The Impact of E-Service Quality on E-Loyalty Through Customer Satisfaction of Private Bank Mobile Banking Users in Indonesia

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Abstract

The banking world uses communication and information technology in data processing systems, where all banking services are done online through applications or what is usually called M-Banking. In Indonesia, private banks have stronger competition compared to other sectors because they are the largest. Due to the high competition in the private banking sector, customer satisfaction and loyalty are of great importance to the quality of mobile banking services provided. As a result, customers pay close attention to the quality of mobile banking services offered by the bank to create loyal customers.

This research aims to determine how the e-service quality provided by private bank mobile banking affects e-loyalty through customer satisfaction. Primary data used in this research was obtained by distributing questionnaires to private bank mobile banking users in Jakarta. The sampling method was purposive sampling with 112 respondents. Path analysis, with the aid of the SPSS program, was used for data processing in this research. The findings of this research affirm the results of previous studies, indicating that e-service quality significantly and positively affects e-loyalty through customer satisfaction among mobile banking users of private banks in Indonesia.

Keywords: Electronic Service Quality, Electronic Customer Loyalty, Customer Satisfaction

1. Introduction

Indonesia's banking sector is highly competitive, with 110 banks operating in the country as of December 2022. Among them, National Private Commercial Banks (BUSN) represent the largest group, consisting of 60 banks. To stay ahead of the competition, BUSN must prioritize providing top-quality E-services to ensure customer satisfaction and prevent customers from switching to other banks.

According to Nawangsari and Putri (2020), one way to increase customer satisfaction is by paying attention to the quality of E-Service in m-banking applications, as it has a significant impact on customer satisfaction. Through the research on E-Service Quality, E-Trust, and E-Satisfaction, it was found that these three independent variables can influence E-Loyalty. In agreement with (Mariana & Fadli 2022), the higher the quality of service, trust, and satisfaction, the more likely causing customers will remain loyal to banking in Indonesia.

Studies in the banking sector have shown that there is a positive and significant relationship between e-service quality and the satisfaction and loyalty of online banking users. Research by Budiman et al. (2020) confirmed this relationship among Mandiri online e-banking users,
while Raza et al. (2020) found similar results in Pakistan. Both studies concluded that e-service quality has a positive and significant influence on e-customer satisfaction, which in turn leads to e-customer loyalty. However, Haetami and Widodo's (2021) research produced different results, showing that while e-service quality has a significant influence on customer satisfaction, its impact on customer loyalty is indirect. This is because they found that customer satisfaction acts as an intervening variable between e-service quality and e-loyalty. Therefore, while e-service quality as a whole has a positive and significant relationship with e-satisfaction, there are discrepancies in research results regarding the relationship between e-service quality and e-loyalty. To address this gap and reconfirm the relationship between e-service quality, e-satisfaction, and e-loyalty, Sembiring & Sinaga's (2021) dimensions of tangible, reliability, responsiveness, assurance, and empathy will be adopted in the upcoming research.

The problem being addressed in this research is whether the quality of E-Services and customer satisfaction have an impact on the e-loyalty of customers who use mobile banking services provided by private banks in Indonesia. The research will focus on private banks due to their significant presence in the banking sector. The purpose of this research is to explain how e-service quality affects customer loyalty through customer satisfaction.

The expected outcome of this research is to provide valuable insights for companies to improve the quality of their mobile banking services and help them understand the level of customer loyalty. It can also contribute to the development of proposals related to the influence of electronic service quality on customer loyalty through customer satisfaction as an intervening variable for private bank mobile banking users in Indonesia.

2. Review of Literature

2.1. E-Service Quality

As per Sembiring & Sinaga’s (2021) research, E-Service Quality is a technique that uses attributes from various dimensions to measure the quality of service. This method helps to identify the gap between the consumer's perception of the service received and their expected service. E-Service Quality comprises five dimensions: tangible, reliability, responsiveness, assurance, and empathy.

2.2. Customer Satisfaction

Satisfaction, as defined by Yuliana et al. (2019), is the feeling of happiness or disappointment that arises from comparing the performance results of a product or service with the expectations of the customer. Customer satisfaction is a measure of the extent to which users of a company's products or services are happy with what they have received.

2.3. E-Loyalty

E-Loyalty is a term used to refer to customer or consumer loyalty in the online context. According to Pudjarti et al. (2019), E-Loyalty can be defined as a customer's willingness to visit a company website to carry out transactions in the future. The level of E-Loyalty is directly influenced by customer satisfaction with the quality of service. Having loyal customers is highly beneficial for online companies, especially in the face of intense competition in online sales. Loyal customers are more likely to recommend their friends and family to make purchases, which can lead to increased revenue for the company.
3. Methods

The research conducted involves three variables - independent, intervening, and dependent. E-Loyalty (L) is the dependent variable, while Customer Satisfaction (K) serves as the intervening variable, and E-Service Quality (Q) is the independent variable. The conceptual framework utilized in this research is depicted in Figure 1.

![Diagram of the conceptual framework](image)

**Fig 1:** framework of thinking

The research population comprises customers using mobile banking services of a Private Bank in DKI Jakarta. A purposive sampling technique was used to select 112 individuals for the research sample. The data collected was primary data obtained through the distribution of questionnaires to customers of the mobile banking services of the Private Bank in DKI Jakarta. Path analysis with the help of the SPSS program was used to process the data collected.

4. Research Result

4.1. Validity Test Result (Convergent Validity)

The validity of the research was tested on 30 respondents at a 5% significance level, with df = n - 2 in hence df = 30 - 2 = 28 and a $r_{table}$ value of 0.361.

The results of the Validity Test Result show that:

1. All statement items in the E-Service Quality (Q) variable have a $r_{count}$ value greater than $r_{table}$, namely $r_{count} > 0.361$. Thus, all statement items in the E-Service Quality (Q) variable can be said to be valid.
2. All statement items in the Customer Satisfaction (K) variable have a $r_{count}$ value greater than $r_{table}$, namely $r_{count} > 0.361$. Thus, all statement items in the Customer Satisfaction (K) variable can be said to be valid.
3. All statement items in the E-Loyalty (L) variable have a $r_{count}$ value greater than $r_{table}$, namely $r_{count} > 0.361$. Thus, all statement items in the E-Loyalty (L) variable can be said to be valid.
4.2. Reliability Test Result (Cronbach’s alpha)

The reliability of an instrument can be measured using Cronbach's Alpha. A questionnaire is considered reliable if its Cronbach's Alpha value is above 0.60. The following are the results of reliability testing.

Table 1. Reliability Test Result

<table>
<thead>
<tr>
<th>Variable</th>
<th>Cronbach’s Alpha</th>
<th>Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-Service Quality</td>
<td>0.955</td>
<td>Reliable</td>
</tr>
<tr>
<td>Customer Satisfaction</td>
<td>0.848</td>
<td>Reliable</td>
</tr>
<tr>
<td>E-Loyalty</td>
<td>0.818</td>
<td>Reliable</td>
</tr>
</tbody>
</table>

Based on Table 1, all variables have a Cronbach's Alpha value greater than 0.60, hence can be said that all questionnaires for each variable are considered reliable or suitable for use as measuring tools in research.

4.3. Path Analysis

Path analysis is a statistical method used to determine the influence of intervening variables on a particular outcome. It's an extension of multiple linear regression analysis that allows us to estimate the causal relationships between variables in a predefined causal model. In other words, path analysis helps us understand how different variables interact with each other to produce a specific outcome.

1. Sub-Structural Equations 1
   \[ K = 0.867Q + \varepsilon_1 \]

   The magnitude of the path coefficient for the E-Service Quality variable on customer satisfaction in standardized beta coefficients is 0.867 and the magnitude of the influence corresponds to the R Square value, namely 0.751 or 75.1%. A result of 0.499 means that the number of variable variants that are not examined in the model and influence the customer satisfaction variable is 0.499. In other words, E-Service Quality as an independent variable has a direct influence on customer satisfaction as a dependent variable of 0.867 with an error value of 0.499.

2. Sub-Structural Equations 2
   \[ L = 0.425Q + 0.419K + \varepsilon_2 \]

   The path coefficient for the E-Service Quality variable towards E-Loyalty in the standardized beta coefficients is 0.425. Meanwhile, the customer satisfaction variable has a path coefficient value of 0.419. The magnitude of the influence corresponds to the R Square value, namely 0.664 or 66.4%. A result of 0.580 means that the number of variable variants that are not examined in the model and influence the E-Loyalty variable is 0.580. This error value shows that not only the E-Service Quality and customer satisfaction variables influence the E-Loyalty variable, but several other variables influence E-Loyalty.
Hence, it can be explained the direct and indirect influence of the E-Service Quality (Q) variable on E-Loyalty (L) through Customer Satisfaction (K).

1. The direct effect of E-Service Quality (Q) on E-Loyalty (L) is 0.425.
2. The indirect effect between E-Service Quality (Q) on E-Loyalty (L) through Customer Satisfaction (K) is 0.867 x 0.419 = 0.363.
3. The total influence of E-Service Quality (Q) on E-Loyalty (L) through Customer Satisfaction (K) is 0.425 + 0.363 = 0.788.

4.4. t-Test

This test was conducted with a significance level of 0.05 (α=5%). The decision to accept or reject a hypothesis is based on the following criteria:

a. If the significance value is greater than 0.05, then $H_0$ is accepted, indicating that the regression coefficient is not significant. This suggests that the independent variable has little or no effect on the dependent variable.

b. If the significance value is less than 0.05, then $H_0$ is rejected, indicating a significant regression coefficient. This suggests that the independent variable has a significant influence on the dependent variable.

Table 2. Sub-Structural Equations 1 t-Test Result

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>-.276</td>
<td>-.250</td>
<td>.803</td>
</tr>
<tr>
<td></td>
<td>E-Service Quality</td>
<td>.179</td>
<td>.867</td>
<td>18.206</td>
</tr>
</tbody>
</table>

Based on Table 2, the significance value of the E-Service Quality (Q) variable is 0.000, which is smaller than 0.05. Therefore, $H_0$ is rejected and $H_1$ is accepted. This means that there is a direct influence of E-Service Quality (Q) on Customer Satisfaction (K).

Table 3. Sub-Structural Equations 2 t-Test Result

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>1.527</td>
<td>.850</td>
<td>.397</td>
</tr>
<tr>
<td></td>
<td>E-Service Quality</td>
<td>.122</td>
<td>.425</td>
<td>3.817</td>
</tr>
<tr>
<td></td>
<td>Customer Satisfaction</td>
<td>.583</td>
<td>.419</td>
<td>3.766</td>
</tr>
</tbody>
</table>

a. Dependent Variable: E-Loyalty
Based on the results presented in Table 3, it can be concluded that the E-Service Quality (Q) variable has a direct influence on E-Loyalty (L), as the significance value (0.000) is smaller than the accepted threshold value of 0.05. Therefore, H₀ is rejected and H₂ is accepted. Similarly, H₀ is rejected, and H₃ is accepted. Hence, the analysis reveals that Customer Satisfaction (K) also has a direct influence on E-Loyalty (L), as the significance value (0.000) is smaller than the accepted threshold value of 0.05.

### 4.5 Coefficient of Determination

The coefficient of determination measures how much the independent variable contributes to the dependent variable. A higher value indicates a stronger relationship.

**Table 4. Sub-Structural Equations 1 Coefficient of Determination Test Result**

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.867ᵃ</td>
<td>.751</td>
<td>.749</td>
<td>1.580</td>
</tr>
</tbody>
</table>

ᵃ. Predictors: (Constant), E-Service Quality  
b. Dependent Variable: Customer Satisfaction

According to Table 4, it is evident that the R Square value is 0.751, which is equal to 75.1%. This indicates that E-Service Quality (Q) has a significant impact on Customer Satisfaction (K) with a percentage of 75.1%. On the other hand, the remaining 24.9% is influenced by other factors, which are Bank Image and E-Trust as per Nawangasari & Putri’s (2020) research.

**Table 5. Sub-Structural Equations 2 Coefficient of Determination Test Result**

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.815ᵃ</td>
<td>.664</td>
<td>.658</td>
<td>2.564</td>
</tr>
</tbody>
</table>

ᵃ. Predictors: (Constant), Customer Satisfaction, E-Service Quality  
b. Dependent Variable: E-Loyalty

According to Table 5, E-Service Quality (Q) and Customer Satisfaction (K) have a 66.4% impact on E-Loyalty (L), as indicated by the R Square value of 0.664 or 66.4%. The remaining 33.6% is influenced by other variables, such as E-Trust, as mentioned in the study conducted by Fajar et al. (2019).

### 4.6 Sobel Test

The conditions for the Sobel test are that if the one-tailed significance value of the Sobel test is less than 0.05, it confirms that the intervening variable can significantly mediate the independent variable on the dependent variable. On the other hand, if the one-tailed
significance value is greater than 0.05, it indicates that the intervening variable is not able to mediate the independent variable on the dependent variable significantly.

According to the results obtained from the online Sobel test calculator shown in Figure 1, A represents the regression coefficient value of the E-Service Quality variable on the customer satisfaction variable, which is 0.867. On the other hand, B is the regression coefficient value of the customer satisfaction variable on the E-Loyalty variable, which is 0.419. Furthermore, SE\(_A\) is the standard error value of the E-Service Quality variable on the customer satisfaction variable, which is 0.010, while SE\(_B\) is the standard error value of the customer satisfaction variable for the E-Loyalty variable, which is 0.155. If the significance value (one-tailed probability) is <0.05, a variable can be considered to have an indirect effect. In this case, the results of the Sobel test indicate a one-tailed value of 0.003 which is < 0.05. Therefore, \(H_0\) is rejected, and \(H_4\) is accepted. As a result, it can be concluded that there is an indirect influence from the E-Service Quality variable on E-Loyalty through customer satisfaction.

5. Conclusion

1. Based on the results of path analysis, t-test, coefficient of determination, and Sobel test, it has been proven that there is a direct relationship between E-Service quality and E-Loyalty among mobile banking users of private banks in Indonesia. The findings suggest that an increase in E-Service Quality leads to an improvement in E-Loyalty. When the E-Service Quality is optimal, customers are more likely to be satisfied with the products and services provided, leading to increased loyalty. Therefore, private banks offering better E-Service Quality will likely have more loyal customers who continue to use their mobile banking services.

2. Based on the results of path analysis, t-test, coefficient of determination, and Sobel test, it has been proven that there is a direct relationship between E-Service quality and customer satisfaction among mobile banking users of private banks in Indonesia. The quality of E-Service provided to customers plays a crucial role in enhancing customer satisfaction when using mobile banking services offered by private banks. The mobile banking services provided by private banks meet the acceptable quality standards of customers, as evidenced by the high scores of respondents in the satisfaction category.
As a result, the respondents have a positive perception of the private bank mobile banking services and this can help increase customer satisfaction.

3. Based on the results of path analysis, t-test, coefficient of determination, and Sobel test, it has been proven that there is a direct relationship between customer satisfaction and E-Loyalty among mobile banking users of private banks in Indonesia. E-Loyalty, in turn, is closely related to customer satisfaction. In other words, customers who are not completely satisfied will find it hard to be loyal to a specific mobile banking service. Additionally, the study found that customer satisfaction leads to repeat transactions, and customers are less likely to switch to other mobile banking services that offer similar features.

4. Based on the results of path analysis, t-test, coefficient of determination, and Sobel test, it has been proven that there is a direct relationship between E-Service Quality on E-Loyalty through Customer Satisfaction in Indonesia's private bank mobile banking. The study found that customers need to feel satisfied with the quality of the service before they become loyal to it. This means that if private bank mobile banking in Indonesia offers better E-Service Quality, customers will experience higher satisfaction, leading to increased loyalty towards the mobile banking service.

References


