



# Analysis of The Effect of Service Quality and Promotion on Passenger Buying Interest In South Sumatra LRT

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**Abstract.** Quality of service and promotion is one effort to increase buying interest. With the existence of good service quality and promotions that are in accordance with the targets, a company will achieve the goals that have been set. South Sumatra LRT has carried out good service quality and promotion, as evidenced by an increase in the number of passengers in 2022. The data collection technique used is *random sampling* obtained by 400 South Sumatra LRT passenger respondents. The calculation uses a formula *slovin* standard error 5%. The method used is multiple linear regression. From this research obtained through data analysis carried out using the application *IBM SPSS 26* which shows that Service Quality (X1) has a partial effect on the buying interest of passengers on the LRT in South Sumatra with a significance value ( $0.000 < 0.05$  and a value of  $t_{hitung} 12.055 > 1.960$ ). Promotion (X2) has a partial effect on the purchase intention of passengers on LRT South Sumatra with (significant value  $0.000 < 0.05$  and value  $t_{hitung} 9.460 > 1.960$ ). The two variables, namely service quality and promotion, have an influence of 0.601 or 60.1% on the buying interest of passengers on the South Sumatra LRT.

**Keywords:** Service Quality, Promotion, Purchase Intention, South Sumatra LRT, and Multiple Regression Analysis.

## 1 Introduction

Subsequent paragraphs, however, are indented. In everyday life, transportation is an inseparable part [1]. As time goes by, many people make trips that require transportation that can accommodate the needs of the community. Over time, technological advances developed and the means of transportation developed. Based on Presidential Regulation Number 116 of 2015 concerning the acceleration of implementation *Light Rail Transit* in South Sumatra Province, the South Sumatra LRT was built which is used as a means of public transportation. South Sumatra LRT has provided quality service for customers. In this case the South Sumatra LRT carried out several strategies to increase passenger buying interest. The strategy carried out by the South Sumatra LRT is LRT *party*, there is a subscription card, there is *feeder* [2] [3].

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**Fig. 1.** South Sumatera LRT Passengers in 2018-2022

The following is a picture of South Sumatera LRT passenger volume in 2018-2022. From the table above, information can be drawn that there will be an increase in passengers in 2022. Based on *load factor* which has been set at 70% or 10,000 passengers per day but the South Sumatera LRT has not met this target, judging from the *load factor* which is achieved in 2022 is 21.2%. It can be concluded that the occupancy of South Sumatera LRT passengers is small, so steps must be taken to increase the number of passengers [4]. Complaints from service users can also be considered in fulfilment *load factor*. There are several categories of customer complaints, namely the category of service officers, there are 33 complaints. In the category of station facilities, there are 26 complaints. In the integration category there were 15 complaints, in the subscription card category there were 10 complaints, in the train facilities category there were 3 complaints, in the mask use category there were 4 complaints, in the operation category there were 3 complaints. With the existence of various customer complaints, the authors want to see how the interest of passengers in using the South Sumatera LRT [5]. The author conducted a preliminary survey to see the buying interest of passengers on the South Sumatera LRT. From the preliminary survey it was found that the people of Palembang are interested in using the South Sumatera LRT because of several aspects which include the cheap price, avoiding traffic jams, the ease of access when traveling, the existence of a card that makes it easy for students to take the South Sumatera LRT, and the existence of *feeder* which can facilitate Palembang people's access to the nearest station.

## 2. Methods of Measurement and Processing Data

### 2.1 Theoretical Studies

Service quality according to Sinollah & Masruro, (2019) is the addition of needs and desires supported by good delivery. According to Kotler and Keller (2008) Service has five dimensions or elements of service quality. The five dimensions can be explained as follows:

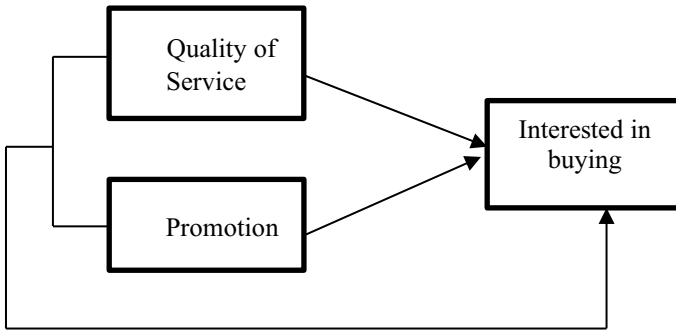
1. *Tangibles* concrete evidence of a company's ability to present the best for customers
2. *Reliability* is the company's ability to provide services that meet consumer expectations
3. *Responsiveness* is responsive to providing fast or responsive services and accompanied by clear and easy-to-understand delivery methods.
4. *Assurance* is the guarantee and certainty obtained from the polite attitude of employees, good communication, and knowledge possessed, so as to foster customer trust.
5. *Empathy* is to give sincere and personal attention to customers, this is done to find out the needs and desires of customers.

According to Kotler (2013) promotion includes activities in the solicitation category of communication that can result in customers having the intention to buy goods.

1. Advertising That is sales presentation *non* personal communication through any form of media or *non* media to influence a large number of consumers.
  2. Personal Sales A personal sales presentation used to influence one or more customers.
  3. Sales promotion Namely a series of activities intended to influence consumers.
  4. Public relations That is a form of public relations carried out with the aim of creating or maintaining a favorable impression for the public of a product or company.
- According to Kotler in Nailufar (2021) Purchase interest is a basis for encouraging customers to choose a product.

1. Transactional Interests The tendency of someone to buy the product. This means that consumers already have an interest in purchasing a particular product they want.
2. Transactional Interests The tendency of someone to buy the product. This means that consumers already have an interest in purchasing a particular product they want.
3. Explorative Interests  
Describes the behavior of consumers who are always looking for information about the products they are interested in and looking for information to support the positive properties of these products.

## 2.2 Hypothesis



## 2.3 Research Methods

The first thing that must be done by researchers is to find a problem that can be raised into research. Primary and secondary data collection, primary data obtained using a questionnaire and secondary data obtained from the South Sumatera LRT. After obtaining the necessary data, the researcher compiled a questionnaire containing questions for each variable and conducted an instrument test namely validity and reliability test. If the researcher passes the instrument test, the researcher can distribute questionnaires to the research samples. If you have obtained the questionnaire data then do the data processing using SPSS and carry out the normality test. If the data is normal, then the classic assumption test can be carried out which consists of a normality test, linearity test, multicollinearity test, and heteroscedasticity test. After fulfilling it, perform data analysis with multiple linear regression. From the data analysis it will produce research results. Furthermore, researchers will make conclusions and suggestions. The research was completed and provided benefits to many parties. In determining the sample method used random sampling, by using the slovin formula and using *standart error* 5%. The number of respondents specified in this study is 400 respondents. 5% is the error rate and 95% is the truth level [3] [6]. Furthermore, the questionnaire instrument that has been prepared is carried out by instrument testing which includes validity and reliability tests. If it is fulfilled, then a survey can be carried out on passengers on the South Sumatra LRT. If the questionnaire data has been collected according to the target then it will then enter the data analysis method. Methods of data analysis in this final project using the classical assumption test, simple linear regression analysis and multiple linear regression analysis. The classical assumption tests carried out are the linearity test, normality test, multicollinearity test and heteroscedasticity test. The classical assumption test is carried out as a condition in order to proceed to the regression analysis test. In this analysis there are results/output namely hypothesis testing (t test and F test) and the coefficient of determination. Hypothesis testing was carried out in order to find

out whether there is an influence between service quality variables (X1) and promotions/X2 on buying interest/Y in South Sumatera LRT. The coefficient of determination is carried out in order to know the magnitude of the effect between variables X1 and X2 on variable Y.

### 3. Statistical Comparison of the Measuring Instruments

#### 3.1 Validity Test

Validity testing was carried out on respondents to South Sumatera LRT passengers using the help of IBM SPSS Statistics 26. Conducting validity testing by comparing *r table* and *r count* as well as by way of comparing significant values. A valid question is if the value *r count* > *r table*

**Table 1.** Validity Test

Variable	Indicator	r count
Service Quality	X1.1	0,613
	X1.2	0,670
	X1.3	0,661
	X1.4	0,700
	X1.5	0,496
	X1.6	0,669
	X1.7	0,591
	X1.8	0,646
	X1.9	0,629
	X1.10	0,421
Promotion	X2.1	0,527
	X2.2	0,455
	X2.3	0,644
	X2.4	0,692
	X2.5	0,635
	X2.6	0,589
	X2.7	0,634
	X2.8	0,448
Buying interest	Y1	0,521
	Y2	0,506
	Y3	0,768
	Y4	0,571
	Y5	0,691
	Y6	0,633
	Y7	0,688
	Y8	0,430

Of the 3 variables above, there are several indicators consisting of several questions. For conditions that have been set  $r_{\text{arithmetic}} > r_{\text{table}}$  it is stated that the question is valid. For the

specified r table, namely 0.361, these 3 variables have valid questions.

### 3.2 Reliability Test

If the questions about service quality, promotion, and purchase intention are valid, then do a reliability test analysis by comparing values *Cronbach Alpha* and a value of 0.60. According to Surjaweni, questionnaire questions are declared reliable if the value *Cronbach Alpha* > 0,60.

**Table 2.** Reliability Test

Realibility Test			
Variable	<i>Cronbach Alpha</i> > 0,60		Information
	<i>Cronbach Alpha</i>	0,60	
X1	0,813	0,60	Reliable
X2	0,708	0,60	Reliable
Y	0,757	0,60	Reliable

From Table 2 it can be stated that the three variables are reliable.

### 3.3 Linearity Test

This test has a goal to determine the relationship of each variable.

**Table 3.** Linearity Test

Linearity Test	<i>Deviation from Linearity</i>	<i>Sig.</i>
Buying interest * Service Quality	0,053	0,05
Buying interest * Promotion	0,259	0,05

Based on the test results, it can be concluded that the linearity test between service quality and purchase intention fulfills a significant value. The linearity test between promotion and purchase intention fulfills a significant value, namely > 0.05

### 3.4 Normality test

This test aims to determine whether the data studied is normally or not normally distributed.

**Table 4.** Normality test

Information	Value
N	400
Kolmogorov-Smirnov	0,038
Asymp Sig (2-tailed)	0,174

Table 4 produces a value of 0.174, meaning that the value is greater than 0.05.

### 3.5 Multicollinearity Test

Multicollinearity test aims to determine the correlation between the independent and dependent variables.

**Table 5.** Multicollinearity Test

Variable	Tolerance	VIF
Service Quality	0,627	1,595
Promotion	0,627	1,595

From these results it can be concluded that the research data does not have multicollinearity (rejects  $H_0$ ), which means that all independent variables are not correlated with each other.

### 3.6 Heteroscedasticity Test

The test aims to determine whether there is a similarity of the variance of the residuals.

**Table 6.** Heteroscedasticity Test

Variable	Tolerance
Service Quality	0,817
Promotion	0,910

The results of the heteroscedasticity test in table 6 show that the variables of Service Quality (X1) and Promotion (X2) have a sig value greater than the value of  $\alpha$  (0.05). Therefore it can be concluded that this study is free from heteroscedasticity.

### 3.7 Multiple Linear Regression Analysis Test

Multiple regression analysis is used to determine whether or not there is an influence of two or more independent variables on the dependent variable. The multiple linear regression analysis method was carried out using *software* SPSS 26. To determine the level of precision of the regression function, it is measured from *goodness of fit* (hypothesis test) which statistically can be seen from the value *adjusted R<sup>2</sup>*, the t statistic

value, and the F statistic value. When the t statistic test value is below 0.05, then Ho is rejected and Ha is accepted.

The results of multiple linear regression tests on the effect of service quality and promotion on the buying interest of passengers on the South Sumatra LRT can be seen in the following table.

**Table 7.** Multiple Linear Regression Analysis Test

Coefficients					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	21,380	1,936		11,041	0,000
1 Service Quality	0,299	0,025	0,438	12,055	0,000
Promotion	0,315	0,033	0,379	9,460	0,000

Dependent Variabel: Buying interest

Based on the results of data processing using SPSS 26 the constant coefficient value is 21.380, the Service Quality Coefficient (X1) is 0.299 and the Promotion coefficient (X2) is 0.315. Then the multiple linear regression equation can be formulated as follows:

$$Y = 21.380 + 0.299(X1) + 0.315(X2)$$

Information:

X1 = Service Quality

X2 = Promotion

Y = Buying Interest

**Table 8.** Multiple Linear Regression Equation

No	Y = 21,380 + 0,299(X1) + 0,315(X2)		
	X1	X2	Y
1.			
2.	82	66	66,688
3.	89	66	68,781
4.	83	71	68,562
...	...	...	...
399	84	61	65,711
400	86	66	67,884



From the equation above, it can be interpreted that if the variable service quality (X1) and promotion (X2) is equal to 0 then the value of the passenger's buying interest (Y) is 21.380. The regression coefficient of X1 is 0.299 which means that if the X1 variable increases by 1 unit, the passenger's buying interest will increase by 0.299. The X2 coefficient of 0.315 states that the X2 variable increases by 1 unit, then buying interest will increase by 0.315. From the table above it can be informed that when the value X1 = 82 and the value X2 = 66, the value of Y according to the equation will produce a value of 66.688. It can be concluded that the greater the value of X1 and X2 produced, the greater the resulting value of Y.

### 3.8 Hypothesis Test t

The t hypothesis test is used to partially test the effect of each independent variable (quality of service and promotion) on the dependent variable (purchasing interest). The basis for decision making is when a value of  $t$  is obtained *hitung* greater than the value of  $t$  ( $t_{hitung} > t_{tabel}$ ) then it can be stated that the independent variable partially affects the dependent variable. In this test, attention must be paid to the significant value used for comparison with  $\alpha = 0.05$ .  $t_{tabel}$  that is to determinet  $t_{tabel}$  used statistical attachment t table, with results = 0.05: 2, 400-2 = 0.025, 398 The following are the results

**Table 9.** Hypothesis Test t

		Coefficients			t	Sig.
Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta		
	(Constant)	21,380	1,936		11,041	0,000
1	Service Quality	0,299	0,025	0,438	12,055	0,000
	Promotion	0,315	0,033	0,379	9,460	0,000

Dependent Variable: Buying Interest

Based on table 4.20 it can be seen that the value  $t$  count for the service quality variable (X1) of 12.055 with a significance level of 0.000, the value  $t$  count for the promotion variable (X2) of 9.460 with a significance value of 0.000. As well as known  $t_{table}$  through :

$$\begin{aligned} \text{Value } df &= n-2 \\ &= 400-2 \\ &= 398 \end{aligned}$$

The t table value is 1.960

Thus for the service quality variable (X1) a value is obtained  $t$  count greater than  $t$  table (12,055 > 1,960) at a significant level of 0.000 < 0.05, so it can be concluded that the quality of service (X1) has a positive and significant effect on the variable of purchase intention. For the promotion variable (X2) the value is obtained  $t$  count bigger than value  $t$  table (9.460 > 1.960) with a significance value less than 0.05 (0.000 < 0.05). So it can be concluded that the promotion variable (X2) partially has a positive and significant effect on the purchase intention variable.

**3.9 Hypothesis Test F**

The F test is used to determine the effect of the dependent/independent variable on the variable *independent*/ bound together or simultaneously. The basis for making a decision is if a value of  $F$  is obtained count greater than the value of  $F$  table ( $F_{count} > F_{table}$ ) then it can be stated that the independent variables simultaneously affect the dependent variable. In this test must pay attention to the significance value used for comparison with  $\alpha = 0.05$ . Value  $F_{table}$  can be obtained from the provisions of the significance level of 0.05.

$$\begin{aligned} \text{Value of } df1 &= k-1 \\ &= 3-1 \\ &= 2 \end{aligned}$$

$$\begin{aligned} \text{Value of } df2 &= n-k(\text{number of variables}) \\ &= 400-3 \\ &= 397 \end{aligned}$$

Obtained F table 3.02

**Table 10.** Hypothesis Test F

<i>ANOVA</i>					
<i>Model</i>	<i>Sum of Squares</i>	<i>df</i>	<i>Mean Square</i>	<i>F</i>	<i>Sig</i>
<i>Regression</i>	5201.413	2	2600.706	298.446	.000
1 <i>Residual</i>	3459.525	397	8.714		
Total	8660.938	399			

a. Dependent Variabel : Buying interest

b. Predictors: (Constant), Service quality, Promotion

Based on table 4.21, the value is 298,446 and the significance value of all independent variables of 0.000 below the value of  $\alpha$  (0.05), so the variables are independent, namely the quality of service and promotion significantly influence the buying interest of passengers on the South Sumatra LRT.

From the results of the analysis in table 4.21 it can be informed that the value of *Fhitung* as many as 298,446 which means this value is more than 3.02 ( $40.234 > 3.02$ ). And the significance value obtained is 0.000, which means that the value is below 0.05 ( $0.000 < 0.05$ ). From these results, information can be drawn that service quality and promotion simultaneously affect the buying interest of South Sumatra LRT passengers or  $H_0$  rejected.

### 3. 10 Coefficient of Determination

The coefficient of determination ( $R^2$ ) is the value that shows how much the significance value of the regression model is the independent variable and the dependent variable.

**Table 11.** Coefficient of Determination

<i>Model Summary</i>				
<i>Model</i>	<i>R</i>	<i>R Square</i>	<i>Adjusted R Square</i>	<i>Std. Error of the Estimate</i>
1	.775	.601	.599	2.95198
a. Predictors: (Constant), promotion, service quality				
b. Dependent Variabel: buying interest				

From the test results of the coefficient of determination in table 4.22 it can be informed that the value *R Square* of 0.601. This can be interpreted that the value of the independent variables (service quality and promotion) can explain the dependent variable (passenger buying interest) of 60.1%. As for the difference, namely 39.9% which is influenced by other variables outside this study. This Final Project. R value is the value of the multiple correlation coefficient, the R value in this study is 0.775.

## 4. Conclusion

Based on the results of the research and discussion of the influence of two variables, namely service quality and promotion on the buying interest of passengers on the South Sumatra LRT in this final project, the following conclusions can be drawn. The service quality variable has a partial effect on the buying interest of passengers on the South Sumatra LRT. This can be proven by looking at the results of statistical analysis with the help of an application *SPSS 26*. The result of the analysis is a significance value of 0.000 and an error rate of 5% ( $0.000 < 0.05$ ). The promotion variable has a partial effect on the buying interest of passengers on the South Sumatra LRT. This can be proven by looking at the results of statistical analysis with the help of an application *SPSS 26*. The result of the analysis is a significance value of 0.000 and an error rate of 5% ( $0.000 < 0.05$ ). The variables of service quality and promotion simultaneously influence the buying interest of passengers on the South Sumatra LRT. This can be proven by looking at the results of statistical analysis with the help of an application *SPSS 26*. The result

of the analysis is a significance value of 0.000 and an error rate of 5% ( $0.000 < 0.05$ ). The two variables (quality of service and promotion) have an influence of 0.601 or 60.1% on the buying interest of passengers on the South Sumatera LRT.

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