

Original Article

The Effect of Perceived Ease of Use and Service Quality on Maxim Consumer Satisfaction in Padang State Polytechnic Students

¹Fauzyah Wulandari, ²Rahmi Wardani, ³Gustina

^{1,2,3}Department of Business Administration, Politeknik Negeri Padang, West Sumatra, Indonesia.

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Abstract: To compete with their rivals, many businesses are utilising internet innovations successfully and efficiently. One of the service sectors that has transformed as a result of the advancement of internet technology is transportation. All Padang State Polytechnic students who had used online transport services made up the population of this study, and there were an undetermined number of samples. Purposive sampling is the technique that is employed. Multiple linear regression analysis techniques are used in this study together with SPSS application data. The goal of the study was to examine the relationship between customer satisfaction among Padang State Polytechnic students and perceived ease of use and service quality. According to the study's findings, customer satisfaction is positively and significantly impacted by perceived ease of use and service quality.

Keywords: Perceived Ease of Use; Service Quality; Customer Satisfaction.

I. INTRODUCTION

Smartphone applications can be used to access online transportation, an internet-based transportation service. This is a result of the quick-moving technical developments and the times. Online transportation is an implementation of road traffic and transportation that runs by utilizing the development of application-based and online technological knowledge for both ordering and payment (Adinda, 2016).

Land transportation is one that is widely used by users of transportation services because besides being cheap, it is still the prima donna for most Indonesians. (Farida, Tarmizi, & November, 2016). The increasing competition between similar service companies makes online motorcycle taxi service companies continue to strive to improve their service so that potential new customers as well as existing customers can get the best service.

Currently, in Indonesia especially in big cities, people are starting to use ride-hailing services as an alternative to their personal vehicles. Ride-Hailing is a transportation service that uses an online platform, such as an application on a smartphone to connect passengers with drivers. The ride-hailing user must specify the destination and then book the vehicle along with the driver before traveling. Almost every smartphone owned by people in Indonesia who live in big cities has an online transportation application, such as Gojek and Grab. This can be seen from the increasing use of ride-hailing services.

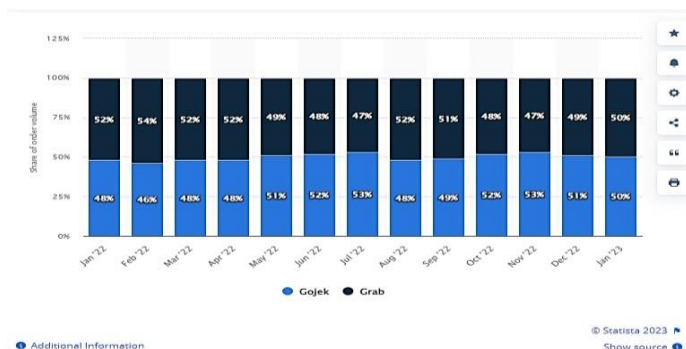


Figure 1: Use of Ride-hailing Gojek and Grab



II. THEORETICAL FOUNDATION

According to Jogiyanto (2019), perceived ease of use is a metric that determines how easily a person perceives utilising a technology to be comprehended, require little effort, and operate. The easier a system is to use, the less effort a person has to put in so that it can improve a person's performance when using this technology. All of that is because ease of use is an effort that is not burdensome or requires high abilities when someone uses a system.

Perceived ease, as defined by Davis (1989) in Reza Ramadhan and Sri Herianingrum (2016), is the degree to which a person thinks technology is simple to understand. The degree to which potential users anticipate the new system to be devoid of problems determines how simple it is seen to be to operate. Thus, the notion of ease of use refers to an individual's opinion that using an IT system is not difficult or time-consuming.

Customer satisfaction will rise if the quality of the services is high. Satisfied customers will assess if the quality of the services meets their expectations or not (Pasuraman, 1990). The servqual technique, a word for service quality created by Pasuraman, Zethaml, and Berry (Pasuraman, 1990), can be used to gauge service quality generally.

According to Arianto (2018), focusing on needs and requirements as well as on timeliness to meet customer expectations constitutes service quality. When a client is a client of the business, service quality relates to all services offered by the business.

Customer satisfaction, according to Phillip Kotler and Kevin Lane Keller (2007), is a person's emotion of happiness or disappointment that develops after comparing the performance (results) of the product against the performance anticipated. Kotler and Keller (2016) define customer satisfaction as the dissatisfaction or pleasure that consumers experience after using a variety of performance services that meet or fall short of their expectations.

Table 1: Operational Definition

No.	Variable Name	Definition	Indicator	Reference
1	Perceived Ease of Use	It is a measure of where a person believes that using a technology can be clearly used and does not require a lot of effort but should be easy to use and operate	• Easy to learn • Easy to obtain • Easy to operate	Jimenez et al., (2016) in the research of Andrean Septa Yogananda and I Made Bayu Dirgantara (2017)
2.	Service Quality	Can be interpreted as focusing on meeting needs and requirements, as well as on timeliness to meet customer expectations.	• <i>Reliability</i> • <i>Responsiveness</i> • <i>Assurance</i> • <i>Emphaty</i> • <i>Tangibles</i>	Tjiptono(2016)
3.	Consumer Satisfaction	Is the level of feeling where a person expresses the results of a comparison of the performance of a product or service received and expected	• Product quality • Service quality • Emotional • Price • Cost	Ratnasari(2017)

III. RESULT AND DISCUSSION

Based on the questionnaires that have been given or distributed via online, they have been collected and tabulated in tabular form and presented according to the results of the answers from the respondents. Previously, the researcher conducted a validity test on 30 respondents so that later there were no statements from variables that did not support of the 30 respondents, it was found that the test was valid and could be carried out on to 100 respondents, and the valid and reliable test of 30 respondents is in the attachment. Therefore, the research used a questionnaire that was provided to items that were randomly picked in order to gather information regarding how much of an impact the perception of ease of use and service quality has on Maxim's customer satisfaction at Padang State Polytechnic.

A) Validity Test

The indicators on the questionnaire are considered valid if the value of $r_{\text{count}} > r_{\text{table}}$ is attained. In contrast, the indicator on the questionnaire is deemed invalid if the value of $r_{\text{count}} < r_{\text{table}}$ is obtained. In this study, the validity test was conducted by distributing questionnaires with 100 respondents, each of whom completed 30 statement items. The significance test is carried out by comparing the calculated r value with the r_{table} value. The value of the r_{table} with a significance level of 5% (0.05) in this study is 0.1966, which is obtained from the formula for finding the r_{table} , which uses

the formula for degrees of *freedom* according to the number of respondents, namely $df = N - 2$ (N is the number of samples). Then the r table obtained is $df = 100 - 2 = 98$, so the r table is 0.196, which can be seen in the percentage point of the r table attached on the attachment page.

Table 2: Validity Test Results

Variables	Indicator	R Tabel 0,05 (5%)	R Count	Description
Perceived Ease of Use (X1)	X1.1	0.196	0.708	Valid
	X1.2		0.689	Valid
	X1.3		0.635	Valid
	X1.4		0.530	Valid
	X1.5		0.622	Valid
	X1.6		0.795	Valid
Quality Service (X2)	X2.1		0.727	Valid
	X2.2		0.768	Valid
	X2.3		0.750	Valid
	X2.4		0.762	Valid
	X2.5		0.683	Valid
	X2.6		0.793	Valid
	X2.7		0.806	Valid
	X2.8		0.795	Valid
	X2.9		0.621	Valid
	X2.10		0.742	Valid
Satisfaction Consumer (Y)	X2.11		0.643	Valid
	X2.12		0.725	Valid
	X3.1		0.723	Valid
	X3.2		0.676	Valid
	X3.3		0.720	Valid
	X3.4		0.702	Valid
	X3.5		0.582	Valid
	X3.6		0.702	Valid
	X3.7		0.547	Valid
	X3.8		0.552	Valid
	X3.9		0.574	Valid
	X3.10		0.557	Valid
	X3.11		0.603	Valid
	X3.12		0.690	Valid

Source: data processed, 2023

According to the findings of the validity test performed with the aid of the SPSS version 29 programme, all variables in this study have $r\text{-count} > r\text{-table}$ values of ($0.708 > 0.196$). Therefore, it can be said that all of the study's variables have a high level of validity. All items in the perceived ease of use variable (X1) display the value $r\text{-count} > r\text{-table}$. This suggests that the statements in the perceived ease of use variable are capable of accurately measuring the relevant factors. The value of $r\text{-count} > r\text{-table}$ is likewise displayed by the service quality variable (X2). This suggests that the assertions made about the service quality variable are able to highlight its key constituents. Furthermore, the customer satisfaction variable (Y) demonstrates that $r\text{-count} > r\text{-table}$. These findings suggest that the statements used to gauge customer satisfaction levels based on the influence of perceived usability and service quality are able to precisely predict the respondent's choice or action.

Accordingly, the findings from the validity test of all research variables, including perceived ease of use (X1), service quality (X2), and customer satisfaction (Y), are declared valid in the sense that the measuring tool used in this study has something concrete and reliable to measure the variables used.

B) Reliability Test

The reliability test, according to Sugiyono (2017), measures how closely measurement outcomes using the same object would result in the same data. If the variable's Cronbach's Alpha value $>$ from 0.6, it is considered to be reliable (Priyatno, 2013). The following criteria are used to define the variable to be reliable:

1. If the Cronbach's Alpha value $>$ 0.6 then reliable
2. If the Cronbach's Alpha value $<$ 0.6 then it is not reliable

Table 3: Cronbach's Alpha Values

Reliability Statistics	
Cronbach's Alpha	N of Items
0.949	30

Source: data processed, 2023

Table 4: Reliability Test Results

Variables	Indicator	Cronbach's Alpha	Description
Perceived Ease of Use (X1)	X1.1	0.949	Reliable
	X1.2	0.949	Reliable
	X1.3	0.949	Reliable
	X1.4	0.949	Reliable
	X1.5	0.949	Reliable
	X1.6	0.949	Reliable
Quality Service (X2)	X2.1	0.949	Reliable
	X2.2	0.949	Reliable
	X2.3	0.949	Reliable
	X2.4	0.949	Reliable
	X2.5	0.949	Reliable
	X2.6	0.949	Reliable
	X2.7	0.949	Reliable
	X2.8	0.949	Reliable
	X2.9	0.949	Reliable
	X2.10	0.949	Reliable
	X2.11	0.949	Reliable
	X2.12	0.949	Reliable
Satisfaction Consumer (Y)	X3.1	0.949	Reliable
	X3.2	0.949	Reliable
	X3.3	0.949	Reliable
	X3.4	0.949	Reliable
	X3.5	0.949	Reliable
	X3.6	0.949	Reliable
	X3.7	0.949	Reliable
	X3.8	0.949	Reliable
	X3.9	0.949	Reliable
	X3.10	0.949	Reliable
	X3.11	0.949	Reliable
	X3.12	0.949	Reliable

Source: data processed, 2023

Tables 2 and 3 show that the 30 dependable statement items have a Cronbach's Alpha score of 0.949. This value indicates a high level of instrument reliability. In the context of research, a Cronbach's Alpha value close to or equal to 1 indicates that all items in the instrument have excellent consistency and are related to each other. Thus, the calculation results indicate that the variables measured by this instrument can be said to be highly reliable.

C) Classical Assumption Test

a. Data Normality Test

Using the SPSS application programme and a probability level (sig) of 0.05, the Kolmogorov-Smirnov test is used to determine if the data are normally distributed. If the probability value (sig) > 0.05, then the data are considered to be regularly distributed, and if the probability value (sig) < 0.05, then the data are considered to be non-normally distributed.

Table 5: Kolmogorov Smirnov Results
One-Sample Kolmogorov-Smirnov Test

			Unstandardized Residual
N			100
Normal Parameters ^{a,b}	Mean		.0000000
	Std. Deviation		2.23372363
Most Extreme Differences	Absolute		.087
	Positive		.087
	Negative		-.070
Test Statistic			.087
Asymp. Sig. (2-tailed) ^c			.061
Monte Carlo Sig. (2-tailed) ^d	Sig.		.063
	99% Confidence Interval	Lower Bound	.057
		Upper Bound	.070

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

d. Lilliefors' method based on 10000 Monte Carlo samples with starting seed 2000000.

Source: data processed, 2023

In the data normality test, first look for the residual value so that you can get a significance value. Kolmogorov Smirnov is used in this normalcy test because there are more than 30 respondents. It is clear from the normality test findings that the residual value is regularly distributed because the significance value is $0.63 > 0.05$.

b. Multicollinearity Test

The variance inflation factor (VIF) and tolerance value show the results of the multicollinearity test. If the VIF value < 10 , multicollinearity does not exist. There is multicollinearity in the data if the VIF value > 10 .

Table 6: Multicollinearity Test Results
Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.	Collinearity Statistics	
		B	Std. Error				Tolerance	VIF
1	(Constant)	10.907	2.441		4.468	<.001		
	Perceived Ease Usage	.396	.152	.203	2.595	.011	.407	2.457
	Service Quality	.586	.065	.705	9.000	<.001	.407	2.457

a. Dependent Variable: Customer Satisfaction

Source: IBM SPSS version 29, 2023

The perceived ease of use variable (X1) and the service quality variable (X2) have VIF (Variance Inflation Factor) values of $2.457 < 10$ and $0.407 > 0.1$, respectively, indicating that the data do not exhibit multicollinearity.

c. Heteroscedasticity Test

The Rank Spearman correlation coefficient value between each independent variable and the confounding variable is used to determine whether or not heteroscedasticity exists. There is no heteroscedasticity if the probability value (sig) > 0.05 (Ghozali, 2018).

Table 7: Heteroscedasticity Test Results

Model		Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.
		B	Std. Error			
1	(Constant)	.763	1.553		.491	.624
	X1	-.055	.097	-.089	-.566	.573
	X2	.047	.041	.180	1.138	.258

a. Dependent Variable: RES2

Source: IBM SPSS version 29, 2023

This heteroscedasticity test determines whether the regression model leads to variance inequality between the residuals from one observer and the other. According to the results of the heteroscedasticity test, where the significant values for the service quality variables are $0.258 > 0.005$ and the perceived ease of use variable is $0.573 > 0.05$, heteroscedasticity is not present.

d. Multiple Linear Regression Analysis

Understanding the link between one dependent variable (the dependent variable) and two or more independent variables (the independent variables) is done using multiple linear regression analysis. Simple linear regression is used when there is only one independent variable and one dependent variable. Contrarily, it is referred to as multiple linear regression if there are several independent or dependent variables. A regression model called multiple linear regression includes multiple independent variables.

Table 8: Multiple Linear Regression Result

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error			
1	(Constant)	10.907	2.441	4.468	<,001
	Perceived Ease Usage	.396	.152	.203	.011
	Service Quality	.586	.065	.705	.001

a. Dependent Variable: Customer Satisfaction

Source: IBM SPSS version 29, 2023

Based on the results of multiple linear regression analysis in table 4.7, it can be seen that the equation seen from the insignificant standard error coefficient (Unstandardized) coefficients B, as follows:

$$Y = a + b_1X_1 + b_2X_2$$

The multiple linear regression equation can be interpreted as follows:

$$Y = 10.907 + 0.396X_1 + 0.586X_2$$

The regression coefficient results for a model with a dependent variable of customer satisfaction and two independent variables, namely perceived ease of use and service quality:

- Constant (a) is a fixed or constant number of dependent variables if the independent variable is 0
- X1 and X2 values are determining or predictive values that show an increase (+) or a decrease (-) in the Y variable.
- The magnitude of the X1 regression coefficient is 0.396; this indicates that every 1 unit increase in the perceived ease of use (X1) value will increase customer satisfaction (Y) by 0.396.
- The magnitude of the X2 regression coefficient is 0.586; this indicates that every 1 unit increase in service quality (X2) will increase customer satisfaction (Y) by 0.586.

From the results of this data, it can be concluded that the variables of perceived ease of use and quality of use can affect customer satisfaction because the resulting values both have an increase or are linear.

e. T test

The partial test, or T test, is employed to evaluate the individual effects of each independent variable on the dependent variable. With degrees of freedom $df = n - k - 1$, the value of the t table is sought at a significance level of 0.05. n is the sample size in this study, which is 100 respondents, and k is the number of independent variables, which in this study total to 2. Thus, the result for the t table obtained is 1.984 for $df = 100 - 2 - 1 = 97$. The following results of the t test are shown in table 4.8:

Table 9: T-test results

Variables	t-count	t-table	Sig.
Perceived Ease of Use (X1)	2.595	1,984	<,001
Service Quality (X2)	9.000	1,984	<,001

Source: data processed, 2023

The variable perceived ease of use (X1) $t\text{-count} > t\text{-table}$ value is $2.595 > 1.984$, as can be seen from the table above. The hypothesis is accepted based on these criteria since $t\text{-count} > t\text{-table}$ and $\text{sig} < 0.05$, indicating that the independent variable, perceived ease of use, partially and significantly influences the dependent variable, customer satisfaction. The $t\text{-count} > t\text{-table}$ value for the service quality variable (X2) is $9.000 > 1.984$. For Padang State Polytechnic students, these two independent variables perceived usability and service quality have a favourable and considerable influence on Maxim's customer satisfaction decisions. On the other hand, the impact of service quality on customer satisfaction is far greater than that of perceived usability.

f. F Test

The F test is used to determine whether the independent factors have an impact on the dependent variable simultaneously. The results of the F test are derived using the previously discussed formulas $df\ 1$ (number of variables-1) and $df\ 2$ ($n-k-1$). The F test must also be searched out first. 100 respondents make up the sample size (n), and there are two independent variables (k). The acquired f value is 97, and the f table results are obtained at 3.090 as a result of $df\ 1 = 2-1 = 1$ and $df\ 2 = 100-2-1 = 97$. Table 4.9 contains the study's F test findings, which are as follows:

Table 10: ANOVA F Test Results^a

Test Results						
Model Squares		Sum of	df	Mean Square	F	Sig.
1	Regression	1547.827	2	773.914	151.974	<,001 ^b
	Residuals	493.963	97	5.092		
	Total	2041.790	99			

a. Dependent Variable: Customer Satisfaction

b. Predictors: (Constant), Service Quality, Perceived Ease of Use

Source: data processed, 2023

Based on the test results, it can be seen that the results of the $f\text{-count}$ value in the F column are $151.974 > 3.090$ with an error rate of $\alpha\ 5\%$. Based on the test criteria as if $f\text{ count} > f\text{ table}$ and the significance level < 0.05 , it can be said that the influence of the variables of perceived ease of use and service quality has a joint effect (simultaneously) on Maxim customer satisfaction in Padang State Polytechnic students.

g. Determination Coefficient Test

The coefficient value is divided into two, namely 0 and 1. When the value of R^2 obtained is close to 0, it can be said that the variables of perceived ease of use and service quality cannot explain the variable customer satisfaction.

Table 11: Determination Test Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.871 ^a	.758	.753	2.257

a. Predictors: (Constant), X2, X1

Source: IBM SPSS version 29, 2023

Based on the multiple linear regression analysis test, the R value indicates the relationship between the independent variable and the dependent variable. The interpretation of the coefficient according to Sugiono (2016) is:

1. 0.80 - 1.000 = very strong level of relationship
2. 0.60 - 0.799 = strong relationship level
3. 0.40 - 0.599 = moderately strong relationship level
4. 0.20 - 0.399 = low level of relationship
5. 0.00 - 0.199 = very low level of relationship

The R Square value shows the size of the contribution of the independent variable to the dependent variable with the formula:

$$KP = R^2 \times 100\%$$

Description

KD = Coefficient of
determination R^2 = Squared
correlation coefficient.

The adjusted R square displays how much the independent variable contributed to the dependent variable. However, it is applied when determining the dependent variable's value. The standard error of the estimate also reveals the inaccuracy in the linear regression; the lower this number, the more accurate the regression equation. So it might be understood as:

1. The value of $R = 0.871$ indicates a very strong relationship between the variables of perceived ease of use and service quality and customer satisfaction.
2. The R Square value = 0.758 indicates that the perceived ease of use and service quality variables can explain the customer satisfaction variable by 75.8%, while 24.2% is explained by other factors not included in this study.
3. The standard error estimate shows linear regression, the smaller the number, the better the regression equation.

D) Discussion

Overall, the findings of this investigation are encouraging. According to the findings of the descriptive analysis, the variables of perceived ease of use and service quality have a substantial impact on students at Padang State Polytechnic's ability to maximise customer satisfaction. According to Tjiptono (2019), service quality is the standard of excellence that must be met when serving customers. Numerous organisations have successfully exploited better service quality as a competitive strategy. Physical proof, empathy, responsiveness, reliability, and assurance given to consumers by the Maxim firm are among the metrics utilised in this study to assess the impact of service quality characteristics on customer satisfaction.

The analysis' findings, which are based on the outcomes of several tests, indicate that the factors of perceived ease of use and service quality can have a big impact on customer satisfaction. According to the coefficient results of multiple linear regression analysis, the perceived ease of use variable has a significant value of $0.011 < 0.05$ on customer satisfaction. On the customer satisfaction metric, the service quality variable has a significance value of $0.001 < 0.05$. This result suggests that perceived ease of use and service quality at Padang State Polytechnic are strongly correlated. At Padang State Polytechnic, perceived ease of use and service quality both have a large impact on customer satisfaction with Maxim. As a result, the independent factors of perceived ease of use and service quality significantly affect customer satisfaction for Maxim.

In this case, the respondent recognizes that Maxim online motorcycle taxi services are easy to understand and operate, and the services provided are also very good. This ease of use will reduce either time or power so that customers can learn the ins and outs of online transportation. Good service to customers often makes them continue to use this service. In addition, the speed of Maxim responds to customer problems will make customers loyal enough to continue using this online motorcycle taxi service. Thus, if Maxim is easy to use by customers, the service will be used frequently.

The research by Fransiska and Ajeng Aquinia (2023) on the impact of service quality, usability, and advertising on customer satisfaction of Gojek users is used in this study to offer further context. Previous studies have discovered a substantial relationship between service quality, convenience of use, and promotion in Gojek despite the fact that the factors under investigation are the same. This study confirms the findings of other studies that customer satisfaction with Maxim at Padang State Polytechnic is significantly influenced by perceived ease of use and service quality.

IV. CONCLUSION

A) Conclusion

According to the study's findings, student satisfaction with Maxim at Padang State Polytechnic is statistically substantially influenced by perceived ease of use and service quality. The higher the quality of service provided by Maxim both in motorcycles, cars, food, cargo goods, and daily services, it will increase Maxim's customer satisfaction at Padang State Polytechnic students. The easier it is to use the Maxim application, it will be able to increase Maxim's customer satisfaction at Padang State Polytechnic students. Perceived ease of use and service quality affect customer satisfaction, both partially and simultaneously.

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