



## THE INFLUENCE OF DIGITALIZATION OF BANKING SERVICES ON OPERATIONAL EFFICIENCY AND CUSTOMER SATISFACTION IN INDONESIA

### *PENGARUH DIGITALISASI LAYANAN PERBANKAN TERHADAP EFISIENSI OPERASIONAL DAN KEPUASAN NASABAH DI INDONESIA*

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#### Abstract

*This study aims to analyze the impact of digitalization in banking services on operational efficiency and customer satisfaction in Indonesia. The research method used is a quantitative approach with data collection through surveys involving 300 customer respondents from various banks in Indonesia. The obtained data were analyzed using multiple regression techniques to determine the relationship between service digitalization, operational efficiency, and customer satisfaction. The results indicate that digitalization of banking services significantly enhances operational efficiency by reducing transaction time and costs. Additionally, digitalization has proven to increase customer satisfaction by providing faster, safer, and more accessible services. The study finds that the adoption of technologies such as mobile banking, internet banking, and more advanced ATMs has helped Indonesian banks serve customers more effectively and efficiently. Digitalization also reduces bank queues, speeds up the verification process, and gives customers greater control over their transactions. The conclusion of this study is that digitalization of banking services has a significant positive impact on operational efficiency and customer satisfaction. Banks in Indonesia are advised to continue developing and implementing digital technologies in their operations to improve performance and competitiveness in the market. Moreover, it is important for banks to continually innovate and adapt to technological advancements to meet the ever-increasing customer expectations. Therefore, digitalization is not only a tool to enhance efficiency but also a strategy to retain and attract new customers.*

**Keywords :** *Digitalization, Operational Efficiency, Customer Satisfaction, Banking Services, Technology*

## INTRODUCTION

In recent years, digitalization has become a major trend across various sectors, including the banking sector. The advancement of information and communication technology has driven banks to adopt digital services to enhance operational efficiency and customer satisfaction. Services such as mobile banking, internet banking, and more advanced ATMs have become increasingly popular among customers due to the ease and convenience they offer. According to Bank Indonesia (2020),



digital banking transactions have seen a significant increase in recent years, indicating that customers are increasingly relying on technology for their daily banking activities.

Digitalization in banking not only aims to provide convenience to customers but also to enhance the operational efficiency of the banks themselves. Operational efficiency is a key factor in increasing the competitiveness and profitability of banks. Research by Claessens, Ghosh, and Mihet (2018) indicates that digitalization can reduce operational costs and increase staff productivity, enabling banks to deliver better services to customers at lower costs.

The aim of this study is to examine the impact of the digitalization of banking services on operational efficiency and customer satisfaction in Indonesia. This research employs a quantitative approach, conducting a survey of 300 bank customers from various banks in Indonesia. The collected data will be analyzed to determine the extent to which digitalization contributes to efficiency and customer satisfaction. The results of this study are expected to provide deeper insights into the benefits of digitalization in the banking sector and encourage banks in Indonesia to continue developing their digital services.

Thus, this study is not only academically relevant but also practical, given the importance of digitalization in enhancing the performance and competitiveness of banks in this digital era. This research also aims to provide recommendations for banks in Indonesia on implementing effective digital strategies to achieve these goals.

## **MATERIALS AND METHODS**

The materials and methods section includes the tools, materials, and methods used in the research. The listing of tools and materials should be accompanied by information regarding the name of the material/tool, the manufacturing company, and the city of manufacture. For the research methodology, the analysis methods must be clearly and thoroughly described so that the methods can be replicated by other researchers. If there are any modifications to existing standard methods during the research, these modifications must be specified. In the final part of the materials and methods section, the statistical analysis methods used should be clearly stated.

This study employs a quantitative approach using a survey method to collect data. The survey is conducted using a questionnaire distributed to customers of various banks in Indonesia. This questionnaire is designed to measure the level of digitalization of banking services, operational efficiency, and customer satisfaction.



### Tools and Materials

#### 1. Questionnaire:

- Name: Banking Digitalization Questionnaire
- Creator: Research Team
- City of Creation: Jakarta, Indonesia

#### 2. Data Analysis Software:

- Name: IBM SPSS Statistics
- Company: IBM Corporation
- Manufacturing City: Armonk, New York, USA

#### 3. Laptop:

- Name: Dell Inspiron 15
- Company: Dell Inc.
- Manufacturing City: Round Rock, Texas, USA

## RESEARCH METHOD

This research involves 300 respondents who are customers of various banks in Indonesia. The criteria for selecting respondents are based on the use of digital banking services such as mobile banking, internet banking, and ATMs. The survey was conducted over three months, from January to March 2024.

### Data Collection Procedure:

#### 1. Questionnaire Development:

The questionnaire was developed based on existing literature on the digitalization of banking services and customer satisfaction. It consists of several sections covering demographic information, usage of digital services, and assessments of operational efficiency and customer satisfaction.

#### 2. Questionnaire Distribution:

The questionnaire was distributed online via Google Forms. The link to the questionnaire was sent through email and social media to potential respondents who met the research criteria.

#### 3. Data Collection and Processing:

The collected data was analyzed using IBM SPSS Statistics software. The data was processed to examine the frequency distribution, mean, and standard deviation of the variables studied. Multiple regression techniques were used to analyze the relationships between digital service variables, operational efficiency, and customer satisfaction.

**Method Modification:**

In this study, modifications were made by adding open-ended questions to the questionnaire to gain additional qualitative insights from respondents regarding their experiences with digital banking services. This aims to enrich the quantitative data with more in-depth information.

**Statistical Analysis Method:**

The statistical analysis used in this study includes multiple regression to test the relationships between the independent variable (digital service) and the dependent variables (operational efficiency and customer satisfaction). Validity and reliability tests of the questionnaire were also conducted to ensure that the research instrument had a high level of confidence. All analyses were performed using IBM SPSS Statistics software.

**RESULTS AND DISCUSSION**

This study examines the impact of digitalization of banking services on operational efficiency and customer satisfaction in Indonesia. Data was obtained from surveys of 300 respondents who are customers of various banks in Indonesia. Analysis was conducted using IBM SPSS Statistics software. The research results are presented in tables and figures that can be found on separate pages after the references.

**Research Results**

The results of the multiple regression analysis show that the digitalization of banking services has a significant impact on operational efficiency and customer satisfaction.

**1. Operational Efficiency**

Table 1 shows that the digitalization of banking services improves operational efficiency with a regression coefficient value of 0.45 and a p-value  $< 0.01$ . This indicates that increasing the use of digital services such as mobile banking and internet banking significantly reduces transaction time and costs.

**2. Customer Satisfaction**

Table 2 shows the regression analysis results indicating that digitalization of services positively affects customer satisfaction with a regression coefficient value of 0.52 and a p-value  $< 0.01$ . Figure 1 shows the distribution graph of customer satisfaction based on the level of digital service usage, indicating that customers who frequently use digital services tend to be more satisfied with the bank's services.



## Discussion

The results of this study are consistent with previous research showing that digitalization can improve banks' operational efficiency. A study by Claessens, Ghosh, and Mihet (2018) supports these findings, stating that digitalization reduces operational costs and increases staff productivity. This study also found that more advanced digital services, such as mobile banking and internet banking, provide significant convenience for customers, which in turn increases their satisfaction.

Increased operational efficiency is due to several factors. First, digitalization reduces the time required to process transactions, allowing customers to complete transactions quickly. Second, digital services reduce queues in banks, allowing staff to focus on more complex and high-value tasks. Third, digitalization enables banks to provide more secure and accurate services, increasing customer trust.

The increase in customer satisfaction can also be explained through several aspects. Digital services provide flexibility for customers to conduct transactions anytime and anywhere, which is highly valued in this fast-paced era. Additionally, enhanced security features in digital services give customers a sense of security when conducting transactions, contributing to their satisfaction. Research by Parasuraman, Zeithaml, and Malhotra (2005) shows that good digital service quality can improve customers' perceptions of the bank, consistent with the findings of this study.

In the context of banks in Indonesia, the results of this study highlight the importance of continuously developing and implementing digital technology in bank operations to improve efficiency and customer satisfaction. Banks in Indonesia are advised to invest in adequate technology infrastructure and train staff to maximize the potential of digital services. Thus, digitalization not only becomes a tool to improve operational efficiency but also a strategy to retain and attract new customers.

Table titles are above, while figure titles are below. All tables and figures must be cited in the text. If tables and figures can be included in one column, the writing example is as follows:

Table 1. The Effect of Digitalization on Operational Efficiency

Variable	Treatment	
	Regression Coefficient	p-value
High Digitalization	0.45	0.001
Moderate Digitalization	0.30	0.020
Low Digitalization	0.15	0.050

Note:

Table 1 shows the regression coefficient and p-value from the analysis of the effect of digitalization of banking services on operational efficiency. These results indicate that the higher the level of digitalization, the more significant the increase in operational efficiency, with the highest coefficient in high digitalization.



Table 2. The Effect of Digitalization on Customer Satisfaction

Variate	Treatment	
	Regression Coefficient	p-value
High Digitalization	0.52	0.001
Moderate Digitalization	0.35	0.010
Low Digitalization	0.20	0.040

Note:

Figure 1 shows the distribution graph of customer satisfaction based on the level of digital service usage. This graph illustrates that customers with high digital service usage levels have higher satisfaction levels than customers with lower usage levels.

## CONCLUSION

This study shows that the digitalization of banking services significantly improves operational efficiency and customer satisfaction in Indonesia. Digitalization has been proven to reduce transaction time and costs and provide faster, safer, and more accessible services for customers. These results indicate that banks in Indonesia need to continue developing and implementing digital technology in their operations to improve performance and competitiveness in the market. Thus, digitalization is not only a tool to improve efficiency but also a crucial strategy to retain and attract new customers.

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