

Research Article

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Influence of Perceived Trust, Convenience and Security on The Use of Mobile Banking

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Abstract: *The aim of this research is to determine and analyze the influence of perceptions of trust, convenience and security on the use of mobile banking. This research uses quantitative data with a causal approach. The population used in this research was 817 active STIE Malangkucecwara students who used the mobile banking application. The sampling technique in this research used incidental sampling. And based on the Slovin formula, the samples in this study were 90 samples. In this research, the data analysis methods used include the classic assumption test which includes, among others; normality test, multicollinearity test, heteroscedasticity test, and autocorrelation test as well as hypothesis testing which includes the coefficient of determination test and t test. Based on the research results, it shows that perceptions of trust, perceptions of convenience, and perceptions of security influence the use of mobile banking.*

Keywords: *mobile banking, trust, convenience, security.*

Introduction

In the current era of globalization, technological developments are increasingly rapid. The rapid development of information technology has an impact, namely changing people's habits or behavior (Maharani, 2020). The rapid development of technology encourages people to adapt, giving rise to the term digital society. The impact of this is that it encourages other aspects to grow and develop, such as in transaction and business activities that are carried out digitally (Ismail & Purwani, 2021)

Technology has opened up new markets, new products, new services and efficient delivery channels for the banking industry. Banks have changed from providing paper-based banking solutions to the latest technology, one of which is mobile banking. Banking developments make it easier for customers to use their various products anytime and anywhere (Maharani, 2020). Mobile banking is also a banking transaction service facility through an internet network that can be accessed 24 hours. This service allows customers of a bank to carry out almost all types of banking transactions via internet facilities (Ramayani et al., 2020). Smartphone is one of the media that makes it possible to carry out this mobile banking activity.

Based on the results of a survey by the Ministry of Communication and Information Technology (Kominfo) with the Katadata Insight Center (KIC) entitled "Status of Digital Literacy in Indonesia 2021", 62.9% of respondents admitted that they had never accessed internet banking or mobile banking transactions. Based on the survey, respondents who claimed to rarely use internet or mobile-banking transactions were also high, reaching 15.8%. Then, respondents who said they very rarely used internet or mobile-banking amounted to 8.20%. Meanwhile, respondents who said they often reached 11.4% and those who very often used internet or mobile banking were only 1.70% (Mutia, 2022). This is due to the character of Indonesian people who still lack confidence in transactions using mobile banking. In addition, public perceptions of security in using mobile banking are still lacking, causing concern. The three things above are the causes of mobile banking growth to be quite slow.

Trust in the banking business is one of the main principles. Banks must continue to maintain the trust that customers have given because it is based on trust that customers keep their money in the bank and use all the products and services provided by the bank such as mobile banking (Ningrum, 2020). Perceived convenience will provide confidence if the system in mobile banking is easy to use, then users will definitely use the system (Lieny et al., 2021). This perception of security needs to be considered because of the rampant crime that may be faced by internet users so that perceived security can influence someone to use mobile banking or not.

This research is based on previous studies, because there are similarities in the variables used. In research conducted by Lieny et al. (2021) states that there is a positive and significant effect of perceived trust on customer interest in using mobile banking. In contrast to research conducted by Mahmudah & Rahmatika (2021), the results state that trust partially has a negative and significant effect on interest in using mobile banking. Research conducted by Rozi & Ziyad (2019) states that perceived convenience has a positive and significant effect on interest in using BTN KC Banjarmasin Bank mobile banking. In contrast to research conducted by (Pranoto & Setianegara, 2020) stated that perceived convenience has a negative and significant effect on customer interest in using mobile banking at PT Bank Rakyat Indonesia (Persero) Tbk Pandanaran Semarang Branch. Research conducted by Kamarudin et al. (2022) states that security has a positive and significant effect on customer satisfaction in using mobile banking in Mamuju Regency. In contrast, research conducted by Mukhtisar (2020) states that security has no effect on customer interest in transactions using mobile banking. There are inconsistencies in the results of previous studies so that the authors feel interested in conducting further studies with different objects.

Literature Review

Perception of Trust

Trust as an individual's willingness to depend on another party with certain risks. Maintaining the continuity of e-banking in this modernization era is a competition between banks. The banking industry must have the trust of its customers, so that the application can survive amid the rapid development of technology every day. The bank must convince its customers that the system is highly secure and confidential without any interference from any party in order to maintain customer trust (Lieny et al., 2021).

Perceived Ease

Ease of use is defined as a level where a person believes that a technology can be very easily understood and understood. Perceived ease of use has several things that become benchmarks or an indicator of an information system, including mobile banking which includes time efficiency in use, the appearance of a banking site that is easy for customers to understand and understand, adding skills in its use and easy for anyone to learn (Mahmudah & Rahmatika, 2021).

Perception of Safety

Security in information is defined as guarding information from all possible threats in an effort to ensure or guarantee business continuity, minimize business risk and maximize or accelerate return on investment and business opportunities (Deliyana et al., 2022). This perception of security needs to be considered because of the rampant crime that may be faced by internet users so that it can influence someone to use mobile banking or not (Sulmi et al., 2021).

Mobile Banking Usage

Mobile banking is a banking facility or service using mobile communication devices such as smartphones, by providing facilities for banking transactions through applications on mobile phones. With mobile banking, activities that usually have to come to the bank office, can now be done using a smartphone so that it can save time and money. In addition to saving time, mobile banking services also aim so that customers are not outdated in using modern electronic media and can also better utilize smartphone media which is usually used for communication but can also be used for business and transactions (Astuti, 2019).

Hypothesis Development

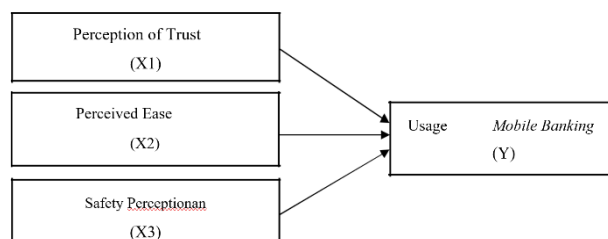


Figure 1. Framework Research Concept

The Effect of Perceptions of Trust on the Use of Mobile Banking

Trust is a belief in the reliability and integrity that a person has with their partners. When customers have a high level of trust in the mobile banking service, it can be used as a measure to increase customer loyalty in using mobile banking services. The results of research conducted by Atarwaman (2022), Yuniati et al. (2022) show that perceived trust has an effect on attitudes towards using mobile banking. Based on this background, the hypothesis in this study is as follows.

H1: Perceived trust affects the use of mobile banking.

The Effect of Perceived Ease of Use of Mobile Banking

Ease of use is defined as the level to which a person believes that the use of information technology is easy and does not require great effort from the user. Quality technology is technology that is easy to use. However, it is not only easy to use and operate, but also makes it easier for users to complete the work done than without using a technology. The results of research conducted by Pratama et al. (2019) and Vinasti et al. (2022) show that ease of use affects the intention to use mobile banking applications. Based on this background, the hypothesis in this study is as follows.

H2: Perceived convenience affects the use of mobile banking.

The Effect of Perceived Security on Mobile Banking Usage

Security is very important in a banking system because it involves important privacy data such as highly confidential customer personal data. Security is one of the reasons that affects customers using mobile banking. The results of research conducted by Ramayani et al., (2020) and Sulmi et al. (2021) show that security has a positive and significant effect on the use of mobile banking. Based on this background, the hypothesis in this study is as follows; H3: Perceived security has a positive effect on the use of mobile banking.

Method

Type of Research

This study uses quantitative data with a causality approach. According to (Sugiyono, 2016) quantitative data is in the form of numbers or numbers according to the form that can be processed or analyzed using mathematical or statistical calculation techniques. Causality research aims to test the effect of one variable on another. In causal research, the independent variable is the cause variable and the dependent variable is the effect variable (Sugiyono, 2016).

Popolation and Sample

The population used in this study were 817 active students of STIE Malangkucecwara who used the mobile banking application. The sampling technique in this study focuses on using incidental sampling techniques. According to (Sugiyono, 2016) incidental sampling is a sampling technique based on chance, that is, anyone who happens / incidentally meets the researcher can be used as a sample, if it is deemed that the person who happened to be met is suitable as a data source. And based on the Slovin formula, the sample in this study was 90 students,

Variables and Measurements

The variables used in this study are independent variables (X) which consist of variables of perceived trust (X1), perceived convenience (X2) and perceived security (X3) and the dependent variable (Y), namely the variable use of mobile banking. Operational definitions and variable measurements can be seen in Table 1.

Table 1. Operational Definition and Measurement of Variables

Variable	Operational Definition	Measurement
Perceived Trust (X1)	Trust is a descriptive belief that someone has about something. Transactions using mobile banking require trust from customers. If the service provided meets expectations, customers will feel satisfied.	- Accuracy
		- Expediency
		- Data confidentiality guarantee
		- Data protection
		- Consistency
		(Source: Kotler and Keller, 2016)
Perceived Convenience (X2)	Perceived convenience refers to the belief that using information technology reduces excessive effort. It reflects a perception that the system is easy to use and simplifies tasks.	- Clear and easy to understand
		- Easy to operate
		- Flexible
		- Requires little effort
		- Simple and time-saving
		(Source: Ferry Wibowo et al., 2015)
Perceived Safety (X3)	Individuals' belief in the privacy and security of their personal information. Technology is considered secure if it ensures personal data can only be accessed by authorized individuals and is stored safely.	- Privacy
		- Good control
		- Authenticity
		- Availability
		- Confidentiality

Variable	Operational Definition	Measurement
		(Source: Robaniyah, 2021)
Use of Mobile Banking (Y)	A person's interest in using a mobile banking application, influenced by their belief in the benefits derived from using the system.	- Product selection
		- Brand selection
		- Distributor selection
		- Item purchase quantity
		- Payment method

Analysis Method

In this study, the data analysis methods used include classical assumption tests which include, among others; normality test, multicollinearity test, heteroscedasticity test, and autocorrelation test and also hypothesis testing which includes determination coefficient test and t test.

Results and Discussion

Classical Assumption Test

Normality Test

Table 2. Data Normality Test
One-Sample Kolmogorov-Smirnov Test

			Unstandardized Residual
N			90
Normal Parameters ^{a,b}	Mean		,0000000
	Std. Deviation		1,67012992
Most Extreme Differences	Absolute		,092
	Positive		,038
	Negative		-,092
Test Statistic			,092
Asymp. Sig. (2-tailed) ^c			,059
Monte Carlo Sig. (2-tailed) ^d	Sig.		,057
	99% Confidence Interval	Lower Bound	,051
		Upper Bound	,063

Source: Data Processed, 2024

Based on Table 2, it shows that the significant value of asymp sig 2 tailed is greater than 0.05, namely 0.59. This means that the residual data used in this study are normally distributed.

Multicollinearity Test

Table 3. Multicollinearity Test Coefficients^a

		Collinearity Statistics	
Model		Tolerance	VIF
1	perception of trust	,624	1,602

Siti Munfaqiroh et al Model						
		Unstandardized Coefficients		Standardized Coefficient Beta	Sig.	
		B	Std. Error			
1	(Constant)	2,923	2,169		1,348	,181
	perception of trust	,316	,106	,286	2,996	,004
	perceived ease	,167	,077	,175	2,153	,034
a. Dependent Variable: mobile banking usage						
Source: Data Processed, 2024						

The multicollinearity test results presented in Table 3 show that the tolerance value for each variable is greater than 0.10, namely 0.624, 0.860 and 0.558. As well as the VIF value is smaller than 10, namely 1,602, 1,163 and 1,793, which means that the regression equation model is free from multicollinearity.

Heteroscedasticity Test

Table 4. Heteroscedasticity Test Results
Heteroscedasticity Test Results

Model	Unstandardized Coefficients (B)	Std. Error	Standardized Coefficients (Beta)	t	Sig.
1 (Constant)	4.876	1.282	-	3.803	0
Perception of Trust	-0.025	0.062	-0.051	-0.395	0.694
Perceived Ease	-0.046	0.046	-0.11	-1.002	0.319
Perception of Security	-0.099	0.057	-0.237	-	-

Dependent Variable: res_2

Source: Data Processed, 2024

Based on Table 4, the significant value of each variable shows a value above 0.05. so it is concluded that there is no heteroscedasticity in the regression model.

Multiple Regression Test

Table 5. Multiple Linear Analysis Test Results Coefficients^a

		Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.
Model		B	Std. Error			
1	(Constant)	2,923	2,169		1,348	,181
	perception of trust	,316	,106	,286	2,996	,004
	perceived ease	,167	,077	,175	2,153	,034

a. Dependent Variable: mobile banking usage

Source: Data Processed, 2024

Based on Table 5, it can be explained as follows:

- It is known that the constant value of 2.923 means that if the variables of perceived trust, perceived convenience and perceived security are 0 (zero), then the use of mobile banking (Y) will increase by 2.923.

- b. $\beta_1 = 0.316$: means that the perceived trust variable has a positive relationship to the use of mobile banking. This means that if the perceived trust variable (X1) increases, the use of mobile banking (Y) will increase by 0.316.
- c. $\beta_2 = 0.167$; means that the perceived convenience variable has a positive relationship to the use of mobile banking. That is, if the perceived convenience variable (X2) increases, the use of mobile banking (Y) will increase by 0.167.
- d. $\beta_3 = 0.403$; means that the security perception variable has a positive relationship with the use of mobile banking. This means that if the security perception variable (X3) increases, the use of mobile banking (Y) will increase by 0.266.

Determination Coefficient Test

Table 6. Results of the Coefficient of Determination (R²) Model Summary^b

Model	R	Adjusted R		Std. Error of	
		R Square	Square	Adjusted R Square	the Estimate
1	,716 ^a	,512		,495	1,69901

a. Predictors: (Constant), perceived security, perceived convenience, perceived trust.

b. Dependent Variable: mobile banking usage

Source: Data Processed, 2024

Based on Table 6, the magnitude of the coefficient of determination is indicated by the adjusted R square value. amounting to 0.495, this means that the effect of perceived trust, perceived convenience and perceived security on the use of mobile banking is 49.5% and the remaining 50.5% is influenced by other factors outside the variables used.

Hypothesis Test (t Test)

Based on Table 5, the results of testing the effect of each independent variable on the dependent variable in this study are described as follows; (1) the significance level of variable X1 t value of 0.004 which is smaller than 0.05 so that H1 is accepted. This means that perceived trust has a positive and significant effect on the use of mobile banking. (2) the significance level of the X2 variable t value is 0.034 which is smaller than 0.05 so H2 is accepted. This means that perceived convenience has a positive and significant effect on the use of mobile banking. (3) the significance level of variable X3 t value of 0.000 which is smaller than 0.05 so that H3 is accepted. This means that perceived security has a positive and significant effect on the variable use of mobile banking.

The Effect of Perceptions of Trust on the Use of Mobile Banking

The results of hypothesis testing on the effect of perceived trust (X1) on the use of mobile banking (Y) show a regression coefficient value of 0.316, which means that the perceived trust variable has a positive relationship to the use of mobile banking. Trust is a belief in the reliability and integrity that a person has with his partners. When customers have a high level of trust in the mobile banking service, it

can be used as a measure to increase customer loyalty in using mobile banking services. Basically, this trust is an important thing that encourages customers to use mobile banking services. This is in line with the results of research conducted by Atarwaman (2022) and Yuniati et al., (2022) also shows that trust affects the variable use of mobile banking services.

The Effect of Perceived Ease of Use of Mobile Banking

The results of testing the hypothesis of the effect of perceived convenience (X2) on the use of mobile banking (Y) show a regression coefficient value of 0.167, which means that the perceived convenience variable has a positive relationship to the use of mobile banking. Ease of use is defined as the level at which a person believes that the use of information technology is easy and does not require great effort from the user, quality technology is technology that is easy to use. However, it is not only easy to use and operate, but also makes it easier for users to complete the work done than without using a technology. So, the higher the ease of use of the mobile banking application, the higher the intention of banking customers to use the mobile banking application. The results of research conducted by Pratama et al., (2019) and Vinasti et al. (2022) show the results that ease of use has a positive effect on the intention to use the mobile banking application.

The Effect of Security Perceptions on the Use of Mobile Banking

The results of hypothesis testing the effect of perceived security (X3) on the use of mobile banking (Y) show a regression coefficient value of 0.403; means that the perceived security variable has a positive and significant relationship to the use of mobile banking. Security is one of the reasons that affects customers using mobile banking. Security factors are considered important to research because customers will intend to use mobile banking if the system can provide security for customer data when making transactions using the mobile banking application. If data security in using mobile banking can be guaranteed, customers will continue to use it. The results of research conducted by Ramayani et al. (2020) and Sulmi et al. (2021) also show that security has a positive and significant effect on interest in using mobile banking services.

Conclusions

Based on the results of data analysis and discussion in the previous chapter, the following conclusions can be drawn.

1. Perceived trust affects the use of mobile banking. These results can be concluded that the better the perception of trust possessed by STIE Malangkececwara students, the more mobile banking usage will increase.
2. Perceived convenience affects mobile banking. These results can be concluded that the higher the perceived convenience provided by STIE Malangkececwara students, the more the use of mobile banking will increase.
3. Perceived security affects the use of mobile banking. These results can be concluded that the better the perception of security carried out by STIE Malangkececwara students, the use of mobile banking will increase.

References

- Astuti, V. Y. (2019). The Effect of Perceived Ease and Perceived Usefulness on Interest in Using Mobile Banking (Case Study of Sukobubuk Village Community, Margorejo District, Pati Regency) [Walisongo State Islamic University].
- Atarwaman, R. J. D. (2022). The Effect of Perception of Risk, Usability, Trust and Ease of Use on Attitudes towards Using Mobile Banking in Ambon City. *Journal of Economics and Business*, 10.
- Deliyana, R., Permatasari, B., & Sukmasari, D. (2022). The Effect of Perceived Ease, Perceived Security, and Perceived Trust on Customer Satisfaction in Using Bca Mobile Banking. *Journals Of Economics and Business*, 2.
- Ferry Wibowo, S, et al., 2015. The Effect of Perceived Benefits, Perceived Ease, Service Features, and Trust on Interest in Using E-Money Cards (Study on Commuterline Service Users in Jakarta). *Indonesian Science Management Research Journal (JRMSI)* Vol. 6, No. 1.
- Ismail, H. A., & Purwani, T. (2021). Factors Affecting Interest in Using Mobile Banking (Vol. 3, Issue 2).
- Kamarudin, J., Nursiah, & Novianti, M. (2022). The Effect of Convenience, Security, and Risk Factors on Customer Satisfaction in Using Mobile Banking (Case Study on Bri Customers in Mamuju Regency). <https://Stiemmamuju.EJournal.Id/Fjiim/Article/View/123>
- Kotler, Phillip and Kevin Lane Keller (2016). *Marketing Management* 12th edition Volume 1 & 2. Jakarta: PT. Index
- Lieny, L., Novika, & Medinal. (2021). The Effect of Perceived Ease, Convenience and Trust on Intention to Use Mobile Banking at BCA Pangkalpinang. *Journal of Business and Financial Accounting*, 8 (2).
- Maharani, B. (2020). The Effect of Perceived Ease, Perceived Usefulness and Trust on Interest in Using Bni Mobile Banking (Case Study Bni Kcu Central Jakarta).
- Mahmudah, & Rahmatika. (2021). The Effect of Perceived Usefulness, Ease of Use, Trust, Service Quality, and Word of Mouth on Interest in Using Mobile Banking 2020 (Case Study of BRI Kc Semarang Customers). *Journal of Masharif Al-Syariah: Journal of Economics and Islamic Banking*, 6.
- Overview. (2020). The Effect of Efficiency, Security and Ease on Customer Interest in Transactions Using Mobile Banking (Study on Customers of Bank Syariah Mandiri Ulee Kareng Banda Aceh) [ArRaniry State Islamic University Banda Aceh].
- Mutia, A. (2022). Survey: Majority of Indonesians Have Never Accessed Internet or Mobile-Banking. Databoks.
- Ningrum, R. (2020). The Effect of Benefits, Trust, and Ease of Use on Customer Interest in Using Mobile Banking at Bank Mega Syariah Palu Branch [Institut Agama Islam Negeri (Iain) Palu].
- Pranoto, M. O., & Setianegara, R. G. (2020). Analysis of the Effect of Perceived Benefits, Perceived Ease, and Security on Customer Interest in Using Mobile Banking (Case Study at Pt Bank Rakyat Indonesia (Persero) Tbk Semarang Pandanaran Branch Office). *Journal of Finance and Business*, 8.
- Pratama, A., Saleh, F. Moh., Zahra, F., & Afdhalia, N. (2019). Factors Affecting Intention to Use Mobile Banking (Empirical Study on Conventional Banking Customers in Palu City). *Journal of Objective Accountable Neutral Accounting*, 2.
- Ramayani, Kismawadi, E. R., & Chalil, R. D. (2020). The Effect of Trust, Security, Benefits and Ease of Use of Mobile Banking. *Student Scientific Journal*, 2.
- Robaniyah, L., & Kurnianingsih, H. (2021). The Effect of Perceived Benefits, Ease of Use and Security on Interest in Using the OVO Application. *IMAGE: Journal of Management Research*, 10(1), 53-62.

- Rozi, F., & Ziyad, M. (2019). The Effect of Trust, Perception of Usefulness, Perception of Ease and Perception of Comfort on Interest in Using Bank Btn Mobile Banking Services. *Journal of Management Science and Entrepreneurship*, 3.
- Sugiyono. (2016). *Management Research Methods*. Alfabeta.
- Sulmi, A. A. K., Awaluddin, M., Gani, I., & Muslimin, K. (2021). The Effect of Perceptions of Usability, Ease, and Security on Interest in Using Mobile Banking Services (Empirical Study on Students of the Faculty of Economics and Islamic Business Uin Alauddin Makassar). *Islamic Banking, Economic and Financial Journal*, 1(2).
- Vinasti, M. A., Ramdan, A. M., & Z, F. M. (2022). Analysis of Perceived Ease of Use on Use Interest through Trust in Mobile Banking Users. *Management Studies and Entrepreneurship Journal*, 3(3), 2022.
- Yuniati, T., Pramukty, R., & Siburian, S. (2022). The Effect of Fraud Perception and Trust on the Use of Mobile Banking Services (Commercial Bank Customers who use Mobile Banking Services).