

Analysis Of The Influence Of Private Service, Bus Rates, And Stop Location On Customer Satisfaction Of BRT TRANS Jateng

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ABSTRACT

Competition in the transportation business is very tight, the Central Java Provincial Transportation Office as the operator and the Government of Surakarta as a regulator must think of the right steps in managing BRT Trans Jateng so that it can compete in the business. Maintaining customer satisfaction is the right step to stay competitive and master market share. The data used in this study are primary data obtained from survey and questionnaire results, as well as secondary data obtained from company documents, literature and the internet. Sampling technique in this study is to use Probability Sampling by Systematic Sampling. The data analysis used in this study is by Structural Equation Modelling (SEM) method with the help of AMOS software version 24. In this study using 3 independent variables namely the concierge service, bus fares, and the location of the stop and 1 dependent variable that is customer satisfaction. The results showed that there are 2 variables that significantly affect brt customer satisfaction. The 42 variables are the concierge service and purchasing decisions.

Keywords: fares; location of the stop; quality of service SEM; quality of service.

1. INTRODUCTION

Trans Jateng is an integrated Bus Rapid Transit system operated under the Transportation Center of the Central Java Provincial Transportation Service. This Trans Jateng service only covers the Central Java Province area. The Trans Jateng BRT adopts the same system as the BRT service operating in Jakarta, namely Trans Jakarta, and the one operating in Yogyakarta, namely Trans Jogja. BRT Trans Jateng was first inaugurated by the Governor of Central Java, Mr. H. Ganjar Pranowo, S.H, M.I.P in 2017, namely Corridor I of the Semarang – Bawen Route. In 2018, Corridor II for the Purwokerto - Purbalingga Route was inaugurated, followed by Corridor III for the Semarang - Kendal Route in 2019. On September 1 2020, Trans Jateng Bus Corridor IV Route Magelang – Purworejo was inaugurated at the same time as Corridor V Route Surakarta – Sragen by the Governor of Central Java, Mr. H. Ganjar Pranowo, S.H, M.I.P. The Trans Jateng BRT fare charged per passenger is IDR 4,000 for general passengers, and IDR 2,000 for workers, students and veterans by showing an identification card (labor/student/veteran) and Social Security (labor). The fare set by the Trans Jateng bus is a fixed fare, a fare that does not take into account short distances, so all general customers are charged the same fare.

Research Gap. Routine evaluations are carried out by the Central Java Provincial Transportation Office every 3 months to determine the level of service to customers so that the Trans Jateng bus tries

to increase the number of customers by improving the quality of service, such as good, friendly service and a polite appearance from the service staff. The location of the bus stop or stopping point is also a consideration for customers in choosing a bus fleet and the bus ticket price is determined by the Transportation Center of the Central Java Provincial Transportation Service. Besides that, the BRT Trans Route Surakarta – Sragen has only been operating for 3 months so it is necessary to evaluate variables that can increase customer satisfaction.

Objective. The objectives of the research carried out on the Trans Jateng Bus Corridor V Surakarta – Sragen Route are as follows:

1. Knowing the influence of the waiter service variable on the purchasing decision variable for Trans Jateng Bus corridor V on the Surakarta – Sragen route
2. Knowing the influence of ticket fare variables on purchase decision variables for Trans Jateng Bus corridor V on the Surakarta – Sragen route
3. Knowing the influence of bus stop location variables on purchase decision variables for Trans Jateng Bus corridor V on the Surakarta – Sragen route
4. Knowing the influence of purchasing decision variables on customer satisfaction variables for Trans Jateng Bus Corridor V Surakarta – Sragen Route

Novelty. The novelty in this research is that the variables studied have never been conducted before on this object

Significance. This research is useful for the Central Java provincial transportation service in measuring customer satisfaction

2. METHODOLOGY

The concept of thinking in this research tests the hypothesis of several research variables, whether variables X1, X2, X3 have an effect on X4 and whether X4 has an effect on

Population and sample used.

The population in this study were some of the BRT Trans Jateng Corridor V customers on the Surakarta - Sragen route during the research period, totaling 3000 customers. The sample is part of the number and characteristics of the population (Sogiyono, 2011).

The research sample is a portion of the population taken as a data source and can represent the entire population. The number of samples taken in this research was 400 customers of the Trans Jateng BRT Corridor V Route Surakarta - Sragen.

Data Collection Techniques.

To complete the data required in this research, researchers collected data through:

a) Questionnaire

The questionnaire is a structured question. The questions that will be asked in this questionnaire are questions about the facts and opinions of the interviewee, while the questionnaire used in this research is a closed questionnaire which requires the interviewee to answer these questions and answers in

various ways. The advantages of closed forms are that they are easy to fill out, easy to analyze and can provide a series of answers.

b) Documents

Namely the written items needed in this research, these documents can be in the form of an organizational structure, number of employees and a brief history of the establishment of the Trans Jateng BRT Corridor V Route Surakarta – Sragen.

c) Observation

According to Arikunto (2006:124) observation is collecting data or information that must be carried out by making direct observation efforts at the place to be investigated.

Tools or Instruments Used.

Path analysis processing:

Path analysis processing uses the Structural Equation Modeling (SEM) method. SEM analysis aims to estimate several separate regression equations, but each has a simultaneous relationship.

Data Analysis Methods.

From the SEM output results, it is analyzed whether the variables tested can influence the dependent variable simultaneously and also to find out which variable has the highest correlation with the dependent variable.

Structural equation model analysis aims to estimate several separate regression equations, but each has a simultaneous or concurrent relationship. In this analysis it is possible that there are several dependent variables, and it is possible for this variable to be an independent variable for other dependent variables.

In principle, the structural model aims to test the causal relationship between variables so that if one variable is changed, changes will occur in other variables. In this study, the data was processed using Analysis of Moment Structure or AMOS version 24.

The structural equation formula in this research is as follows:

$$\eta_2 = \gamma_1 \xi_1 + \gamma_2 \xi_2 + \gamma_3 \xi_3 + \zeta_1 \quad (1)$$

$$\eta_2 = \gamma_1 \xi_1 + \gamma_2 \xi_2 + \gamma_3 \xi_3 + \eta_1 + \zeta_2 \quad (2)$$

Information:

ξ_1 = Management capability as the first exogenous (free) variable.

ξ_2 = franchisee motivation as the second exogenous (free) variable

ξ_3 = promotion strategy as the third exogenous (free) variable.

= brand image as the fourth exogenous (free) variable.

η_1 = Franchisor collaboration with franchisees as the second endogenous (dependent) latent variable.

$\gamma_1, \dots, 3$ = Direct relationship between exogenous and endogenous variables

$\zeta_{1,2}$ = Endogenous measurement error (residual).

In principle, the structural model aims to test the causal relationship between variables so that if one variable is changed, changes will occur in other variables. In this study, the data was processed using Analysis of Moment Structure or AMOS version 24.

SEM analysis allows calculating estimates of a set of simultaneous, multiple and interconnected regression equations. Characteristics of using this model: (1) to estimate multiple dependent relationships that are interrelated, (2) its ability to surface unobserved concepts in the relationship as well as to determine measurement error in the estimation process, and (3) its ability to accommodate a set of relationships between independent variables with the dependent variable and uncovering latent variables (Ghozali, 2005: 26).

3. RESULTS AND DISCUSSION

Structural Equation Modeling (SEM) Analysis

Steps to Create SEM

Step 1: Formulate the Problem

Based on the state of the art of previous research, there is the fact that purchasing decisions have a positive influence on customer satisfaction. Likewise, the waiter service variables, bus fares and bus stop locations have a positive influence on customer satisfaction. However, there is no research that proves that the five can directly influence customer satisfaction, and also no one has proven which variable has the highest relationship or correlation with customer satisfaction. In this research, researchers will test whether these five factors can influence customer satisfaction simultaneously and also to find out which variable has the highest correlation with customer satisfaction.

Step 2: Create an SEM Model

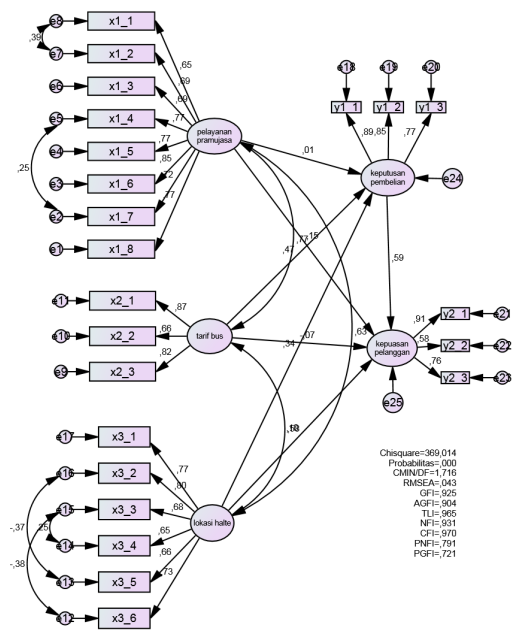


Figure 2 SEM Models

Step 3: Identify the Model

The identification test is carried out to test whether the model can be analyzed further or not. The degree of freedom calculation is used in this test. A structural equation model (SEM) can be categorized as:

- a. Just Identified model, has degrees of freedom of 0 and has been identified, so model estimation and assessment does not need to be done.
- b. Under Identified model, has degrees of freedom <0 (negative). The number of estimated parameters is smaller than the amount of variance and covariance data so there is no need to estimate and evaluate the model.
- c. Over Identified model, has degrees of freedom >0 (positive). The number of estimated parameters is greater than the amount of variance and covariance data so that model estimation and assessment can be carried out.

Computation of degrees of freedom (Default Model)

Number of distinct sample moments:	400
Number of distinct parameters to be estimated:	61
Degrees of freedom (400 - 61):	339

In the results above, a positive df value is obtained, which indicates that the model can be declared overidentified and testing can be carried out.

Step 4: Test the Goodness of the Model

To determine the criteria for a good model (Goodness of Fit), Absolut Fit Measured (absolute index measurement), Incremental Fit Measured (additional index measurement) and Parsimonious Fit Measured (measurement of index simplicity) are used. The test results of the research model can be described as follows

Table 1 Structural Equation Modeling (SEM) Feasibility Test Results

<i>Goodness of Fit Index</i>	<i>Result</i>	<i>Cut Off Value</i>	<i>Criteria</i>
<i>Likelihood Chi Square</i>	369.014	Diharapkan kecil	
<i>Probability</i>	0.00	≥ 0.05	<i>Marginal Fit</i>
CMIN/DF	1.716	≤ 2.00	<i>Good Fit</i>
RMSEA	0.043	≤ 0.08	<i>Good Fit</i>
GFI	0.925	≥ 0.90	<i>Good Fit</i>
AGFI	0.904	≥ 0.90	<i>Good Fit</i>
TLI	0.965	≥ 0.90	<i>Good Fit</i>
CFI	0.970	≥ 0.90	<i>Good Fit</i>

(source: 2024 research data)

Based on the table above, it can be seen that most of the goodness of fit criteria have met the cut off value, so it can be concluded that there is a match between the observation input and the predictions from the model that has been created.

Below is an image of the Structural Equation Modeling (SEM) test results.

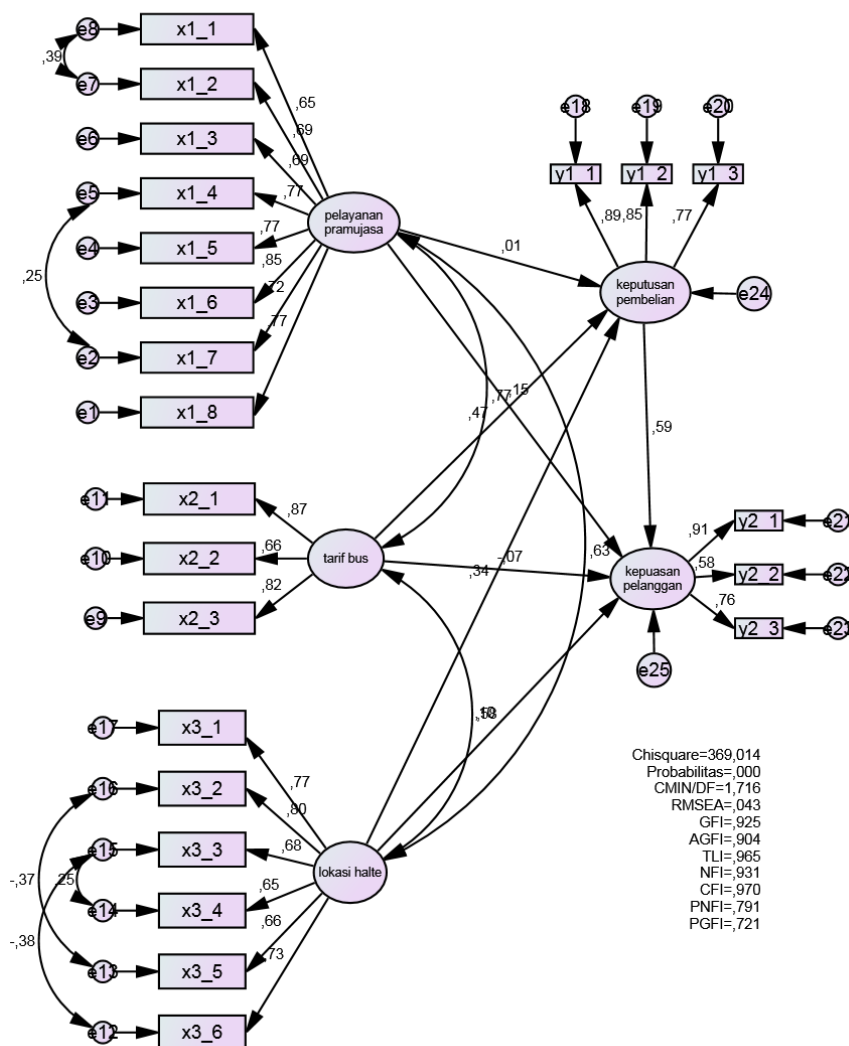


Figure 3. Sem test result
(Source: Data processing 2023)

Step 5: Interpretation of Results

Overall, this structural model can be considered fit, so the next process is to see whether there is a significant and close relationship between the independent variables and the dependent variable. Based on statistical analysis using AMOS version 24.0 software, the results of the hypothesis test were

obtained which is a test of the causal relationship of each research variable as presented in the following table:

Tabel 2 results

buying decision	<---	butler service	.015	.107	.141	0.888
buying decision	<---	bus fare	.553	.097	5.698	0.000
buying decision	<---	Bus stop location	.363	.065	5.583	0.000
buying decision	<---	buying decision	.643	.803	7.769	0.000
buying decision	<---	butler service	.213	.120	1.772	0.076
buying decision		bus fare	.087	.120	-.723	0.391
buying decision	<---	Bus stop location	.111	.077	1.436	.151

(source: 2024 research data)

Analysis

H1: waiter service \diamond purchasing decisions

The p number is 0.888, this number is above 0.05 so H₀ is accepted, or there is no positive and significant relationship between the waiter service factor and purchasing decisions.

H2: bus fare \diamond purchasing decision

The p number is 0.0, this number is below 0.05 so H₀ is rejected, or there is a positive and significant relationship between bus fares and purchasing decisions.

H3: bus stop location \diamond purchasing decision

The p number is 0.000, this number is below 0.05 so H₀ is rejected, or there is a positive and significant relationship between bus stop location and purchasing decisions.

H4: Purchase decision \diamond Customer satisfaction

The p number is 0.000, this number is below 0.05 so H₀ is rejected, or there is a positive and significant relationship between purchasing decisions and customer satisfaction.

H5: waiter service \diamond Customer satisfaction

The p number is 0.07, this number is below 0.05 so H₀ is rejected, or there is a positive and significant relationship between waiter service and customer satisfaction.

H₆: bus fares \diamond customer satisfaction

The p number is 0.391, this number is above 0.05 so H₀ is accepted, or there is no positive and significant relationship between bus fares and customer satisfaction.

H₇: bus stop location \diamond customer satisfaction

The p number is 0.151, this number is above 0.05 so H₀ is accepted, or there is no positive and significant relationship between bus stop location and customer satisfaction.

Analysis of Results

After all assumptions have been fulfilled, the hypothesis test will be carried out as proposed in the previous chapter. Testing of the 7 research hypotheses was carried out based on the Critical Ratio (CR) value of a causal relationship from the results of SEM processing as in table 21 below:

Tabel 3 Regression Weights: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P	Label
y1 <--- x1	,015	,107	,141	,888	
y1 <--- x2	,553	,097	5,698	***	
y1 <--- x3	,363	,065	5,583	***	
y2 <--- y1	,643	,083	7,769	***	
y2 <--- x1	,213	,120	1,772	,076	
y2 <--- x2	-,087	,120	-,723	,470	
y2 <--- x3	,111	,077	1,436	,151	
x1_6 <--- x1	,912	,052	17,660	***	
x1_5 <--- x1	,947	,060	15,788	***	
x1_4 <--- x1	,976	,062	15,725	***	
x1_3 <--- x1	,736	,052	14,029	***	

	Estimate	S.E.	C.R.	P	Label
x2_3 <--- x2	1,000				
x2_2 <--- x2	,893	,066	13,601	***	
x2_1 <--- x2	1,044	,056	18,569	***	
x3_5 <--- x3	,851	,070	12,179	***	
x3_4 <--- x3	,935	,077	12,188	***	
x3_3 <--- x3	,975	,088	11,073	***	
x3_2 <--- x3	1,120	,075	14,893	***	
y1_1 <--- y1	1,000				
y1_2 <--- y1	1,026	,047	21,779	***	
y1_3 <--- y1	,891	,048	18,592	***	
y2_1 <--- y2	1,000				
y2_2 <--- y2	,636	,055	11,636	***	
y2_3 <--- y2	,794	,050	15,742	***	
x1_1 <--- x1	,539	,042	12,978	***	
x1_2 <--- x1	,685	,049	13,922	***	
x1_8 <--- x1	1,000				
x1_7 <--- x1	,874	,060	14,657	***	
x3_1 <--- x3	1,031	,070	14,630	***	
x3_6 <--- x3	1,000				

(source: 2024 research data)

4. CONCLUSION

The results of factor analysis using the Structural Equation Modeling (SEM) method show that:

- a. The bus fare variable has a positive and significant influence on purchasing decisions with a p-value of 0.00.
- b. The bus stop location variable has a positive and significant influence on purchasing decisions with a p-value of 0.00.
- c. The purchasing decision variable has a positive and significant influence on customer satisfaction with a p-value of 0.00.
- d. The waiter service variable has a positive and significant influence on customer satisfaction with a p-value of 0.07.
- e. The bus fare variable does not have a positive and significant influence on customer satisfaction with a p-value of 0.470.
- f. The bus stop location variable does not have a positive and significant influence on customer satisfaction with a p-value of 0.151.

From the results of the analysis of the seven variables, five variables are the variables with the greatest significance value with a p-value of 0.000. so that the five variables can be stated as the most influential variables among the seven existing variables and have an influence on customer satisfaction.

From the results of data processing and analysis, it was found that there was no direct relationship between bus fares and customer satisfaction and There is no direct relationship between bus stop location and customer satisfaction.

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