

# The Influence of Electronic Service Quality (M-BANKING) on Customer Satisfaction (Case Study: PT. Bank Negara Indonesia)

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## ABSTRACT

This study aims to analyze the effect of electronic service quality of BNI's m-banking or E-SERVQUAL (Efficiency, Fulfilment, Reliability, Privacy) on customer satisfaction. The research data was obtained through a survey method with a questionnaire technique. Analysis of research data using multiple linear regression. The results of this study show that Efficiency, Fulfilment, Reliability, and Privacy significantly influence customer satisfaction for BNI Mobile Banking users.

**Keywords:** Service Quality; E-Servqual, Customer Satisfaction, BNI.

## 1. INTRODUCTION

To deliver banking services to customers, the banking sector is now focusing on E-Banking technologies. Mobile banking is a type of E-banking that has grown in popularity among bank customers in recent years. Mobile banking refers to the provision of banking services using mobile phone technology [1]. With the intense competition between banks in Indonesia, continuous innovation is needed to compete and continue to proliferate. PT Bank Negara Indonesia (Persero) Tbk or BNI has successfully presented BNI Mobile Banking as the best banking service provider application among other national banks. This is based on the results of the 2021 Bank Service Excellence Monitor (BSEM) survey conducted by Marketing Research Indonesia (MRI).

M-banking is a service or feature that is made by the bank so that customers can carry out various financial transactions via smartphones. This technology is also a good offer and opportunity for banks to reduce costs,

increase customers to save, and provide accessible transaction services [2]. Excellent service in electronic banking services plays a vital role in increasing customer satisfaction.

The SERVQUAL method proposed by [3] is one of the best evaluation techniques for assessing customer expectations and perceptions. [4] in their research shows that the four e SERVQUAL variables have a significant effect on customer satisfaction. The findings of this study support the finding by [5] that the quality of electronic services (E-Servqual) has a substantial influence on customer satisfaction. Likewise, with research conducted by [6], the results of this study indicate that the quality of electronic services has a significant effect on customer satisfaction and loyalty using mobile banking applications. Based on this description, this study aims to analyze whether the quality of electronic services (Efficiency, Fulfilment, Reliability, Privacy) significantly influences BNI M-banking customer satisfaction.

## 1.1. Literature Review

### 1.1.1. Service Quality

E-Service Quality is defined as the extent to which a website facilitates efficient and effective shopping, purchasing, and delivery [7]. Reference [7] put forward the SERVQUAL concept (tangible, reliability, responsiveness, assurance, and empathy) and model e-SERVQUAL or online service quality (efficiency, reliability, fulfilment, privacy, responsiveness, compensation, and contact). Reference [7] identified seven dimensions of online service quality, namely:

- Efficiency, i.e., the ability of the customer to enter the website, search for the needed product and relevant information, and leave the site with little effort.
- Reliability, concerning the extent to which the site is available and functioning as it should.
- Fulfilment, including accuracy of service promises, product stock availability, and product delivery under the promised time.
- Privacy, in the form of promises that customer credit card information and shopping habit data will not be shared with third parties.
- Responsiveness, or the capacity of online merchants to deliver correct information to consumers when problems happen, as well as have a procedure in place to manage product returns and provide online guarantees.
- Compensation for example: refund, shipping charges, and product handling fees.
- Contact represents the client's desire to speak with customer support representatives online or by phone.

### 1.1.2. M-Banking

M-banking, often known as mobile banking, refers to banking transactions conducted through mobile phones [8]. Mobile banking is an e-commerce program that allows clients to access bank accounts using mobile devices in order to undertake and finish bank-related activities [9]. Mobile banking is a mobile commerce application that focuses on banking financial difficulties, such as operations performed using mobile devices at ATMs (Automated Teller Machines). Customers may use mobile banking to check their savings balances, pay payments, and transfer cash to other accounts. Customers no longer need to visit banking branches or ATMs to do various transactions.

### 1.1.3. Customer Satisfaction

Consumer satisfaction, according to Kotler and Armstrong [10], is the extent to which perceived product

performance meets buyer expectations. If the product's performance falls short of the customer's expectations, the buyer is satisfied or extremely pleased.

## 2. METHODS

This study obtained the information from respondents through a questionnaire. A score for alternative answers in this questionnaire is assigned for each choice using a Likert scale. Thus in this study, there are only five categories, including strongly agree (SS), agree (S), neutral, disagree (TS), strongly disagree (STS) for respondents in answering questions. Respondents in this study amounted to 51 people who use the BNI Mobile banking application. The model used in this study is the E-SERVQUAL model with core service dimensions (Efficiency, Fulfilment, Reliability, Privacy) as the independent variable and customer satisfaction is the dependent variable.

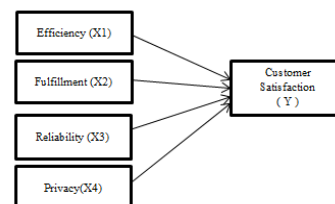


Figure 1. Conceptual Framework

## 3. RESULTS AND DISCUSSION

### 3.1. Validity Test

Validity is a measure of an instrument's level of validity or validity [12]. The computed r numbers and r tables are compared in this test. The SPSS software is used to search for R count, whereas table r is used to search for R table. Here is a test for the validity of the disseminated questionnaire.

Question items are valid because the r count's value is greater than the r table. The value of the r table for the following validity is 0.278.

Table 1. Validity Test

	R Count	R Table	Description
1	0,721	0,279	Valid
2	0,782	0,279	Valid
3	0,747	0,279	Valid
4	0,865	0,279	Valid
5	0,642	0,279	Valid
6	0,728	0,279	Valid
7	0,866	0,279	Valid
8	0,798	0,279	Valid
9	0,694	0,279	Valid
10	0,695	0,279	Valid
11	0,746	0,279	Valid
12	0,743	0,279	Valid
13	0,799	0,279	Valid
14	0,873	0,279	Valid
15	0,811	0,279	Valid

### 3.2. Reliability Test

Reliability test to find out how far the measurement results remain consistent if two measurements are made times or more to the same symptom using the same measuring instrument [13]. Because the research instrument is in the form of a questionnaire and a graded scale, the instrument's reliability is determined using the Alpha Cronbach formula.

**Table 2.** Reliability Test Instrument

Reliability Statistics	
Cronbach's Alpha	N of items
.949	15

The Results output of the table above shows that there are N of items, namely the number of items or questionnaires, and there are 15 items with a Cronbach's Alpha value of 0.949. Because the value of Cronbach's Alpha is  $0.949 > 0.60$ , it can be concluded that all questions on the questionnaire are reliable or consistent.

### 3.3. Coefficient of Determination Analysis(R<sup>2</sup>)

**Table 3.** Coefficient Analysis

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.848 <sup>a</sup>	.719	.695	1.271
a. Predictors: (Constant), TOTALX4, TOTALX1, TOTALX2, TOTALX3				

The coefficient of determination test is used to assess how well the model explains the variation in the dependent variable [14]. In testing the coefficient of determination hypothesis, information is obtained about the magnitude of the influence of the entire independent and dependent variables. Based on the table above, the R number is 0.848 (84%). This shows that there is a strong relationship between Efficiency, Fulfilment, Reliability, Privacy on customer satisfaction. In addition, R Square is worth 0.719 (or 71.9%). This shows that the percentage contribution of the influence of the independent variables (Efficiency, Fulfilment, Reliability, Privacy) to the dependent variable (customer satisfaction) is 71.9%, or the contribution of all independent variables to the dependent variable simultaneously is 71.9%. At the same time, the remaining 28.1% is a contribution from factors other than factors that are not included in this research model.

### 3.4. T-Test

**Table 4.** T-Test Results

Variable	T count	T table	Sig.
Efficiency (X1)	8.173	2,013	0,000
Fulfillment (X2)	7.825	2,013	0,000
Reliability (X3)	9.125	2,013	0,000
Privacy (X4)	7.150	2,013	0,000

The t-test was carried out to show how far the effect of one independent variable individually in explaining variation dependent variable [14].

Based on the T-test, the results obtained are:

1. Efficiency has a significant effect on customer satisfaction.
2. Fulfilment has a significant effect on customer satisfaction.
3. Reliability has a significant effect on customer satisfaction.
4. Privacy has a significant influence on customer satisfaction.

### 3.5. F-Test

**Table 5.** F test

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	190.294	4	47.574	29.440	.000 <sup>b</sup>
	Residual	74.333	46	1.616		
	Total	264.627	50			
a. Dependent Variable: TOTALLY						
b. Predictors: (Constant), TOTALX4, TOTALX1, TOTALX2, TOTALX3						

The F test determines if all of the model's independent variables have a simultaneous influence on the dependent variable [14]. The F test table shows that the calculated F value is 22,239 with a significance level of 0.000. When referring to table F with df1(k-1) and df2 (nk), then the F table is 2.56. When compared, the calculated F is  $29,440 > F$  table. Then when viewed from the level of significance, where the significance value obtained is  $0.000 < 0.05$ , then there is a significant effect. Therefore, it can be explained that the overall variables of Efficiency, Fulfilment, Reliability, Privacy together have a simultaneous effect on customer satisfaction.

## 4. CONCLUSIONS

The results of this study's four variables, namely Efficiency, Fulfilment, Reliability, and Privacy, significantly influence customer satisfaction on BNI mobile banking users. Suggestions that can be submitted for this research are that the number of respondents can be increased more evenly so that the results obtained can be more accurate, then the variables used can be more that have not been in this research.

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