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The Influence Of Fraud Perceptions And Trust On The Use Of Mobile Banking Services

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Abstract

This research aims to determine the influence of fraud perceptions and trust on the use of mobile banking services. This type of research is quantitative research. The data collection method in this research uses a questionnaire with the population being commercial bank customers who use mobile banking services in Palopo City. The sample determination method in this research is random sampling. The sample used in this research was 100 which was determined using the moe formula. The analytical methods used are validity testing, reliability testing, classical assumption testing, hypothesis testing, and linear regression testing. The research results show that: 1) perceptions of fraud have a positive and significant effect on the use of mobile banking services; 2) trust has a positive and significant effect on the use of mobile banking services.

Keywords: Perception of Fraud; Trust; Use of Mobile Banking Services

1. Introduction

Connection between technology and society is strengthened by globalization. This can be seen in the increasing development of information technology and communication in various parts of the world, which has caused many changes in the sectors of human life. Advances in information technology from one generation to the next have had a significant impact on the business world, especially in the banking sector. In the banking sector, technological advances are very important to provide fast and efficient services to customers [1].

Mobile banking is a popular digital banking service used by the general public. Because mobile banking has the advantage, people can carry out banking transactions from wherever they are. In a banking system with access to mobile banking, anyone can easily access services such as money transfers, balance information, account mutations, currency information, credit card payments, telephone payments, and insurance. This system can also be used to make payments for credit top-ups. However, in practice there is still abuse in mobile banking, including cellphone theft and cellphone number hijacking [2]. Mobile banking also provides convenience and ease of use in carrying out transactions, which is not limited by time or location, and can be accessed by customers at any time. Security in banking service systems must be prioritized to reduce the possibility of abuse or fraud via mobile banking. [3]

The security of mobile banking was also questioned after there was a case of account hacking by clicking on a PDF application link sent via WhatsApp message. Irwan Gema, a resident of Klojen, Malang City, admitted that he lost hundreds of millions in an instant [4].

The tendency for accounting fraud, or what is known as fraud in auditing language, is currently a frequent headline in the news media [5]. Fraud is deliberately carried out to increase other people's wealth and provide financial benefits to the perpetrator of the fraud. Organizations with the greatest potential for fraud to occur are organizations operating in the financial sector or financial institutions.

The rise in fraud that occurs requires banks, especially commercial banks, to implement anti-fraud strategies as an effort to prevent fraud. This rule is also strengthened by Financial Services Authority Regulation Number 39/POJK.03/2019 concerning the implementation of anti-fraud strategies for Commercial Banks, which came into effect on 19 December 2019 [6]. Previous research conducted by [7] shows that perceptions of usefulness, convenience and security have a positive and significant effect on interest in using mobile banking services. Meanwhile, research conducted by [8] shows that trust, perceived usefulness, convenience and comfort simultaneously and partially influence interest in using mobile banking services. Therefore, it can be concluded that several of these studies have almost the same variables, so that the difference between previous research and this research lies in the independent variable that will be studied, namely the perception of fraud. This research aims to determine perceptions of fraud and trust in the use of mobile banking services.

Consumer behavior is the tendency of consumers to consume goods or services with the aim of maximizing their satisfaction, where consumers can buy, use, evaluate and improve the products and services used [9]. This theory covers various aspects, including psychological, social, cultural, economic and purchasing behavior factors that influence consumer decisions. In this theory, the relevant factors to explain the variables in this research are psychological factors, where psychological factors emphasize factors that influence consumer behavior, such as perception, motivation, attitudes, and learning. [10] in his research explains that fraud is a type of activity that aims to disrupt or destroy the integrity of a business, both internal and external, with the aim of gaining personal or monetary gain, either slowly or quickly, and causing financial losses for other people. Fraud is a behavior carried out by irresponsible people and used to benefit themselves without considering the interests of other people [11].

Trust is defined as a person's desire to rely on another party with certain risks. This desire comes from the individual's prior understanding of the other party, there is an expectation that the other person will provide positive feedback even though there is a possibility that the other person will provide negative feedback. Trust as a willingness to make oneself sensitive in actions taken by trust that is based on belief [12]. Trust is a person's expectations in relying on other people for a transaction and risk assuming they act in accordance with expectations [13]. Basically, trust is an important factor that encourages people to use mobile banking services. Mobile banking or commonly called M-Banking is a banking service provided by banks to improve customer service and increase bank operational efficiency and effectiveness in carrying out various transactions. These services give banks the opportunity to provide real benefits to customers, and the promotion of mobile banking will have implications for consumer adoption of the technology over time [14]. (Eudo in their research explains that specifically, mobile banking services not only improve payment processing, but also improve non-transaction processes, such as services for checking account balance information, receiving notifications about incoming funds, completing transactions or ongoing transfers, customer service, and so on. Therefore, it can be said that mobile banking provides convenient banking services.

2. Methodology

This type of research is quantitative research, namely research to obtain objective data and includes collecting quantitative data analysis using statistical testing methods. This quantitative research uses descriptive methods to describe the data that has been collected with the aim of determining the influence of perceptions of fraud and trust as independent variables with the use of mobile banking services as the dependent variable.

The population in this research is commercial bank customers who use mobile banking services in Palopo City. The sample used in this research used a random sampling method. The number of samples to be used in this research is determined using the moe formula proposed by Rao Purba, as shown below, with a large and unknown population.

$$n = \frac{Z^2}{4(Moe)^2}$$

Description:

n = Number sample

Z = The level of normal distribution is at a significant level 5% = 1,96

Moe = The margin of error or maximum error that can be tolerated is set at 10% (0.10)

With use margin of error is 10 %, then amount minimum sample that can be taken amount :

$$n = \frac{1{,}96^2}{4(0{,}1)^2}$$

$$= 96{,}04$$

Based on results calculation formula above , it is known amount the sample is 96.04 and rounded to 100 respondents .The data collection method in this research is primary data collected using a survey method with the help of a questionnaire. The data in this research uses a questionnaire distributed to commercial bank customers who use mobile banking services. Score calculations for measuring variables are carried out using a Likert scale with five alternative answers, namely strongly agree (score 5), agree (score 4), neutral (3), disagree (2), and strongly disagree (1).

The data analysis method used in this research is data quality testing which consists of validity and reliability tests. The classic assumption test consists of the normality test, heteroscedasticity test, and multicollinearity test. Hypothesis testing consists of the coefficient of determination test (R^2), simultaneous test (f test), partial test (t test), and multiple linear regression test.

3. Result and Discussion

3.1. Result

Data Quality Test

1. Validity Test

Validity testing is carried out to find out whether the questionnaire used is truly valid for measuring the variables studied.

Table 1. Validity Test Results

Variable	Instrument	r count	r table	Information
Perception Of Fraud (X1)	Statement X1.1	0.706	0.196	Valid
	Statement X1.2	0.553	0.196	Valid
	Statement X1.3	0.716	0.196	Valid
	Statement X1.4	0.701	0.196	Valid
	Statement X1.5	0.690	0.196	Valid
Trust (X2)	Statement X2.1	0.721	0.196	Valid
	Statement X2.2	0.651	0.196	Valid
	Statement X2.3	0.687	0.196	Valid
	Statement X2.4	0.786	0.196	Valid
	Statement X2.5	0.759	0.196	Valid
Use Mobile Banking Services (Y)	Statement Y1	0.600	0.196	Valid
	Statement Y2	0.649	0.196	Valid
	Statement Y3	0.640	0.196	Valid
	Statement Y4	0.684	0.196	Valid
	Statement Y5	0.715	0.196	Valid

Source : processed primary data (2023)

From the results of the validity test, it can be concluded that all question items for each variable are declared valid because the resulting calculated r value is greater than the table r value, namely 0.196.

2. Reliability Test

Reliability tests are used to test the consistency of data over a certain period of time, including determining how reliable or trustworthy the measures used are. A variable is said to be reliable if it provides a Cronbach Alpha coefficient value greater than 0.60 [15].

Table 2. Reliability Test Results

Variable	*Cronbach's Alpha*	Reliability limits	Information
Perception (X1)	0.686	0.60	Reliable
Trust (X2)	0.764	0.60	Reliable
Use Mobile Banking Services (Y)	0.665	0.60	Reliable

Source : processed primary data (2023)

The reliability test results in the table above show that each variable obtained a Cronbach's alpha value > 0.60, meaning that all the statements used were reliable.

Classic Assumption Test

1. Normality Test

The normality test is a statistical test used to check whether the observation data is normally distributed or not.

Table 3. Normality Test Results

Kolmogrov-Smirnov	***Unstandardized Residuals***
N	100
Asymp.Sig .(2-tailed)	0.124

Source : processed primary data (2023)

Based on the normality test results above, an Asymp.Sig.(2-tailed) value of 0.124 is obtained, meaning the value obtained is > 0.05, so it can be concluded that the data is normally distributed.

2. Multicollinearity Test

Multicollinearity test aim for inspect is there is correlation between variable independent in the regression model . The presence of multicollinearity among others , with see mark variation inflation factor (VIF) and tolerance . If the VIF value < 10 and tolerance > 0.1 indicates no happen phenomenon multicollinearity.

Table 4. Multicollinearity Test Results

Variable	***Cronbach's Alpha***	**VIF**
Perception Of Fraud (X1)	0.797	1.255
Trust (X2)	0.797	1.255

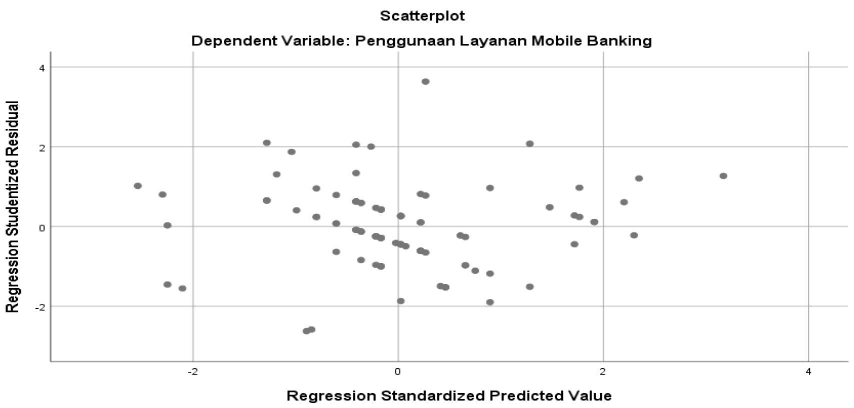
Source : processed primary data (2023)

The table above shows the tolerance values for the two independent variables > 0.1 and VIF < 10. Therefore, it can be concluded that all independent variables in this study do not have multicollinearity.

3. Heteroscedasticity Test

The heteroscedasticity test is carried out to find out whether in the regression model there is an inequality in the residual variance from one observation to another. A good regression model is one that does not experience heteroscedasticity.

Picture 2. Heteroscedasticity Test Results



Source : processed primary data (2023)

In testing heteroscedasticity on show that dot, dot, dot spread . On the Y axis , above and below number 0, no formed pattern certain and not there is connection . Therefore, that can concluded that no there is symptom heteroscedasticity that occurs.

Multiple Linear Regression Test

1. Coefficient Of Determination (R^2)

Table 5. Coefficient of Determination Test Results

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.642[a]	.413	.401	1.414

a. Predictors: (Constant), Trust , Fraud Perception
b. Dependent Variable: Usage Mobile Banking Services

Source : processed primary data (2023)

Based on the adjusted R Square results in the table above it is 0.401. This states that 40.1% of the use of mobile banking services can be explained by independent variables, namely perception of fraud and trust. The remaining 59.9% is explained by other reasons outside the variables studied.

2. Simultaneous Test

Table 6. Simultaneous Test Results

Model		df	F	Sig.
1	Regression	2	34.082	.000 [b]
	Residual	97		
	Total	99		

a. Dependent Variable: Use Mobile Banking Services
b. Predictors: (Constant), Trust , Fraud Perception

Source : processed primary data (2023)

From the table above, it can be seen that the calculated f value is (34.082) while the f table significance value is 5% (3.090), so it can be concluded that calculated f (34.082) > f table (3.090) which means it can be concluded that the perception of fraud and trust are simultaneous (together) has a significant effect on the use of mobile banking services.

3. Partial Test

Table 7. Partial Test Results

Model		Unstandardized B	Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	4.873	1.860		2.620	.010
	Perception of Fraud	.227	.091	.218	2.507	.001
	Trust	.511	.087	.514	5.894	.000

a. Dependent Variable : Use Mobile Banking Services

Source : processed primary data (2023)

From the t test results table above, it can be seen that the calculated t value of the fraud perception variable is 2.507, which means that the calculated t value of this variable is > t table value (1.661) and the sig value. 0.001 < 0.05, so it can be said that the fraud perception variable has a positive and significant influence on the variable use of mobile banking services. Meanwhile, the trust variable shows the calculated t value (5.894), this value is also > t table value (1.661) and the sig value. 0.000 < 0.05, which means that the perception of trust variable has a positive and significant effect on the use of mobile banking services.

4. Multiple Linear Regression

Table 8. Multiple Linear Regression Test Results

Model		Unstandardized B	Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	4.873	1.860		2.620	.010
	Perception of Fraud	.227	.091	.218	2.507	.001
	Trust	.511	.087	.514	5.894	.000

a. Dependent Variable : Use Mobile Banking Services

Source : processed primary data (2023)

Based on the results of the regression analysis above, the following equation is obtained:

$$\mathbf{Y = 4.873 + 0.227 + 0.511 + e}$$

Based on this equation model, the following can be interpreted:

1. Constant value of 4.873 shows the average value is 4.873 uses mobile banking service with provision mark variable perception fraud and trust constant value.
2. Coefficient value regression variable X1 (Perception Fraud) of 0.227. That figure explain that if variable perception fraud improved so use mobile banking services will increase . It means perception fraud influential positive to use service mobile banking
3. Coefficient value regression variable X2 (Trust) is 0.511. That figure explain that if variable trust improved so use service mobile banking will increase . It means trust influential positive to use service mobile banking.

3.2. Discussion

1. The influence of fraud perceptions on the use of mobile banking services

Based on the research results previously explained, the perception of fraud has a significant effect on the use of mobile banking services as proven by the partial test results showing the calculated t value of the fraud perception variable of 2.507 > t table value (1.661) and the sig value 0.014 < 0.05. The results of this research are in line with research conducted by [6] which found that perceptions of fraud influence the use of mobile banking services. Perceptions of fraud regarding the use of mobile banking services influence a person in carrying out a transaction because the consequences of fraud can cause a person to no longer use the service. A high perception of fraud can lead to distrust, not only towards mobile banking services but also towards online transactions in general. Users may prefer to transact in person or use traditional payment methods. To address the impact of negative perceptions of fraud, mobile banking service providers must proactively implement stringent security measures, inform users about security measures, and communicate to achieve transparency regarding the steps taken to protect user information.

2. The influence of trust on the use of mobile banking services

Based on the research results described previously, trust has a significant effect on the use of mobile banking services as proven by the partial test results showing the calculated t value of the trust variable is 5.894 > t table value (1.661) and the sig value 0.000 < 0.05. These results are in line with research conducted by [12] which states that trust has a positive and significant effect on the use of mobile banking services. The results of this research are not in line with research [16] which states that trust has a negative and significant effect on the use of mobile banking services. Trust in mobile banking influences a person's interest in using the service, because with high trust, customers believe in the banking industry to be able to carry out transactions in such a way that the trust factor directly influences the use of mobile banking services for transactions. In practice, companies and mobile banking service providers build a certain level of trust with their customers by offering advanced security features, providing transparent information about privacy policies, and maintaining service quality, and often strive to maintain it. Strong trust helps drive continued adoption and use of mobile banking services.

4. Conclusion

The conclusion of this research is that perceptions of fraud have a positive and significant effect on the use of mobile banking services, so that the first hypothesis in this research is accepted. Trust has a positive and significant effect on the use of mobile banking services, so the second hypothesis in this research is accepted.

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6. Reference

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