



THE EFFECT OF SERVICE QUALITY USING DIGITAL MACHINE ON CUSTOMER SATISFACTION
(Case Study at PT. Bank Central Asia, Tbk Panakkukang Main Branch Office, Makassar)

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Abstract

The rapid development of information technology and the internet has contributed to major changes in the banking service industry. Service quality is an important factor that supports customer satisfaction. This study aims to determine the effect of service quality on customer satisfaction. This research uses quantitative methods. The research population is the customers of the BCA Bank Panakkukang Main Branch Office, Makassar, totaling 200 customers with the sampling technique, saturated sampling so that the research sample is 200 customers. Data were collected using a questionnaire and analyzed using simple regression with the help of SPSS software, the variables in the study were service quality (X) and customer satisfaction (Y). The results of the study show that the service uses a digital machine at PT. Bank Central Asia Tbk. Panakkukang Makassar has an effect on customer satisfaction. This provides a good response to customer satisfaction in services using digital banking machines. With the dimensions of service quality consisting of Reliability, Tangibles, Responsiveness, and Assurance it is found that service quality using digital machines has a positive and significant effect on customer satisfaction.

Keywords: *service quality, customer satisfaction.*

1. INTRODUCTION

The rapid development of information technology and the internet has brought major changes to the banking service industry. Since it was first used by a banking company from Japan (Sumitomo Bank) in 1997, digital bank services have continued to progress until now (Deha, 2022). In this digitalization era, banking services in Indonesia also offer many advantages and conveniences for customers (customers) through the presence of various types of sophisticated digital machine features.

Various digitalization efforts were carried out by the four largest national banks in order to support the quality of their services which are interesting for further study. PT Bank Negara Indonesia Persero Tbk (BNI), for example, is

increasingly active in providing convenience for customers by launching a new digital application called BNI yep! (Your All Payment) which can be used to make non-cash transactions without debit or credit cards (Dianto and Marlizar, 2019). The presence of this application allows customers to transact simply via a smartphone device with three main sources of funds, namely credit cards, debit cards, and BNI Electronic Money called UnikQu (BNI, 2018). Where all three are integrated in one application so that transactions are claimed to be more effective and efficient.

T Bank Central Asia Tbk (BCA) as the largest national private bank that makes the most transactions tries to change the pattern of customer financial transactions from conventional services to digital technology services. Apart from making it easier for customers to make transactions, this type of digital machine service can be useful for banks in breaking down the number of customer queues at branch offices so that excess transaction activity does not occur (Mamun and Ningsih, 2021). In the Financial Services Authority regulation Number 12/PJOK.03/2018 it has been stated that digital banking services are services for obtaining information, communication and transactions through electronic media, so that customer service can be faster, easier and as needed. Digital services can also be carried out independently by paying attention to security aspects, making it possible for customers to make transactions and information easily and quickly.

Even though it has a sophisticated technology system with advantages that can be obtained, the implementation of digital machine services at BCA tends to still have weaknesses in the form of negative impacts and certain obstacles in it. Among other things, there is a rule that the use of digital machines mostly relies on Electronic Identity Cards (e-KTP) as a mandatory requirement for verifying the accuracy of transactions. Obstacles for prospective customers who do not yet have the registration process, technical problems with the e-KTP Reader machine that cannot read the e-KTP due to errors or incompatibilities with Dukcapil data, unreadable fingerprints on the fingerscan machine during the verification process due to things Certain conditions, such as the condition of wet fingers and their inaccurate placement, so that customers still use transactions on digital machines independently, is another weakness in the implementation of digital banking machine services.

According to Parasuraman et al. (1988) customer satisfaction can be influenced by the service quality of a product or service. This is in line with the Service Quality theory put forward by Lewis and Booms (1983) that Service Quality is a comparison of perceived expectations with perceived performance so that it has the opportunity to achieve customer satisfaction. The quality of service (Service Quality) is multidimensional and can vary depending on the type of product or service industry that is different (Brady and Cronin, 2001).

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fingerprints on the fingerscan machine during the verification process due to things Certain conditions, such as the condition of wet fingers and their inaccurate placement, so that customers still use transactions on digital machines independently, is another weakness in the implementation of digital banking machine services.

One form of Service Quality in the banking industry is the experience that customers have had with services holistically, including services performed through digital banking machines (e-Service, STAR Teller and Digital Customer Service) at Bank BCA KCU Panakkukang Makassar. These three types of digital machine services are thought to have a positive impact that can help make services more effective and efficient. In terms of the most important positive impact, it can accelerate and facilitate customers in terms of managing their finances independently.

E-Service is a digital machine that is used to open accounts, print account books, change account books, register and activate mobile and internet banking that can be done by customers themselves. While the STAR Teller is a machine for depositing and withdrawing cash by entering money or taking money directly at the machine without the need for manual calculations by the Teller officer. The Digital Customer Service is a digital machine that is used to print new ATM cards, replace ATM cards, unblock ATM cards that can be done independently, can be accessed at any time. With these three types of digital machine services, bank officers only need to control the tool or machine so that its performance remains optimal (Aji and Sumitro, 2020).

he author considers it necessary to conduct further research regarding customer satisfaction, especially related to service quality through the implementation of digital machines at BCA KCU Panakkukang. The author views that satisfaction is very important to be studied further. This is because satisfaction is an indicator of the success of a company in meeting consumer expectations or expectations. In addition, those who are loyal will generally continue to use the brand even though they are presented with many alternative competing brands that offer similar products or services. Therefore the variable used here is Customer Satisfaction as the dependent variable with Service Quality as the independent variable. The main theory used in the analysis here is the Service Quality theory put forward by Lewis and Booms (1983). The author uses four proxies for the Service Quality variable on digital machines adapted from this theory, namely reliability, responsiveness, assurance, and tangible.

The purpose of this study was to analyze the effect of service quality using digital machines on customer satisfaction at PT. Bank Central Asia, Tbk Panakkukang Main Branch Office, Makassar

2. LITERATURE REVIEW

Service Quality

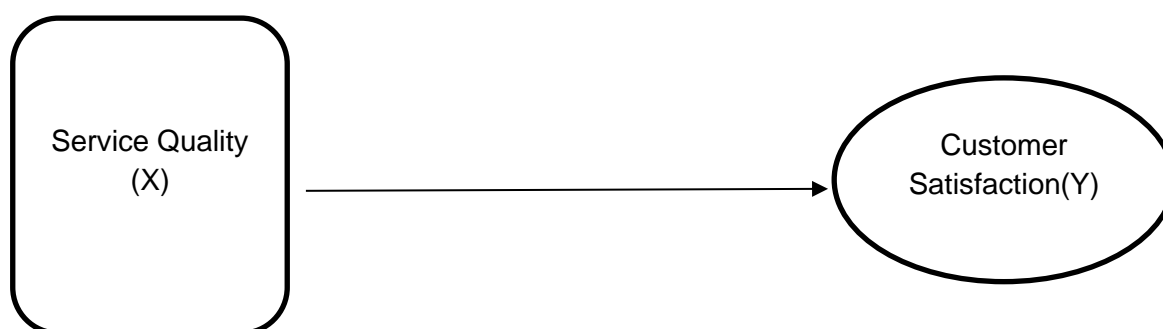
Kotler and Keller (2013) define service quality as "Quality is the totality of features and a characteristics of a product or service that bears on l'ts ability to satisfy stated or implied needs. "Service quality is the totality of the characteristics and characteristics of a particular product or service, including its ability to provide a sense of satisfaction or need indirectly. Lewis and Booms in Tjiptono and Chandra (2011) define service quality as a measure of how well a product or service provided

by a company is able to meet consumer expectations. Parasuraman and Fitzsimmons (2011) revealed that service quality has five main dimensions. The five dimensions include reliability, responsiveness, assurance, empathy, and tangible variables. The following is a description of the five dimensions of service quality.

Customer Satisfaction

According to Kotler and Keller (2013) customer satisfaction is a feeling that reflects one's assessment of perceived product performance in relation to expectations. Assuming that if the performance drops below expectations, customers tend to be disappointed. If performance matches expectations, the customer will be satisfied. Whereas if it exceeds both, the customer feels happy. Customer satisfaction is a prelude to repurchasing by consumers and triggering consumer retention which ultimately benefits the company. Consumer satisfaction can provide many advantages for companies where one of the most important is enabling the achievement of customer loyalty (Lovelock et al 2005:395). Zeithaml and Bitner (1996) divided five factors that can affect the level of customer satisfaction (customer satisfaction). These include product and service features, consumer emotions, attributions for service success or failure, perceptions of equity and fairness, and factors other consumers.

Frame Work



Picture 1. Service Quality (X), Customer Satisfaction (Y)

Source : Frame of Mind, 2022

3. RESEARCH METHOD

Research Approach

This study used a quantitative research approach because it obtained data in the form of numbers, the data was obtained from primary data (qualitative) then quantified and analyzed to test the proposed hypothesis.

The Object of Research

The object of research here is the BCA KCU Panakkukang Makassar which is the Main Branch Office of the Bank company PT. Bank Central Asia (BCA) Kanwil IV. This form of service quality implementation in banking companies applies digital

machine services, namely e-Service, STAR Teller and Digital Customer Service. Considering that this form of banking service is quite comprehensive and sophisticated, the authors deem it necessary to carry out more in-depth research regarding the quality of its services which can affect customer satisfaction.

Population or Sample

The population of customers who use BCA digital machine services who have used the three e-Service services, Digital Customer Service, and STAR Teller for the last 2 years who live (domicile) in Makassar City is 200 people. The sampling technique used is side saturation. Saturated sampling is a sampling technique when all members of the population are used as samples. The reason for choosing the saturated sampling technique is because the sample studied is the entire population and to generalize research with small errors. This sampling helps researchers in statistical calculations by determining the relationship between the two variables.

Method of collecting data

This research is a quantitative research where the goal is to find out the relationship between two or more variables. Quantitative data types in the form of numbers are needed to measure the level of customer satisfaction (customer satisfaction) as the influence of the service quality variable obtained through the results of questionnaires or questionnaires. In this study, the data sources consist of two sources, namely primary data sources and secondary data sources. The primary data source is data that is directly obtained from the location of the research object, namely customers at the BCA KCU Panakkukang Makassar regarding their perceptions or experiences using digital machine services in the form of e-Service, STAR Teller and Digital Customer Service. Meanwhile, secondary data sources were obtained via the internet as supporting materials from primary data sources.

Variable Operational Definitions

Table 1
Variable Operational Definitions

Variabel	Definisi Operasional Variabel	Dimensi	Indikator
<i>Customer Satisfaction</i> (Y)	<i>Customer Satisfaction is a person's feeling of pleasure or disappointment that arises after comparing the performance (results) of the product in question with the expected performance.</i>	Conformity of Expectations	Features as needed
			Adequate Facilities
		Interest in Reusing	Attractive Display
			Interested in using the machine again because of the

Variabel	Definisi Operasional Variabel	Dimensi	Indikator
	<i>(Phillip Kotler & Kevin Lane Keller, (2007)</i>		satisfying features
			Interested in using the machine again because the supporting facilities are satisfactory
		Willingness to Recommend	Willingness to Recommend
			Recommended this machine to friends because it's fast to use
			Recommended this machine to friends because it's safe
Service Quality (X)	Service quality is a comparison of perceived expectations with perceived performance so that there is an opportunity to achieve customer satisfaction. Parasuraman et.al. (1998), Lewis and Booms (1983	Tangible	Easily accessible
			Attractive Physical Appearance
			Complete Features
		Reliability	Reliable
			Accurate
		Responsiveness	Quick response
			Easy to use
		Assurance	Reliable safe
Guaranteed			

Data analysis method

The data analysis model in this study uses simple linear regression with the help of SPSS for Windows software.

Simple Linear Regression

Simple linear regression is linear regression consisting of 1 dependent variable (Y) and 1 independent variable (X).

$$Y_t = \beta_0 + \beta_1 X_{1t} + \epsilon_t$$

Keterangan :

Y : Dependent Variable – Customer Satisfaction
 X : Independent Variable – Service Quality
 ε : Error term

Partial Test (t test)

Partial test (t test) is a test conducted to see whether an independent variable has an effect or not on the dependent variable by comparing the value of tcount with ttable. The criteria for testing the t test are as follows:

- If the value of t count > t table then the hypothesis is rejected, meaning that these variables affect the dependent variable.
- If the value of t count < t table then the hypothesis is accepted, meaning that the variable has no effect on the dependent variable.

RESEARCH RESULT

Instrument Validity Test Result

Table 2
Service Quality Variable Validity Test Results

Number	Variable	Prob	Sig	Result
1	X1.1	0,676	0,000	Valid
2	X1.2	0,594	0,000	Valid
3	X1.3	0,698	0,000	Valid
4	X2.1	0,645	0,000	Valid
5	X2.2	0,627	0,000	Valid
6	X3.1	0,634	0,000	Valid
7	X3.2	0,654	0,000	Valid
8	X5.1	0,496	0,000	Valid
9	X5.2	0,502	0,000	Valid

Source: SPSS Data Processing Results, 2022

Based on the results of the validity test, the 9 statement items used to measure service quality variables have a significance value of <0.05 or an rxy value > 0.1388 so that all questions in the questionnaire on question items on service quality variables are **valid**.

Table 3
Customer Satisfaction Variable Validity Test Results

Number	Variable	Prob	Sig	Result
1	Y.1	0,536	0,000	Valid
2	Y.2	0,652	0,000	Valid
3	Y.3	0,296	0,000	Valid
4	Y.4	0,632	0,000	Valid
5	Y.5	0,607	0,000	Valid
6	Y.6	0,619	0,000	Valid

7	Y.7	0,479	0,000	Valid
8	Y.8	0,263	0,000	Valid

Source: SPSS Data Processing Results, 2022

Based on the results of the validity test, the 8 statement items used to measure customer satisfaction variables have a significance value of <0.05 or r_{xy} value > 0.1388 so that all questions in the questionnaire on question items on customer satisfaction variables are **valid**.

Reliability Test Results

Table 4
Realibility Test Results

Variabel	Items	n	<i>Cronbach Alpha</i>	Result
Service Quality	9	200	0,792	Reliabel
Customer Satisfaction	8	200	0,694	Reliabel

Source: SPSS Data Processing Results, 2022

From Table 4 above it can be seen that the coefficient of Cronbach's Alpha > 0.60 so that all questions in the questionnaire on the variables of service quality and customer satisfaction are reliable.

Variable Description

Table 5
Description Answer Variable Service Quality

Indicators	STS (1)		TS (2)		N (3)		S (4)		SS (5)		Mean
	F	%	F	%	F	%	F	%	F	%	
Tangible	0	0,0%	5	2,5%	25	12,5%	95	47,5%	75	37,5%	4,14
<i>Responsiveness</i>	0	0,0%	0	0,0%	65	32,5%	75	37,5%	60	30%	4,13
<i>Assurance</i>	0	0,0%	9	4,5%	51	25,5%	66	33%	74	37%	4,04
<i>Reliability</i>	1	0,5%	7	3,5%	44	22%	67	33,5%	81	40,5%	4,04

Source: SPSS Data Processing Results, 2022

Based on table 5, it can be seen that the respondent's answers regarding service quality (X) are as follows:

1. Statements related to tangible indicators show the distribution of answers 2.5% of respondents disagree, 12.5% answer neutral, 47.5% answer agree and 37.5% answer strongly agree.
2. Statements related to indicators of responsiveness (responsiveness) show the distribution of respondents' answers: 32.5% answered neutral, 37.5% answered agree and 30% answered strongly agree.
3. Statements related to assurance indicators (certainty) show the distribution of answers 4.5% of respondents answered disagree, 25.5% answered neutral, 33% answered agree and 37% answered strongly agree.
4. Statements related to reliability indicators show the distribution of answers 0.5% of respondents answered strongly disagree, 3.5% of respondents

disagreed, 22% answered neutral, 33.5% answered agree and 40.5% answered strongly agree .

Table 6
Description of Respondents' Answers Variable Customer Satisfaction

Indikator	STS (1)		TS (2)		N (3)		S (4)		SS (5)		Mean
	F	%	F	%	F	%	F	%	F	%	
Conformity of Expectations	1	0,5%	5	2,5%	15	7,5%	69	34,5	110	55%	4,0
Interest in Reusing	1	0,5%	8	4%	77	38,5%	50	25%	72	36%	4,04
Willingness to Recommend	1	0,5%	6	3%	60	30%	83	41,5%	50	25%	3,96

Source: SPSS Data Processing Results, 2022

Based on table 6, it can be seen that the respondents' answers regarding customer satisfaction (Y) are as follows:

1. Statements related to expectations conformity indicators show the distribution of answers 0.5% of respondents answered strongly disagree, 2.5% of respondents answered disagree, 7.5% answered neutral, 34.5% answered agreed and 55% answered strongly agreed.
2. Statements related to indicators of interest in reusing show the distribution of answers 0.5% of respondents answered strongly disagree, 4% of respondents answered disagree, 38.5% answered neutral, 25% answered agreed and 36% answered strongly agreed.
3. Statements related to indicators of willingness to recommend show the distribution of answers 0.5% of respondents answered strongly disagree, 3% of respondents answered disagree, 30% answered neutral, 41.5% answered agreed and 25% answered strongly agreed.

Simple Linear Regression

The results of the Simple Linear Regression test are as follows:

Table 7
Simple Linear Regression

Model		Unstandardized Coefficients		Standardized Coefficients
		B	Std. Error	Beta
1	(Constant)	16.862	1.708	
	Service Quality	.409	.046	.534

Source: SPSS Data Processing Results, 2022

Based on the results of a simple linear regression test between the independent variables, namely, service quality on the dependent variable customer satisfaction, the regression equation can be compiled as follows:

$$Y = 16,862 + 0,409$$

Based on the results of data analysis and the regression equation, it can be concluded about the following:

1. A constant value of 16.862 indicates the pure value of the customer satisfaction variable (Y) without being influenced by independent variables.
2. The regression value of the service quality variable is 0.409 indicating that there is a contribution to the service quality variable, meaning that if the service quality variable is increased by 1 (one) unit, it will be followed by a strengthening of the customer satisfaction variable of 0.409

T- test (Partial)

The results of the t significance test (t test) are as follows:

Table 8
T test results

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	16.862	1.708		9.874	.000
	Service Quality	.409	.046	.534	8.898	.000

a. Dependent Variable: Customer Satisfaction

Source: SPSS Data Processing Results, 2022

Partial test (t test) is used to see the effect of the independent variables on the dependent variable. From table 8 it can be seen that the t statistic value is 8.898 > 1.65 so it is concluded that the service quality variable influences customer satisfaction. This can also be seen from the significance value of 0.000 < 0.05 which indicates that the service quality variable has a positive and significant effect on customer satisfaction.

4. DISCUSSION

- a. **The Effect of Reliability, Responsiveness, Assurance, Tangible Dimensions on customer satisfaction**

From the value of several dimensions in the questions given to customers. The level of reliability or Reliability gives a good response, namely with a value of 33.5% agree and 40.5% strongly agree where customers agree and are satisfied with the solutive digital service features and also provide statements that do not make it difficult for customers. According to Ronny et al. (2021) which states that reliability is a digital machine service which is the main factor because without reliability, customers cannot take advantage of the features available in the digital banking machine service. So we need a technological capability that can maintain the availability of good and accurate digital machine services.

The results of the questionnaire show that Reliability shows the lowest score with a mean of 4.05. This is due to the fact that 0.5% strongly disagree and 3.5% disagree. Customers find that in some cases, users still doubt that digital machine services can provide reliable solutions without experienced personnel and only rely on identity verification. The need to develop digital machine service features in banking so that they can be relied upon in solving transaction needs used in digital machine service services.

In the dimension of questions related to confidence or responsiveness, customers have also given a good response by agreeing at 37.5% and strongly agreeing at 30%. The confidence factor in digital machine services is a secondary factor and still needs to be developed because this belief relates to the speed, convenience and accuracy of digital machine services in banking. After experiencing digital machine services that are able to provide reliability, customers can feel the ease of learning the service and feel the speed in the transaction processes carried out. According to Sofiati et al. (2018) which states that responsiveness is the ability or desire of a service to help customers, provide responsive and appropriate service to consumers by being able to answer needs, requests and complaints quickly.

In the assurance factor or assurance PT. Bank Central Asia Tbk. Panakkukang Makassar has provided good service to its customers according to the questionnaire with the results agreeing 33% and strongly agreeing 37%. According to Ronny et al. (2021) assurance or guarantee is a secondary factor that needs to be examined by the bank, this guarantee includes security, guarantees to provide answers or solutions quickly and precisely.

Then for dimensions related to tangibles or tangibles, the bank has provided good service and provided customer satisfaction through digital machine services that are easy to access, complete features, and also an attractive physical appearance as evidenced by the value of the questionnaire agreeing 47.5% and 37.5%. The factor of tangibles in digital machine services is a secondary factor, where indeed customers do not focus on the location of the form of the bank building, but customers simply carry out transactions through digital machine services and their needs can be resolved through the available digital machine features. According to Sofiati et al. (2018) who stated that tangibles are one of the attractions of consumers, because when consumers buy a product or use a service, they will initially be interested in what they see from its appearance.

b. The effect of service quality using digital machines on customer satisfaction

Based on the results of the research that has been carried out through the t test statistical variable service quality found a value of $8.898 > 1.65$ and also a significance value of fault $0.000 < 0.05$, this shows that the service quality variable has a positive and significant effect on customer satisfaction. From the statement of results, it can be seen that the variable of service quality has an influence on PT. Bank Central Asia, Tbk Panakkukang Makassar branch. So from this statement the research hypothesis can be accepted.

This means that the service quality variable using digital machines has a positive and significant influence on customer satisfaction at PT. Bank Central Asia, Tbk Panakkukang Makassar branch. This means that with the good quality of bank employee service to customers, customers are also satisfied to use PT. Bank Central Asia, Tbk Panakkukang Makassar branch.

Service quality basically influences the company's development in responding to future business challenges. Thus the company must pay attention to everything related to the quality of the service. This is also inseparable from the employees in the company in providing good service to customers. Thus in the end it will be able to improve the quality of the company and the targets and future plans of the company can run well.

Services through digital machines that exist in PT. Bank Central Asia Tbk. Panakkukang Makassar has received a good response from its customers. Customers have fulfilled their satisfaction with the digital services available at the Bank. The better the bank provides services through digital machines to customers, of course, it will increase customer satisfaction when using PT. Bank Central Asia Tbk. Panakkukang Makassar.

The results of this study are supported by research conducted by (Aditya Rachman 2020) with the title Analysis of Service Quality in the Context of Increasing Customer Satisfaction at the People's Bank (BRI) Belitung Banjarmasin Unit. The results showed that there was a significant effect of service quality on customer satisfaction at Bank Rakyat Indonesia (BRI) Belitung Unit. The effect of service quality on customer satisfaction at Bank Rayat Indonesia (BRI) Belitung unit proves that the appearance of physical facilities such as the location and layout of the room, the availability of parking lots, cleanliness, tidiness, room comfort, completeness of communication equipment, and the appearance of Bank Rakyat Indonesia employees (BRI) Belitung Unit provides convenience for customers. Steps that must be considered one of them. Appearance of physical facilities such as locations that are easy to see or easy to find, employees have modern communication tools, so customers can easily contact them.

The results of this study are also supported by research that has been carried out by Nawangasari & Putri (2020) which states that e-service has an influence on customer or customer satisfaction. From services through e-services that provide convenience for customers or customers, of course, it will have a good impact on the satisfaction of these customers and will give a good image to the bank. The results of this study are in line with the results of research that has been carried out by Narita & Fauzi (2022) which states that virtual customer service has an influence on customer or customer satisfaction. The use of virtual customer

service has a strong impact on BCA customer satisfaction. From these services, of course, customers will get convenience in accessing the needs they want to address.

5. CONCLUSION

Based on the analysis results or research results that have been obtained from testing and have been interpreted, it can be concluded that digital machine services include e service machines, STAR Teller and Digital Customer Service have a positive and significant effect on customer satisfaction at PT. Bank Central Asia, Tbk Panakkukang Makassar branch. This provides a good response to customer satisfaction in banking digital machine services. From the values of the four dimensions of the research variables consisting of Reliability, Tangibles, Responsiveness, and Assurance, it was found that the reliability and assurance scores were the lowest with a mean of 4.04. Even though the statement is still approved, there are still some respondents who disagree on the service in the dimensions of reliability and assurance. From these two dimensions, it still needs to be improved in terms of the ability to provide reliable and accurate services such as ensuring guarantees and certainty that the settlement of banking transaction needs can be entrusted to be completed on digital machines with more efficient times and prices even though customers make transactions online. independently on a machine without an attendant which is not very common, especially for customers who are not familiar with using digital machine technology. This is seen as important in order to increase banking credibility in solving problems experienced by customers in utilizing the digital machine service facilities that have been provided.

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