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# The Effect of Service Quality, Trust and Ease of Use of Mobile Banking on Customer Satisfaction of Bumn Banks in Jakarta

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**ABSTRACT:** Banking services in the form of mobile banking have various features for payments, purchases, and money transfers that are increasingly used by the public in transactions from home and anywhere. Mobile banking transactions provide and offer convenience for customers through a variety of operational services. Mobile banking transaction facilities via smartphones are services that can create customer satisfaction for BUMN Banks. The analysis method for testing customer satisfaction using Google Form in this study uses quantitative data with a sample of 100 customers in Jakarta using the purposive sampling technique. The analysis tool used is SPSS. Data analysis uses multiple linear regression analysis. The results of the study show that service quality, trust and ease of use affect customer satisfaction for BUMN Bank mobile banking (Bank Mandiri) in Jakarta. Ease of use obtains a dominant value compared to service quality, trust, and customer satisfaction.

**KEYWORDS:** Mobile Banking, Service Quality, Trust, Ease of Use.

## I. INTRODUCTION

Mobile banking is an innovative service in the banking industry that utilizes developments in information and communication technology to meet customer needs and facilitate customer transactions. Currently, almost all conventional and Islamic banks have mobile banking services. M-Banking is a service that allows customers to make banking transactions using smartphones. M-Banking services are available through applications. m-banking not only facilitates customer transactions but also helps to streamline banking services. The growth of m-banking driven by developments in technology, social media, and people's lifestyles will provide opportunities for the banking industry to generate income from taxable income, reduce transaction costs, develop businesses, and increase customer trust/loyalty. The use of m-banking also provides convenience and ease of transacting freely, not limited by time and location (Financial Services Authority, 2021).

Banking services in the form of mobile banking have various features for payments, purchases, and money transfers that are increasingly used by the public in transactions from home and anywhere. Mobile banking transactions provide and offer convenience for customers through a variety of operational services. Mobile banking transaction facilities via smartphones are services that can create customer satisfaction for BUMN Banks (Basri, 2020).

According to the Financial Services Authority on its website, Mobile Banking users have increased by 260% from 13.6 million customers in 2012 to 50.4 million customers in 2016. The increase in Mobile Banking users also continues to grow and increase from year to year. Table 1.1 M-Banking Users in 2022-2024.

**Tabel 1.1: M-Banking Users in Indonesia**

| Mobile Application | Bank | Users (Million) | Transactions (Rp Trillion) |
|---|---|---|---|
| BRIMO | BRI | 37,1 | 4.034 |
| Livin' By Mandiri | Bank Mandiri | 27,6 | 2.940 |
| BNI Mobile Wondr by BNI | BNI | 17,9 | 1.104 |
| BTN Mobile | BTN | 1,9 | 60,1 |

**Source:** *Iconomics (2024)*

According to Iconomics (2024), it can be seen Bank Mandiri are the bank with the most mobile banking users and the largest transaction volume in Indonesia. This shows that the two banks have succeeded in attracting customers to use mobile banking technology in their daily financial activities. However, the high number of users does not necessarily reflect the level of customer satisfaction. Satisfaction is greatly influenced by various factors, such as the quality of service provided through the application, user trust in system security, and ease of use of the mobile banking application interface.

## II. RESEARCH METHOD

### Object And Subject Of Research

According to Sugiyono (2020), the subject of research is a party related to the research, such as an informant or resource person. The subject of research is a sample of a study that aims to obtain information related to research data. The subjects in this study were BUMN Bank Customers (Bank Mandiri) in Jakarta. According to Sugiyono (2020), the object of research refers to all things chosen by the researcher to be studied with the aim of obtaining relevant information and then making conclusions based on the findings. The objects in this study were BUMN Banks (Bank Mandiri) in Jakarta.

### Research Variables

According to Sugiyono (2021), independent variables are often referred to as free variables. Independent variables are variables that influence or cause changes or the emergence of dependent variables. The independent variables in this study are Service Quality (X1), Trust (X2), Ease of Use (X3).

Sugiyono (2021) stated that the dependent variable or also called the bound variable is a variable that is influenced or becomes a result of the existence of an independent variable. The bound variable in this study is Customer Satisfaction (Y).

### Method of collecting data

The data collection method used by researchers in conducting this research used a questionnaire. The researcher's method for obtaining primary data was by distributing questionnaires online via social media (Instagram and WhatsApp) via Google Form to BUMN Bank (Bank Mandiri) customers in Jakarta.

### Population and Sample

According to Arikunto (2020) the population is the entire research subject. The population in this study were customers of state-owned banks consisting of Bank Mandiri in Jakarta who had been using mobile banking for more than one year. According to Arikunto (2020) who stated that a sample is a portion or representative of the population being studied. The sampling method used in this study is the purposive sampling method. Purposive sampling is a sampling determination technique with certain considerations.

### Validity Test

validity test is a valid instrument meaning that the instrument can be used to measure what should be measured (Sugiyono, 2021). The validity test is carried out by comparing the calculated r value with the table r for degree of freedom (df) = n – 2 in this case is the number of samples Ghozali (2021). The decision-making criteria are as follows:

1. If the calculated r value> r table then the question item is valid.
2. If the calculated r value <r table then the question item is invalid.

### Reliability Test

According to Ghozali (2021), a questionnaire is said to be reliable if a person's answer to a statement is consistent or stable over time. A questionnaire is said to be reliable when a respondent's answer is consistent or stable over time. The technique used to measure the reliability test is using Cronbach's alpha. If a test value gets a Cronbach's alpha value (a) > 0.60, the question in the questionnaire can be stated as Reliable. To test the reliability of the questionnaire in this study, the Cronbach's alpha coefficient formula was used as follows:

1. If the alpha coefficient result> 0.60 produces a Reliable questionnaire.
2. If the alpha coefficient result <0.60 produces an Unreliable questionnaire.

### Normality Test

According to Ghozali (2021), the normality test aims to test whether in the regression model, the independent and dependent variables are normally distributed or not. The data obtained in a questionnaire distribution is not necessarily normally distributed. To provide certainty whether data is normally distributed or not, it should be tested using a normality test. To test normality, this study used the Kolmogorov-Smirnov statistical test. The following is the basis for determining whether a normality test is normal or not:

1. If the significance value> 0.05 produces a normally distributed residual value.
2. If the significance value <0.05 produces an abnormally distributed residual value.

**Multicollinearity Test**

Ghozali (2021) multicollinearity test aims to test whether the regression model finds a correlation between independent variables. To test for multicollinearity by looking at the VIF value of each independent variable, if a VIF (Variance Inflation Factor) value is less than 10 and Tolerance is more than 0.1 it is stated as a good model, namely there is no multicollinearity.

**Heteroscedasticity Test**

According to Ghozali (2021), this Heteroscedasticity test is used to see if there is inequality in variance from the residuals of one observation to another. If a variance from the residuals of one observation to another remains, this is called Homoscedasticity and if it is different, it is called Heteroscedasticity. To detect it by looking at the plot graph between the predicted values of the independent variables, namely ZPRED and the residuals SRESID. Where the basis of the analysis is:

a. If there is a certain pattern, such as points that form a certain regular pattern (wavy, spread out and then narrow), it can be said that heteroscedasticity occurs.
b. Conversely, if there is an unclear pattern and the points are spread out, it can be said that heteroscedasticity does not occur.

**Multiple Linear Regression Test**

According Ghozali (2021) multiple linear regression analysis is used to test the effect of more than one independent variable on the dependent variable. The purpose of multiple linear regression analysis is to find out how much influence several independent variables (X) have on the dependent variable (Y) and also to predict the value of the dependent variable if all independent variables are known. The multiple linear regression equation can be formulated as follows:

$Y = a + \beta1X1 + \beta2X2 + \beta3X3 + \beta4X4 + e$

Description:

Y = Customer Satisfaction
a = Constant
β1 = Regression coefficient of Service Quality variable (X1)
β2 = Regression coefficient of Trust variable (X2)
β3 = Regression coefficient of Ease of Use variable (X3)
X1 = Service Quality
X2 = Trust
X3 = Ease of Use
e = Error or confounding variable

**T Test**

According to Ghozali (2021) the t-test is a test used to determine whether there is a significant relationship or influence between independent variables partially, in this study it is known that the number of samples (n) = 100, the number of independent and dependent variables (k) = 5, significance level 5% (0.05). then (df = n-k) is 100 - 4 = 96, from this calculation the t table is 1.66088. The test criteria used are as follows:

- If t-count > t-table and sig.t < α 0.05 means that there is a significant influence between the independent variable on the dependent variable partially (Ho is rejected and Ha is accepted).
- If t-count < t-table and sig. t > α 0.05 means that there is no significant influence between the independent variable on the dependent variable (Ho is accepted and Ha is rejected).

**F Test**

According to Ghozali (2021) the F test or anova test is carried out to determine the effect or no effect between the independent variables on the dependent variable simultaneously with the following provisions:

- If F-calculate> F-table and sig. F <α (0.05) means that there is a significant effect between the independent variables on the dependent variable simultaneously (Ho is rejected and Ha is accepted).
- If F-calculate <F-table and sig. F> α (0.05) means that there is no significant effect between the independent variables on the dependent variable simultaneously (Ho is accepted and Ha is rejected).

**Coefficient of Determination Test**

According to Ghozali (2021), the coefficient of determination ($R^2$) is used to measure the extent to which the model is able to explain the variation of the dependent variable. The value of the coefficient of determination is between zero and one. The greater the $R^2$ (approaching one), the better the regression results are because the independent variables as a whole are able to explain the dependent variable and vice versa, the closer to zero, the worse the regression results are, because the independent variables as a whole are not able to explain the dependent variable.

## III. RESULTS AND DISCUSSION

### Validity Test

Based on the validity test, the summary results of the validity test are obtained in the table below:

**Table 4.12: Validity Test Results**

| Variable | Question | R Count | R Table | Results |
|---|---|---|---|---|
| Service Quality (X1) | X1.1 | 0,817 | 0,3610 | Valid |
| | X1.2 | 0,514 | 0,3610 | |
| | X1.3 | 0,875 | 0,3610 | |
| | X1.4 | 0,817 | 0,3610 | |
| | X1.5 | 0,906 | 0,3610 | |
| | X1.6 | 0,787 | 0,3610 | |
| | X1.7 | 0,659 | 0,3610 | |
| Trust (X2) | X2.1 | 0,930 | 0,3610 | Valid |
| | X2.2 | 0,918 | 0,3610 | |
| | X2.3 | 0,822 | 0,3610 | |
| | X2.4 | 0,850 | 0,3610 | |
| Ease Of Use (X3) | X3.1 | 0,860 | 0,3610 | Valid |
| | X3.2 | 0,845 | 0,3610 | |
| | X3.3 | 0,873 | 0,3610 | |
| | X3.4 | 0,738 | 0,3610 | |
| | X3.5 | 0,758 | 0,3610 | |
| | X3.6 | 0,602 | 0,3610 | |
| | X3.7 | 0,844 | 0,3610 | |
| | X3.8 | 0,660 | 0,3610 | |
| Customer Satisfaction (Y) | Y1 | 0,890 | 0,3610 | Valid |
| | Y2 | 0,752 | 0,3610 | |
| | Y3 | 0,903 | 0,3610 | |
| | Y4 | 0,866 | 0,3610 | |
| | Y5 | 0,885 | 0,3610 | |
| | Y6 | 0,807 | 0,3610 | |

**Source:** Processed Primary Data, 2025

Based on table 4.12 above, it can be seen that the test results for each research variable obtained results with a calculated r value > r table, so it is declared valid.

### Reliability Test

The value to determine the reliability of an instrument is the Cronbach's Alpha value which is greater than 0.60. The test results using the SPSS program can be seen in Table 4.13 as follows:

**Table 4.13: Reliability Test Results**

| Variable | *Cronbach's Alpha* | *Critical Value* | Results |
|---|---|---|---|
| Service Quality (X1) | 0,883 | 0,60 | Reliabel |
| Trust (X2) | 0,900 | 0,60 | Reliabel |
| Ease Of Use (X3) | 0,904 | 0,60 | Reliabel |
| Customer Satisfaction (Y) | 0,917 | 0,60 | Reliabel |

**Source:** Processed Primary Data, 2025

Based on Table 4.13 above, it can be seen that the results of the reliability test of each research variable, namely the independent variable (Service Quality, Trust, Ease of Use) and the dependent variable (Customer Satisfaction) as a whole obtained results with a Cronbach's Alpha value greater than 0.60. Therefore, it can be stated that the data produced is reliable or can be trusted.

**Normality Test**

If the significant value > 0.05 then the residual value is normally distributed. And if the significant value < 0.05 then the residual value is not normally distributed. The output results of the test can be seen in Table 4.14 as follows:

**Table 4.14: Normality Test Results**

| One-Sample Kolmogorov-Smirnov Test | | | |
|---|---|---|---|
| | | | Unstandardized Residual |
| N | | | 250 |
| Normal Parameters[a,b] | Mean | | .0000000 |
| | Std. Deviation | | .21467414 |
| Mosti Extreme Differences | Absolute | | .079 |
| | Positive | | .079 |
| | Negative | | -.079 |
| Testi Statistic | | | .079 |
| Asymp. Sig. (2-tailed) | | | .001[c] |
| Monte Carlo Sig. (2-tailed) | Sig. | | .082[d] |
| | 99% Confidence Interval | Lower Bound | .075 |
| | | Upper Bound | .089 |
| a. Testi distribution is Normal. | | | |
| b. Calculated from data. | | | |
| c. Lilliefors Significance Correction. | | | |
| d. Based on 10000 sampled tables with starting seed 299883525. | | | |

**Source:** Processed Primary Data, 2025

The test results based on Table 4.14 using the Kolmogorov-Smirnov method show that the data obtained from respondents have a significant value of 0.82. This means that the significant value is > 0.05 which states that the data is normally distributed because it meets these conditions.

**Multicollinearity Test**

The multicollinearity test is used to test whether there is a correlation between independent variables in the regression model.

**Table 4.15: Multicollinearity Test Results**

| Coefficients[a] | | | |
|---|---|---|---|
| Model | | Collinearity Statistics | |
| | | Tolerance | VIF |
| 1 | Kualitas Pelayanan | .329 | 3.044 |
| | Kepercayaan | .260 | 3.853 |
| | Kemudahan Pengguna | .381 | 2.628 |
| a. Dependenti Variable: Kepuasan Nasabah | | | |

**Source:** Processed Primary Data, 2025

Based on Table 4.15 above, it shows that the tolerance value is greater than 0.10 (tolerance > 0.10) and the VIF value is less than 10 (VIF < 10), so there is no multicollinearity. This shows that this study meets the requirements to be free from multicollinearity between research variables.

**Heteroscedasticity Test**

The heteroscedasticity test is carried out to determine whether in the regression model there is inequality in the variance of the residuals of one observation with another observation.

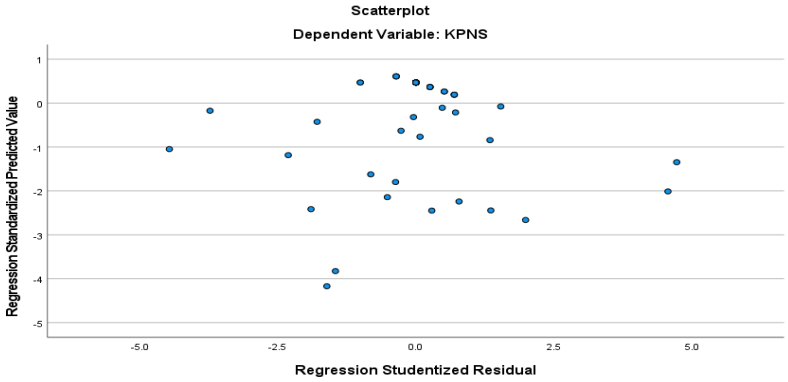


**Figure 4.1 Heteroscedasticity Test Results**

**Source:** Processed Primary Data, 2025

Based on Figure 4.1 above, it can be seen that the points are spread randomly, irregularly, do not form a particular pattern and are spread both above and below the number zero (0) on the Y axis. This shows that there is no deviation from the classical assumption of heteroscedasticity in the regression model created, in other words, it accepts the homoscedasticity hypothesis.

**Multiple Linear Regression**

This test is conducted to see the relationship and influence between one variable and another variable, especially the relationship pattern whose model is not yet fully known.

**Table 4.16: Multiple Linear Regression Test Results**

| Coefficients[a] | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Model | | Unstandardized Coefficients | | Standardized Coefficients | T | Sig. | Collinearity Statistics | |
| | | B | Std. Error | Beta | | | Tolerance | VIF |
| 1 | (Constant) | 3.297 | .903 | | 3.652 | .000 | | |
| | Kualitas Pelayanan | .335 | .051 | .343 | 6.574 | .000 | .329 | 3.044 |
| | Kepercayaan | .220 | .041 | .316 | 5.375 | .000 | .260 | 3.853 |
| | Kemudahan Pengguna | .356 | .057 | .302 | 6.224 | .000 | .381 | 2.628 |
| a. Dependenti Variable: Kepuasan Nasabah | | | | | | | | |

**Source:** Processed Primary Data, 2025

1. The constant value (α) is positive, namely 3.297, meaning that if the independent variables, namely service quality, trust and ease of use, have a value of zero, then the value of customer satisfaction is the same as the constant value, namely 3.297.
2. The regression coefficient value of the service quality variable (X1) is positive at 0.335. This shows that the service quality variable has a direct relationship with customer satisfaction, meaning that if service quality is better known by customers, customer satisfaction at Bank Mandiri will increase by 0.335.
3. The regression coefficient value of the trust variable (X2) is positive at 0.220. This shows that the trust variable has a direct relationship with customer satisfaction, meaning that if trust is better known by customers, customer satisfaction at Bank Mandiri will increase by 0.220.
4. The regression coefficient value of the ease of use variable (X3) is positive at 0.356. This shows that the ease of use variable has a direct relationship with customer satisfaction, meaning that if ease of use is better known by customers, customer satisfaction at Bank Mandiri will increase by 0.356.

**T Test**

The t-test is carried out by comparing the calculated t-value with the t-table value using a significance level of α which is set at 5% or 0.05.

**Table 4.17: T Test Results**

| Coefficients[a] | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Model | | Unstandardized Coefficients | | Standardized Coefficients | T | Sig. | Collinearity Statistics | |
| | | B | Std. Error | Beta | | | Tolerance | VIF |
| 1 | (Constant) | 3.297 | .903 | | 3.652 | .000 | | |
| | Kualitas Pelayanan | .335 | .051 | .343 | 6.574 | .000 | .329 | 3.044 |
| | Kepercayaan | .220 | .041 | .316 | 5.375 | .000 | .260 | 3.853 |
| | Kemudahan Pengguna | .356 | .057 | .302 | 6.224 | .000 | .381 | 2.628 |
| a. Dependenti Variable: Kepuasan Nasabah | | | | | | | | |

**Source:** Processed Primary Data, 2025

Based on the results of data processing, it can be explained that:

1. The service quality variable (X1) obtained a significant value of 0.000 <0.05 so that the H1 hypothesis is accepted, which means that service quality has a significant effect on customer satisfaction in BUMN Bank mobile banking.
2. The trust variable (X2) obtained a significant value of 0.000 <0.05 so that the H2 hypothesis is accepted, which means that trust has a significant effect on customer satisfaction in BUMN Bank mobile banking.
3. The ease of use (X3) obtained a significant value of 0.000 <0.05 so that the H3 hypothesis is accepted, which means that ease of use has a significant effect on customer satisfaction in BUMN Bank mobile banking

**F Test**

This test is carried out to find out whether all independent variables together (simultaneously) can influence the dependent variable.

**Table 4.18: F Test Results**

| ANOVA[a] | | | | | | |
|---|---|---|---|---|---|---|
| Model | | Sum ofi Squares | Df | Mean Square | F | Sig. |
| 1 | Regression | 4378.662 | 3 | 1459.554 | 289.785 | .000[b] |
| | Residual | 1239.022 | 246 | 5.037 | | |
| | Total | 5617.684 | 249 | | | |
| a. Dependenti Variable: Kepuasan Nasabah | | | | | | |
| b. Predictors: (Constant), Kemudahan Pengguna, Kepercayaan, Kualitas Pelayanan | | | | | | |

**Source:** Processed Primary Data, 2025

Based on table 4.18 shows that the F test (simultaneous), obtained a significant value of 0.000 <0.05. This shows that the variables of service quality, trust and ease of use simultaneously affect the satisfaction of BUMN Bank mobile banking customers.

**Coefficient of Determination**

The coefficient of determination value is determined using the Adjusted R square value in Table 4.19 below:

**Table 4.19: Coefficient of Determination Results**

| Model Summary[b] | | | | |
|---|---|---|---|---|
| Model | R | R Square | Adjusted R Square | Std. Error ofi the Estimate |
| 1 | .883[a] | .779 | .777 | 2.244 |
| a. Predictors: (Constant), Kemudahan Pengguna, Kepercayaan, Kualitas Pelayanan | | | | |
| b. Dependenti Variable: Kepuasan Nasabah | | | | |

**Source:** Processed Primary Data, 2025

Based on Table 4.17 shows that the Adjusted R Square of 0.777 or 77.7% of customer decisions in obtaining customer satisfaction can be explained by the variables of service quality (X1), trust (X2), and ease of use (X3). While the remaining 22.3% is influenced by other variables such as brand image, product quality, and promotion.

## IV. CONCLUSION

Based on the results of the study on the Influence of Service Quality, Trust and Ease of Use on Customer Satisfaction. users of mobile banking of BUMN Banks in Jakarta and from the discussion that has been described in the previous chapter, it can be concluded as follows:

Service Quality, Trust and Ease of Use have a positive influence both partially, simultaneously and significantly on customer satisfaction of mobile banking of BUMN Banks in Jakarta. Based on data processing, it was obtained that the dominant variables that contributed to the spread in influencing customer satisfaction of mobile banking of BUMN Banks in Jakarta were trust and ease of use.

**Research Implications**

1. The results of this study indicate that the variable of service quality has a significant effect on customer satisfaction where service quality is the result of distribution activities and logistics to achieve customer satisfaction by providing services to customers. Thus, the factor of service quality is important as a variable studied.
2. The results of this study indicate that the variable of trust has a significant effect on customer satisfaction where trust is the result of building commitment and realizing expectations for customers. Thus, the trust factor is important as a variable studied.
3. The results of this study indicate that the ease of use variable has a significant influence on customer satisfaction, where ease of use is the result of an application that is free from obstacles and easy to use by various groups. Thus, the ease of use factor is important as a variable to be studied.

**Research Suggestions**

For Companies

Companies must re-evaluate their performance, overcome all aspects that affect them, improve all deficiencies based on input from customers, always pay attention and adapt to external market trends that are dynamic in order to maintain their company and achieve customer loyalty as a measure of the success of companies engaged in the banking sector.

For Further Research

It is necessary to carry out further research on the same variables as this or other variables, such as brand image, product quality, and so on, to evaluate a series of evaluations, company performance, periodically and regularly to monitor achievements and targets. company.

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