service sectors, including transportation (Caruana, 2002; Olorunniwo *et al*., 2006) [4, 16].

One of the most widely adopted models to measure service quality is SERVQUAL, which identifies five key dimensions: reliability, responsiveness, assurance, empathy, and tangibles (Parasuraman *et al*., 1988) [1]. This model has been widely validated across various industry contexts, including public transportation and paratransit, and has proven effective in identifying critical areas that influence customer perceptions (Eboli & Mazzulla, 2007; Pakdil & Aydın, 2007) [8, 17]. This study aims to analyze the quality of paratransit services in Jambi City using a modified SERVQUAL approach, employing Structural Equation Modeling (SEM) based on Partial Least Squares (PLS) and second-order Confirmatory Factor Analysis (CFA). This approach enables the identification of complex relationships between service quality dimensions, as well as testing a more robust model compared to conventional methods (Hair *et al*., 2017; Henseler *et al*., 2009) [12, 13]. This analysis is also crucial for evaluating the impact of service quality perceptions on customer satisfaction and loyalty, which have been proven to be key factors in the success of public transportation services (Eboli & Mazzulla, 2011) [9].

Moreover, the integration of variables within the SERVQUAL dimensions can help formulate improvement priorities based on the attributes most influential to customer satisfaction (Pakdil & Aydın, 2007; Zeithaml *et al*., 1990) [17, 22]. Therefore, the findings of this study are expected to provide strategic recommendations for policy development and service quality improvement for paratransit in Jambi City. In this way, the analysis of paratransit service quality using the SERVQUAL model combined with SEM PLS second-order CFA is not only theoretically relevant but also crucial in providing a comprehensive empirical picture of the factors influencing customer satisfaction in the context of urban transportation in Jambi City.

2. Methods

This study was conducted at terminals in Jambi City, including Rawasari Terminal and Alam Barajo Terminal. Additionally, data was gathered from points where ojek bases, both conventional and online, operate. The population for this study consists of passengers using paratransit services such as angkot, conventional ojek, online ojek, and online taxis.:

1. Sampling Technique

The sample selection in this study was carried out using purposive sampling, a technique that involves selecting respondents based on specific criteria (Sugiyono, 2019) [18]. The criteria used to select the sample for this study are passengers who have used paratransit services, such as angkot, conventional ojek, online ojek, and online taxis. Thus, the respondents in the sample have already experienced these paratransit services. The minimal sample size was determined using the Slovin formula as follows:

$$n=\frac{N}{1+Ne^2}$$

Where:

n = sample size, N = total population, e = margin of error (0.1 or 10%).

Based on data from the Jambi Provincial Planning Board (Bappeda Jambi, 2023), the average number of passengers through the terminals from 2020–2022 was 197,048 people. Using the formula, the minimal sample size was calculated:

$$n=\frac{N}{1+Ne^2}$$

$$n=\frac{197.048}{1+197.048\ (0,1)^2}\quad n=100$$

2. Data Collection Techniques

The data collected in this study include both primary and secondary data. The data collection techniques used are:

a. Survey Methods

A closed-ended questionnaire, based on an online Google Form, was used to assess respondents' demographic details and their evaluation of the quality of paratransit services in Jambi City, using SERVQUAL service quality indicators.

b. Literature Review Methods

Secondary data were collected through a literature review and from government departments, including route data for BRT and angkot, as well as information about the city's roads, vehicle ownership, and population data.

3. Research Variables

The variables analyzed in this study are based on one of the most commonly used service quality measurement models, SERVQUAL, developed by Parasuraman *et al*. (1988) [1]. This model identifies 22 indicators grouped into five dimensions:

- Reliability refers to the ability to deliver promised services dependably and accurately.
- Responsiveness is the willingness to help customers and provide prompt service.
- Assurance involves the attitude and knowledge that instills trust and confidence in customers.
- Empathy is the understanding, interest, and personal attention given to customers.
- Tangibles refer to the physical appearance, equipment, and employee presentation.

4. Data analysis

All data analysis was conducted using Microsoft Excel and SmartPLS 3 software. The analysis was conducted as follows:

a. Descriptive Quantitative Analysis

Data analyzed includes the socio-demographic characteristics of respondents related to paratransit services such as angkot, conventional ojek, online ojek, and online taxis in Jambi City.

b. Structural Equation Modeling (SEM)

The measurement model analysis in SEM uses Confirmatory Factor Analysis (CFA) based on the model developed by Ijaz *et al* (2011) in Pasaribu *et al*., (2013). alidity tests for the research instrument were conducted using Pearson correlation equations, and reliability tests were performed using Cronbach's Alpha formula. The goodness-of-fit of the measurement model with the data was evaluated using Goodness of Fit tests, while the structural model was assessed using Multiple Regression Analysis to determine the relationship between service quality criteria factors and customer satisfaction or company performance.

3. Results and Discussion

This study uses the Partial Least Squares Structural Equation Modeling (PLS-SEM) analysis method. PLS-SEM is a statistical technique used to analyze the relationships between latent variables and their indicators in the context of theoretical and predictive research. This method allows researchers to test predefined models, especially when the data do not meet normality assumptions or when dealing with small sample sizes (Hair *et al.*, 2017) [12]. Analisis model pengukuran dalam PLS-SEM menggunakan Confirmatory Factor Analysis (CFA he measurement model analysis in PLS-SEM uses Confirmatory Factor Analysis (CFA). CFA in transportation is used to validate the measurement model and assess the relationships between observed variables and latent constructs. CFA employs a covariance matrix to connect observed variables with latent factors, and the model fit is evaluated through statistical tests (Fox, 2006). he CFA estimation process involves maximum likelihood estimation, which compares the sample covariance matrix with the hypothesized model (Fox, 2006). The Goodness-of-Fit index is crucial for determining how well the model represents the data, guiding the researcher in model modification if necessary (Nye, 2022).

Data acquisition for indicator variables from the SEM-PLS CFA test, where the loading factor resulting in outer loadings below 0.7, will be eliminated as shown in Table 4. Irwan dan Adam (2015) state that the loading factor value should be >0.70 for convergent validity. If the outer loading value is below 0.70, the indicator must be removed to meet high standards. The results of CFA Stage I analysis, displayed in the figure above, show that each latent construct is measured by several indicators with significant factor loadings, reflecting strong relationships between the construct and its indicators. Four data points were eliminated to achieve the validity of the research: P3, P4, Q3, and Q4, which are reliability indicators. Data processing then continued with CFA Stage II analysis.

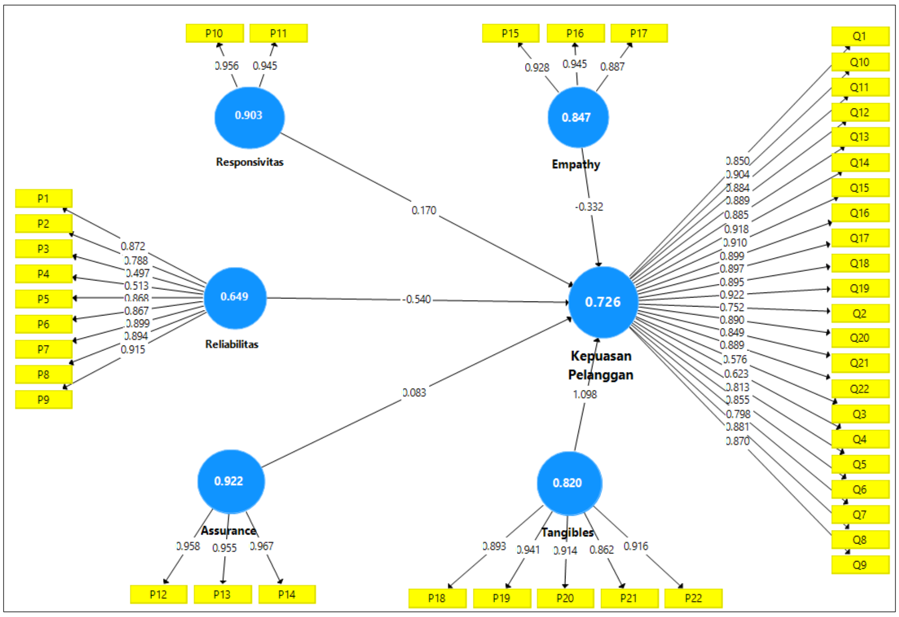

Fig 1: PLS-SEM Confirmatory Factor Analysis (CFA) Stage I Results using SmartPLS

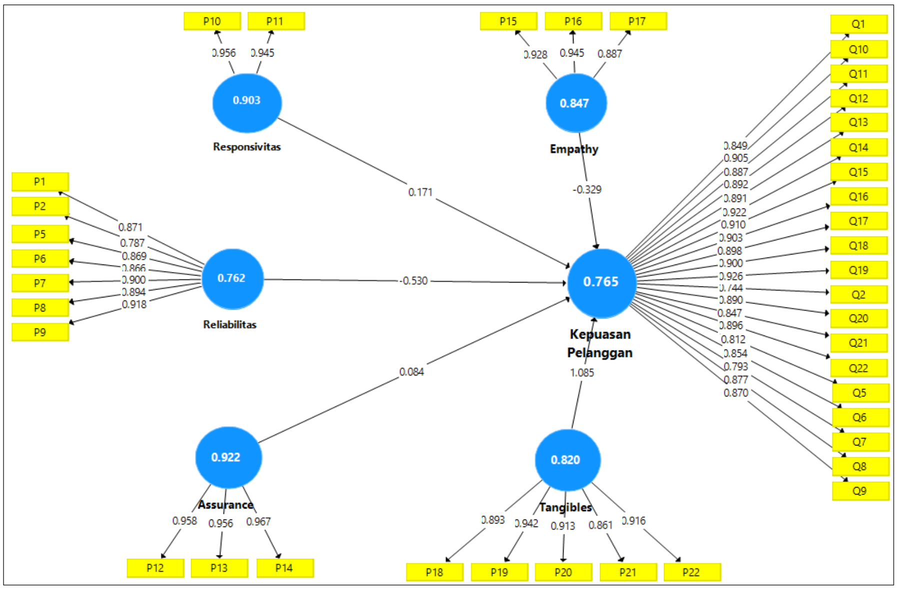

Fig 2: PLS-SEM Confirmatory Factor Analysis (CFA) Stage II Results using SmartPLS

In the Stage II testing, the loading factor results show that all the indicator variables, as presented in Table 1, have outer loadings greater than 0.7, indicating that the data meets validity criteria.

Table 1: Outer Loading Stage I and Outer Loading Stage II

Variabel	Item	Outer Loading 1	Outer Loading 2
Reability	P1	0.872	0.871
	P2	0.788	0.787
	P3	0.497	-
	P4	0.513	-
	P5	0.868	0.869
	P6	0.867	0.866
	P7	0.899	0.900
	P8	0.894	0.894
	P9	0.915	0.918
Responsiveness	P10	0.956	0.956
	P11	0.945	0.945
Assurance	P12	0.958	0.958
	P13	0.955	0.956
	P14	0.967	0.967
Empathy	P15	0.928	0.928
	P16	0.945	0.945
	P17	0.887	0.887
Tangibles	P18	0.893	0.893
	P19	0.941	0.942
	P20	0.914	0.913
	P21	0.862	0.861
	P22	0.916	0.916
Customers Satisfaction	Q1	0.850	0.849
	Q2	0.752	0.744
	Q3	0.576	-
	Q4	0.623	-
	Q5	0.813	0.812
	Q6	0.855	0.854
	Q7	0.798	0.793
	Q8	0.881	0.877
	Q9	0.870	0.870
	Q10	0.904	0.905
	Q11	0.884	0.887
	Q12	0.889	0.892
	Q13	0.885	0.891
	Q14	0.918	0.922
	Q15	0.910	0.910
	Q16	0.899	0.903
	Q17	0.897	0.898
	Q18	0.895	0.900
	Q19	0.922	0.926
	Q20	0.890	0.890
	Q21	0.849	0.847
	Q22	0.889	0.896

Source: Researcher's Analysis 2025

Reliability shows factor loadings ranging from 0.497 to 0.915, with indicators P6 (0.894) and P9 (0.915) demonstrating very strong relationships with the construct. However, indicators P3 (0.497) and P5 (0.513) exhibit factor loadings lower than 0.70, suggesting potential issues in measurement or the suitability of these indicators in representing the reliability construct. These lower factor loadings were further analyzed and subsequently modified or removed from the model, as shown in the Stage II outer loading column. For the Responsiveness construct, the factor loadings for indicators P10 (0.956) and P11 (0.945) show a very strong relationship between the latent variable and its indicators, indicating good convergent validity (Hair *et al.*, 2017) [12]. This means that these indicators effectively represent the responsiveness dimension in the context of this study.

The Assurance construct, measured by indicators P12, P13, and P14, demonstrates very high factor loadings, all above 0.95 (P12: 0.958, P13: 0.955, P14: 0.967). This shows that the assurance construct has excellent convergent validity, meaning these indicators can be relied upon to measure the trust dimension described by assurance (Fornell & Larcker, 1981). Empathy and Tangibles show significant factor loadings, though there is some variation in their indicators. For example, in Empathy, indicators P15 (0.928) and P16 (0.945) demonstrate a strong relationship with the latent construct, but indicator P17 (0.887) shows a slightly lower value. This could indicate potential improvements to the instrument or further adjustments in measuring the empathy dimension.

The Customer Satisfaction construct has a relatively complex relationship with other constructs, with varied factor loading values among its indicators. Indicators Q1 (0.850) and Q21 (0.849) show a very strong relationship with this construct. The most representative indicators are Q19 (0.922) and Q14 (0.918), which exhibit significant relationships, suggesting that customer satisfaction as a construct is well explained by these indicators. However, for the Customer Satisfaction construct, the Stage I outer loading values for indicators Q3 (0.576) and Q4 (0.623) were eliminated from the model because their values were below 0.7.

Tabel 2: Composite Reability, dan Average Variance Extracted (AVE) Confirmatory Factor Analysis (CFA)

Variabel	Cronbach Alpha	Composite Reability	AVE
Reabilitas	0.949	0.957	0.762
Responsivitas	0.893	0.949	0.903
Assurance	0.958	0.973	0.922
Empathy	0.909	0.943	0.847
Tangibles	0.945	0.948	0.820
Satisfaction	0.984	0.985	0.765

Source: Researcher's Analysis 2025

The indicators in this paratransit study in Jambi City were measured using Cronbach's Alpha, Composite Reliability (CR), and Average Variance Extracted (AVE). These three measures are essential for evaluating the validity and reliability of the measurement model in Structural Equation Modeling (SEM) analysis. Cronbach's Alpha (α) indicates how consistent the indicators used are in measuring the latent construct (Fornell & Larcker, 1981; Hair *et al.*, 2017) [12, 10]. In PLS-SEM analysis, CR considers the factor loadings of the indicators and provides a more accurate assessment of the construct's reliability (Hair *et al.*, 2017; Chin & Marcoulides, 1998) [12]. An AVE value higher than 0.5 indicates that more than 50% of the variance in the indicators can be explained by the construct, showing good convergent validity (Fornell & Larcker, 1981; Hair *et al.*, 2017) [12, 10].

The reliability construct shows that the indicator P9 has the highest outer loading value, which is 0.918, meaning there is a very strong relationship between this indicator and the reliability construct itself. The Cronbach's Alpha result of 0.949 and Composite Reliability of 0.957 provide strong evidence that this construct has very high reliability. These values far exceed the recommended threshold of 0.7, indicating that the construct is highly reliable. Furthermore, an AVE of 0.762 shows that more than half of the variance in the indicators can be explained by this construct, demonstrating excellent convergent validity.

For the responsiveness construct, the data show that both items, P10 and P11, have very high outer loading values, 0.956 and 0.945, respectively. This data suggests that these indicators are very strongly related to the responsiveness construct. Additionally, the Cronbach's Alpha of 0.893 and Composite Reliability of 0.949 further reinforce the reliability of this construct. The AVE for this construct is 0.903, also indicating that the responsiveness construct explains most of the variance in its indicators, meaning the convergent validity of this construct is very adequate. The assurance construct, which consists of three items (P12, P13, and P14), has very high outer loading values, ranging from 0.956 to 0.967. This means that these indicators play a significant role in measuring the assurance construct with very high accuracy. With a Cronbach's Alpha of 0.958 and Composite Reliability of 0.973, the reliability of this construct is very well assured. The AVE of 0.922 shows that the assurance construct has excellent convergent validity, more than sufficient to ensure precise measurement.

The empathy construct, consisting of three items (P15, P16, and P17), has outer loading values ranging from 0.887 to 0.945. Although P17 has a slightly lower outer loading value (0.887), it still falls within the acceptable range (>0.7), indicating that this indicator remains fairly representative of the empathy construct. With a very high Cronbach's Alpha of 0.909 and Composite Reliability of 0.943, we can conclude that the reliability of this construct is highly satisfactory. Additionally, an AVE of 0.847 further suggests that the empathy construct has very good convergent validity. For the tangibles construct, five items (P18, P19, P20, P21, and P22) have outer loading values above 0.7, ranging from 0.861 to 0.942. This indicates that each indicator significantly contributes to measuring the tangibles construct. The reliability of this construct is supported by a Cronbach's Alpha of 0.945 and Composite Reliability of 0.948, indicating very high reliability. The AVE of 0.820 also demonstrates good convergent validity, showing that this construct is highly capable of representing the variance in its indicators.

Lastly, the customer satisfaction construct, consisting of 22 items (Q1 to Q22), shows varying outer loading values between 0.744 and 0.926, all of which are above 0.7, indicating that these items significantly contribute to measuring customer satisfaction. The very high Cronbach's Alpha of 0.984 and Composite Reliability of 0.985 affirm that this construct has very high reliability. With an AVE of 0.765, which is greater than 0.5, the customer satisfaction construct shows excellent convergent validity, indicating that this construct can accurately measure the intended dimensions.

Table 3: Fornel dan Lacker Results Chriteria

	Assurance	Empathy	Customers Satisfaction	Reliability	Responsiveness	Tangibles
Assurance	0.960*					
Empathy	0.891	0.920*				
Customers Satisfaction	0.440	0.436	0.874*			
Reliability	0.895	0.857	0.370	0.873*		
Responsiveness	0.794	0.840	0.436	0.802	0.950*	
Tangibles	0.910	0.922	0.527	0.894	0.829	0.906*

Note: *= the square root of the AVE value; other values represent correlations

Source: Researcher's Analysis, 2025

This evaluation is conducted to ensure that the variables are theoretically distinct and empirically proven through statistical testing. The criterion used is that the square root of the AVE for each variable must be greater than the correlation between the variables. Based on the evaluation results shown in Table 4, all the variables tested have square root AVE values greater than their correlation values. This indicates that the measurement items for each variable effectively focus on measuring their respective variables and have low correlations with other variables, thereby confirming that discriminant validity is met.

Table 4: Cross Loading CFA Results

Item	Assurance	Empathy	Customers Satisfaction	Reliability	Responsiveness	Tangibles
P1	0.783	0.757	0.316	0.872	0.686	0.785
P10	0.737	0.802	0.432	0.762	0.956	0.775
P11	0.773	0.795	0.391	0.769	0.945	0.804
P12	0.958	0.804	0.409	0.875	0.746	0.848
P13	0.955	0.874	0.441	0.862	0.802	0.890
P14	0.967	0.886	0.411	0.842	0.734	0.882
P15	0.816	0.928	0.409	0.779	0.729	0.812
P16	0.865	0.945	0.409	0.836	0.773	0.896
P17	0.777	0.887	0.379	0.754	0.822	0.838
P18	0.890	0.849	0.392	0.813	0.750	0.893
P19	0.843	0.862	0.483	0.813	0.756	0.942
P2	0.700	0.673	0.166	0.788	0.642	0.673
P20	0.816	0.857	0.529	0.824	0.735	0.913
P21	0.754	0.757	0.517	0.751	0.745	0.861
P22	0.833	0.852	0.434	0.853	0.771	0.916
P3	0.439	0.466	0.076	0.497	0.632	0.773
P4	0.426	0.478	-0.033	0.513	0.653	0.744
P5	0.785	0.729	0.385	0.868	0.772	0.790

P6	0.789	0.720	0.201	0.867	0.751	0.829
P7	0.801	0.757	0.380	0.899	0.753	0.836
P8	0.799	0.798	0.319	0.894	0.345	0.454
P9	0.809	0.793	0.358	0.915	0.415	0.455
Q1	0.380	0.378	0.850	0.319	0.400	0.446
Q10	0.409	0.381	0.904	0.322	0.436	0.429
Q11	0.402	0.387	0.884	0.329	0.424	0.499
Q12	0.308	0.338	0.889	0.276	0.388	0.488
Q13	0.404	0.407	0.885	0.334	0.356	0.404
Q14	0.383	0.370	0.918	0.325	0.380	0.475
Q15	0.300	0.319	0.910	0.253	0.396	0.436
Q16	0.376	0.373	0.899	0.319	0.358	0.425
Q17	0.365	0.355	0.897	0.284	0.392	0.496
Q18	0.328	0.331	0.895	0.264	0.422	0.463
Q19	0.438	0.401	0.922	0.334	0.317	0.459
Q2	0.378	0.414	0.752	0.321	0.386	0.453
Q20	0.387	0.378	0.890	0.309	0.326	0.434
Q21	0.357	0.380	0.849	0.291	0.412	0.539
Q22	0.367	0.349	0.889	0.325	0.358	0.486
Q3	0.217	0.208	0.576	0.183	0.379	0.449
Q4	0.249	0.252	0.623	0.241	0.329	0.431
Q5	0.493	0.471	0.813	0.468	0.395	0.476
Q6	0.443	0.447	0.855	0.385	0.686	0.785
Q7	0.396	0.357	0.798	0.375	0.956	0.775
Q8	0.362	0.361	0.881	0.286	0.945	0.804
Q9	0.419	0.423	0.870	0.349	0.746	0.848

Source: Researcher Analysis 2025

In addition to using the Fornell and Larcker criterion, discriminant validity can also be assessed through the cross-loading values presented in Table 4. Based on the results in Table 4, it is shown that discriminant validity is met with all variables. This is demonstrated by the fact that the correlation between each item and its respective variable is higher than the correlation with other variables. Therefore, these items reflect a high measurement for their respective variables and have a low measurement for other variables.

Table 5: Results of Hypothesis Testing

Hypothesis	Path Coefficient	p-value	95% Path Coefficient Confidence Interval		t-statistic	f-square
			Lower Bound	Upper Bound		
H1: Assurance → Customer Satisfaction	0.084	0.747	-0.411	0.592	0.322	0.001
H2: Empathy → Customer Satisfaction	-0.329	0.182	-0.876	0.072	1.337	0.020
H3: Reliability → Customer Satisfaction	-0.530	0.005	-0.888	-0.117	2.802	0.069
H4: Responsiveness → Customer Satisfaction	0.171	0.331	-0.197	0.511	0.973	0.067
H5: Tangibles → Customer Satisfaction	1.085	0.000	0.664	1.537	4.710	0.012

Source: Researcher's Analysis 2025

Based on the results of the hypothesis testing in the table above, the following conclusions can be drawn:

a. First Hypothesis (H1) in this study is rejected, meaning there is no direct effect of assurance on customer satisfaction. This is shown by the T-statistic (0.322) < 1.96, f-square (0.001), path coefficient (0.084), p-value (0.747) > 0.05, and a 95% confidence interval between -0.411 and 0.592. Thus, changes in assurance do not have a significant impact on increasing customer satisfaction.

b. Second Hypothesis (H2) in this study is rejected, meaning there is no direct effect of empathy on customer satisfaction. This is shown by the T-statistic (1.337) < 1.96, f-square (0.020), path coefficient (-0.329), p-value (0.182) > 0.05, and a 95% confidence interval between -0.876 and 0.072. Thus, changes in empathy do not have a significant impact on increasing customer satisfaction.

c. Third Hypothesis (H3) in this study is accepted, meaning there is a direct effect of reliability on customer satisfaction. This is shown by the T-statistic (2.802) > 1.96, f-square (0.069), path coefficient (-0.530), p-value (0.005) < 0.05, and a 95% confidence interval between -0.888 and -0.117. Thus, changes in reliability will significantly increase customer satisfaction.

d. Fourth Hypothesis (H4) in this study is rejected, meaning there is no direct effect of responsiveness on customer satisfaction. This is shown by the T-statistic (0.973) < 1.96, f-square (0.067), path coefficient (0.171), p-value (0.331) > 0.05, and the 95% confidence interval between -0.197 and 0.511. Thus, changes in responsiveness do not have a significant effect on improving customer satisfaction.

e. Fifth Hypothesis (H5) in this study is accepted, meaning there is a direct effect of tangibles on customer satisfaction. This is shown by the T-statistic 4.710 > 1,96, f-square (0.012) , path coefficient (1.085), p-value (0.000) < 0,05 and the 95% confidence interval between 0.664 and 1.537. Thus, changes in tangibles will significantly increase customer satisfaction

Table 6: Model Fit Evaluation Values

Model	R square	Q square	SRMR
Customers Satisfaction	0.344	0.312	0.059

Source: Researcher's Analysis 2025

R-square indicates the amount of variation in the endogenous variable that can be explained by other exogenous or endogenous variables in the model. According to Chin (1998), R-square values can be categorized as follows: low impact = 0.19, moderate impact = 0.33, and high impact = 0.66. Based on the model fit results in Table 4, it is found that the joint influence of service factors on customer satisfaction is 0.344 or 34.4% (categorized as moderate). Q-square measures predictive accuracy, indicating how well changes in exogenous or endogenous variables can predict the endogenous variable. This measure serves as a validation in PLS to assess the model's predictive relevance. According to Hair *et al*. (2019) [12], Q-square values are qualitatively interpreted as 0 (low influence), 0.25 (moderate influence), and 0.50 (high influence). Based on the model fit results in Table 4, the Q-square value for the joint influence of service factors on customer satisfaction is 0.312, which is greater than 0.25, indicating moderate predictive accuracy. Another measure of model fit is the Standardized Root Mean Square Residual (SRMR). According to Yamin (2021), SRMR is a model fit measure that represents the difference between the data correlation matrix and the model's estimated correlation matrix. Based on the model fit results in Table 21, it is found that the SRMR value for this study is 0.059, which, according to Hair *et al*. (2021) [12], is considered a fit model as its value is less than 0.08

4. Conclusion

Based on the research findings, it can be concluded that the paratransit service quality in Jambi City, analyzed through the SERVQUAL model using the SEM PLS CFA second order method, shows that the dimensions of reliability and tangibles have a significant impact on customer satisfaction. Customer satisfaction plays an important mediating role in the relationship between service quality and the intention of customers to use paratransit services again. Although the empathy and assurance dimensions did not show significant effects, improvements in aspects such as reliability, travel time, and facilities provided are essential to enhance customer satisfaction. Improving service quality in these areas will encourage customer loyalty and potentially increase the frequency of paratransit service usage in Jambi City. This research provides important insights for transportation managers to improve services in order to meet customer expectations and increase the competitiveness of paratransit services.

Moreover, this study also demonstrates that while some dimensions such as empathy and assurance do not significantly affect customer satisfaction, other factors such as service reliability, efficient travel time, and adequate physical facilities have been proven to be crucial in creating a satisfying experience for customers. This emphasizes that, to improve the quality of paratransit services, greater attention should be given to operational aspects that are directly experienced by users, such as vehicle comfort, punctuality, and the availability of supporting facilities. By focusing on improvements in these areas, it is hoped that paratransit services in Jambi City can become more competitive, enhance customer satisfaction, and encourage repeat usage by both tourists and local users.

5. Thank-You Note

The author would like to thank previous researchers for their contributions in conducting research on the development of *Paratransit Service Quality*. Thanks to the research results obtained by previous researchers, I and other readers can obtain complete information on the development of *Paratransit Service Quality*. This information will certainly be very useful as a basis for further research to create innovative and useful learning media for students. I hope that the results of writing this article can provide a broader picture of the feasibility and response of students to the *Paratransit Service Quality* that has been developed.

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