

ANALYSIS OF CUSTOMER INTEREST USING SOE BANK MOBILE BANKING WITH TECHNOLOGY ACCEPTANCE MODELS

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ABSTRACT

The development of banking services is no longer only with the slogan of safe and reliable services, but also being able to provide services tailored to the needs of customers who have developed in line with developments in technology and lifestyle. One form of service developed by banks is online banking services. Online banking is a banking transaction service that can be carried out by customers either from home, place of business or in other locations that are not in a real bank location (branch offices) by using communication media such as computers, cell phones and home phones. Sampling by technique sampling that is accidental sampling based on the formula Sampling proportion . For collection data includes observation, distribution of questionnaires and literature study. The purpose of this study was to determine the interest in using the Mobile Banking services of BUMN Banks with the Technology Acceptance Model. Approach study Which used in this study is a quantitative approach with a total sample of 100 respondents with the results of the analysis showing that the variable Perceived Usefulness has a significant effect on Attitude, Partial Least Square (PLS) analysis shows that Perceived Ease of Use variable has a significant effect on Attitude, Partial Least Square (PLS) analysis shows that Perceived Usefulness variable has a significant effect on Interest in using mobile banking..

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INTRODUCTION

The development of banking services is no longer only with the slogan of safe and reliable services, but also being able to provide services tailored to the needs of customers who have developed in line with developments in technology and lifestyle. One form of service developed by banks is online banking services . Online banking is a banking transaction service that can be carried out by customers either from home, place of business or in other locations that are not in a real bank location (branch offices) by using communication media such as computers, cell phones and home phones. Forms of online-based banking services are Automatic Teller Machines (ATM) and electronic banking (e-banking) (Irmadhani, 2012) and in order to meet the demand for technological developments, many banking industries provide information technology (IT) based services, one of which is the use of Mobile Banking (M-banking). Mobile banking is one of the mobile technology developments used in the commercial domain. Mobile banking combines information technology and business applications together.

State-owned banks also have Mobile Banking services. This facility was launched so that customers can be more comfortable in making transactions because customers can

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make transactions via mobile phones anytime and anywhere. In addition, this facility is also used to boost the bank's image in the eyes of customers or prospective customers, apart from showing it as a modern bank it is also an indicator that the bank has concern for customers to make transactions easier. Increasing interest in using mobile banking is the main target for the Bank in welcoming the industrial revolution 4.0 era. Interest is a behavioral tendency to continue using a technology (Wibowo et al., 2015)

Interest is one aspect of the human psyche that can encourage to achieve goals. Someone who has an interest in an object tends to pay attention or feel greater pleasure for that object (Kurniawati et al., 2017) . One method of measuring technology acceptance is the Technology Acceptance (TAM) method , a Technology Acceptance Model (TAM) developed by Davis, et al ., (1989). The Technology Acceptance Model or TAM (Technology Acceptance Model) introduced is an adaptation of the Theory of Reasoned Action (TRA) developed by Fishbein and Ajzen (1975) . TAM has the objective of providing a partial explanation of the determinants of adoption from the behavior of information technology users towards the acceptance of the use of information technology itself (Davis, 1989)

The presence of perceptions in the acceptance of a new technology has a major influence on one's interest in using it or not using the new technology. Success or failure of the acceptance of the mobile banking application at consumers (customers) can predicted through correlational and causal relationships. In this study, researchers used a research model that had been developed from several existing studies by taking variables from previous studies to serve as models in the study. These variables are perceived usefulness, perceived ease of use, attitudes towards interest in using mobile banking.

Perceived ease of use according to Jogiyanto (2007) states that perceived ease of use is defined as the extent to which a person believes that using a technology will be free of effort . From the definition, it can be seen that the perceived ease of use is a belief about the decision-making process. If someone feels confident that the information system is easy to use then he will use it. Taylor and Todd's research (1995) found that the construct of perceived usefulness is the main cause of interest in using the system (behavioral intention) for less experienced users. For experienced users, the main cause of interest in using the system is the perceived behavioral control construct .

Attitudes toward using technology (Attitude Toward Using) attitudes toward using TAM technology are conceptualized as attitudes toward using the system in the form of acceptance or rejection as an impact when someone use as one of the aspects that influence individual behavior. Attitudes to technology use are defined by Davis (1989) as positive or negative feelings from someone if they have to carry out the behavior to be determined. The attitude of using technology as a user's evaluation of his interest in using the system (Widanengsih & Yusuf, 2022)

Mobile banking is a banking facility through mobile communications such as mobile phones with facilities that are almost the same as ATMs except for taking cash (Hutabarat, 2010) . Mobile banking is a banking service through wireless channels. Mobile banking is part of electronic banking that uses mobile phone technology. There are two forms of mobile banking, namely SMS-banking which is accessed by sending written messages and WAP-banking a form of mobile internet service which is accessed via a GPRS (internet) connection. Mobile banking is the choice because it is easy to use, practical, safer (Mattila et al., 2003)

The technology acceptance model (TAM) has two external variables, namely perceived ease of use, and perceived usefulness which will affect acceptance of internet technology. Perceived ease of use is defined as the level of user belief that a technology or system can be used easily and free of problems, then perceived usefulness is defined as the level of user confidence that using a particular technology or system will improve performance. the user's work (Frimayasa, 2022) .

TAM is an adaptation of the theory developed by Fishbein, namely Theory of Reasoned Action (TRA) which is an action theory based on one assumption that a person's reaction and perception of something will determine the attitude and behavior of that person. TAM adds two main constructs to the TRA model. These two main constructs are perceived usefulness and perceived ease of use. TAM argues that individual acceptance of information technology systems is determined by these two constructs (Jogiyanto, 2007) .

Interest is something that arises after receiving stimulation from the product it sees, then an interest arises to try the product and finally the desire to buy and own the product arises (Triani, 2016) . According to Jogiyanto (2007) behavioral intention is a person's desire (interest) to perform a certain behavior. Interest is related to behaviors or actions, but interest can change over time, the wider the time interval, the more likely it is for changes in one's interests to occur.

According to Harlan (2014) interest is a persistent mental tendency to pay attention to and remember an activity or activities. Someone who is interested in an activity using banking service facilities and pays attention to this activity based on pleasure, then someone will consistently use it in the future. Interest is a pleasure to do activities. Interest in the use of technology relates to the way companies plan and manage information technology in achieving potential and effective benefits. Information technology can be applied according to business strategy.

Ajzen (1991) states that behavioral intention indicates a person's decision to do or not to do a particular behavior. The concept of behavioral interest states that an individual's motivation to engage in a behavior is defined by the attitudes that influence that behavior. Behavioral interest shows how much effort an individual makes to commit to carrying out a behavior. The magnitude of a commitment defines the realization of the behavior (Ajzen, 1991) . In this study, intention refers to an individual's interest or desire to use mobile banking.

METHOD

In this study the authors used an infinite population, because the population size is unknown and is bank secrecy. In this study, the population used was the customers of BUMN Banks in Jakarta. According to Sugiyono (2016) the sample is part of the number and characteristics possessed by the population. Sampling measurement is a step to determine the size of the sample taken in conducting research on an object. To determine the size of the sample can be done with statistics or based on research estimates. This sampling must be carried out in such a way as to obtain a sample that can really function or can describe the actual state of the population, in other terms it must be representative (representative). Samples are needed to prove the correctness of temporary answers (hypotheses), so researchers collect data on certain objects. Because the objects in the population are too broad, the researcher uses the unknown population formula (Riduwan, 2011)

$$n = \left(\frac{Z_{\alpha/2}}{e} \right)^2$$

Information:

n = Number of samples

$Z_{\alpha/2}$ = measure of confidence level $\alpha = 0.05$ (95% confidence level means $Z_{0.05} = 1.96$)

e = determination level used by stating the maximum *error size* of 20% or 0.20 (*error of estimation*)

Calculation.

$$n = \left(\frac{1.96}{0.20} \right)^2 = 96,04$$

Based on the sample calculation, the researcher believes with a 95% confidence level that the random sample size is 96.04. Seeing these results, to facilitate data calculation, the researchers rounded up the number of samples to 100 people by giving an estimated difference of less than 0.05. Sampling technique in this study will use a probability sampling approach, *namely* a sampling technique that provides equal opportunities or opportunities for each element or member of the population to be selected as a sample.

RESULTS AND DISCUSSION

Validity and Reliability Analysis

This research model will be analyzed using the Partial Least method Square (PLS) and assisted with SmartPLS 3.0 software. PLS is wrong an alternative method of Structural Equation Modeling (SEM) that can be done For overcome problem on connection between variable Which very complex but small data sample size (30-100 samples) and have assumptions non-parametric, meaning that the data does not refer to one of the distributions certain.

Table 1. Test the Validity of Variable Items (Cross Loading)

Item	X1	X2	Y	Z
X1.1	0,65			
X1.10	0,67			
X1.2	0,68			
X1.3	0,72			
X1.4	0,76			
X1.5	0,74			
X1.6	0,80			
X1.7	0,78			
X1.8	0,68			
X1.9	0,81			
X2.1	0,68			
X2.10	0,75			

X2.2	0,61			
X2.3	0,58			
X2.4	0,60			
X2.5	0,61			
X2.7	0,67			
X2.8	0,76			
X2.9	0,76			
Y1.1	0,71	0,71		
Y1.10	0,62			
Y1.11	0,65			
Y1.12	0,61			
Y1.2	0,61			
Y1.3	0,71			
Y1.4	0,67			
Y1.5	0,74			
Y1.6	0,71			
Y1.7	0,61			
Y1.8	0,71			
Y1.9	0,71			

Y1.9		0,74		
Z1.1		0,71		
Z1.10		0,64		
Z1.11		0,71		
Z1.2		0,71		
Z1.3		0,69		
Z1.4		0,61		
Z1.5		0,71		
Z1.6		0,61		
Z1.7		0,71		
Z1.8		0,69		
Z1.9		0,71		

The results of the analysis obtained all Outer Loadings values > 0.5, so there is no need to modify the model.

Item	X1	X2	Y	Z
X1.1	0,65	0,27	0,60	0,38
X1.10	0,67	0,35	0,51	0,41
X1.2	0,68	0,13	0,36	0,26
X1.3	0,72	0,17	0,45	0,38
X1.4	0,76	0,22	0,54	0,41
X1.5	0,74	0,28	0,42	0,33
X1.6	0,80	0,25	0,50	0,52
X1.7	0,78	0,40	0,67	0,43
X1.8	0,68	0,21	0,54	0,27
X1.9	0,81	0,48	0,71	0,57

Item	X1	X2	Y	Z
X2.1	0,35	0,68	0,41	0,49
X2.10	0,36	0,75	0,50	0,57
X2.2	0,17	0,61	0,34	0,42
X2.3	0,12	0,59	0,24	0,37
X2.4	0,08	0,65	0,29	0,42
X2.5	0,23	0,62	0,38	0,33
X2.7	0,28	0,67	0,42	0,35
X2.8	0,35	0,76	0,45	0,42
X2.9	0,37	0,70	0,47	0,42
Y1.1	0,53	0,37	0,73	0,38
Y1.10	0,52	0,39	0,62	0,41
Y1.11	0,40	0,47	0,55	0,32
Y1.12	0,45	0,40	0,61	0,37
Y1.2	0,40	0,29	0,63	0,41
Y1.3	0,57	0,41	0,75	0,42
Y1.4	0,43	0,35	0,67	0,45
Y1.5	0,49	0,50	0,74	0,57
Y1.6	0,59	0,42	0,73	0,65

Y1.7	0,60	0,51	0,85	0,61
Y1.8	0,57	0,37	0,72	0,54
Y1.9	0,63	0,44	0,74	0,62
Z1.1	0,49	0,44	0,54	0,71
Z1.10	0,46	0,51	0,58	0,64
Z1.11	0,40	0,56	0,56	0,70
Z1.2	0,60	0,49	0,62	0,75
Z1.3	0,27	0,41	0,38	0,59
Z1.4	0,26	0,29	0,35	0,60
Z1.5	0,31	0,26	0,41	0,73
Z1.6	0,45	0,46	0,56	0,83
Z1.7	0,32	0,45	0,49	0,75
Z1.8	0,27	0,48	0,32	0,66
Z1.9	0,26	0,43	0,38	0,70

The results of the analysis obtained all the values of *cross loadings* > from the pair of variables, so there is no need to modify the model.

Table 2. Test the Reliability of Variable Items

	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Perception Of Usefulness	0.814	0.914	0.728
Perception of Convenience	0.725	0.792	0.733
Attitude	0.730	0.761	0.757
Interest	0.881	0.882	0.719

Source: data processed, 2023.

Based on table 2, it is known that the AVE value is above 0.5 and the Composite Reliability value is above 0.7, so that all variables meet the reliability requirements (Ghozali, 2014).

Testing the Inner Model or Structural Model

The structural model was evaluated using *the R-Square* for the dependent construct *Stone-Geisser Q-Square test for predictive relevance* and t test and the significance of the structural path parameter coefficients (Ghozali & Latan, 2015). Besides looking at the R-Square value, the PLS model is also evaluated by looking at *the Q-Square Predictive Relevance* measuring how well the observed values are produced by the model and also the parameter estimates. *A Q-Square Predictive Relevance* value greater than 0 indicates that the model has a *predictive relevance value*, while a *Q-Square Predictive Relevance value* less than 0 indicates that the model has less *predictive relevance*.

$$Q^2 = 1 - (1 - (Rsquare)^2)$$

$$Q^2 = 1 - (1 - (0.69)^2) = 0.36$$

Based on the results of calculating the *Q-square value* , it can be seen that the *Q-square value* is 0.48. This shows that the variables Perceived Usefulness and Perceived Ease have a good level of prediction of Attitude.

$$Q^2 = 1 - (1 - (Rsquare)^2)$$

$$Q^2 = 1 - (1 - (0.51)^2) = 0.26$$

Based on the results of calculating the *Q-square value* , it can be seen that the *Q-square value* is 0.268. This shows that the variables Perceived Usefulness and Perceived Ease have a good level of prediction of Benefits.

Partial Least Square (PLS) Estimation Results

Table 3. Hypothesis testing

Path Coefficients

	Original Sample (O)	T Statistics (O/STDEV)	T Table
Perception Of Usefulness -> Attitude	0.36	3,32	1.96
Perception of Convenience -> Attitude	0.49	5.07	1.96
Perception Of Usefulness -> Interest	0.49	5.80	1.96
Perception of Convenience -> Interest	0.20	3.24	1.96
Attitude -> Interest	0.29	2.99	1.96

Source: data processed, 2023.

Hypothesis test

1. Testing the perceived usefulness of the variable Attitudes to Using Mobile Banking
 With a real level (probability) = 5% = 0.05 and from the results of the *Partial Least Square Regression (PLS)* obtained t-count = 3.32. Based on the results of data processing, it is obtained t - count (3.32) > t-table (1.96), then Ho is rejected or Ha is accepted, so it can be concluded that Perceived Usefulness has a significant effect on Attitudes Using Mobile Banking.
2. Testing Perceptions of Convenience on the Attitude variable using Mobile Banking.
 With a real level (probability) = 5% = 0.05 and from the results of the *Partial Least Square Regression (PLS)* it is obtained t - count = 5.07. Based on the results of data processing, the value of t-count (5.07) > t-table (1.96), then Ho is rejected or Ha is accepted, so it can be concluded that Perceived Convenience has a significant effect on Attitudes using Mobile Banking.
3. Testing Perceptions of Usefulness on Interest in using Mobile Banking.
 With a real level (probability) = 5% = 0.05 and from the results of the *Partial Least Square Regression (PLS)* obtained t-count = 5.80. Based on the results of data processing, it is obtained t-count (5.80) > t-table (1.96), then Ho is rejected or Ha is accepted, so it can be concluded that Perceived Usefulness has a significant effect on Interest in using Mobile Banking.
4. Testing the perception of ease on interest using mobile thinking.
 With a real level (probability) = 5% = 0.05 and from the results of the *Partial Least Square Regression (PLS)* obtained t-count = 3.24. Based on the results of data processing, the t-count (3.24) > t-table (1.96) is obtained, then Ho is rejected or Ha is accepted, so it can be concluded that the perception of ease has a significant effect on

interest in using Mobile Manking.

5. Testing Attitudes towards Interest in using Mobile Banking
With a real level (probability) = 5% = 0.05 and from the results of the *Partial Least Square Regression (PLS)* obtained t-count = 2.33. Based on the results of data processing, it is obtained that t-count (2.99) > t-table (1.96), then Ho is rejected or Ha is accepted, so it can be concluded that Attitude has a significant effect on Interest in using Mobile Banking.
6. Path Analysis Hypothesis Testing : Testing the Indirect Effect of Perceived Usefulness on Interest in using Mobile Banking Through Attitude.
Based on the results of data processing, the direct competency regression coefficient is 0.49, the regression coefficient for the indirect effect is $0.36 \times 0.29 = 0.10$. Because the indirect coefficient is smaller than the direct coefficient, Ho is rejected or Ha is accepted, so it can be concluded that the real effect is direct, in other words, the Perceived Usefulness has an effect on Interest in using Mobile Banking , not through Attitude.
7. Testing the Indirect Effect of Perceived Convenience on Interest in using Mobile Banking through Attitude.
Based on the results of data processing, it was obtained that the regression coefficient for the perception of direct convenience was 0.20, the regression coefficient for the indirect effect was $0.49 \times 0.29 = 0.14$. Because the indirect coefficient is smaller than the direct coefficient, Ho is rejected or Ha is accepted, so it can be concluded that the actual effect is direct, in other words, perceived ease of influence on interest in using Mobile Banking is not through attitude.

Testing R² (Coefficient of Determination)

The results of the regression with the OLS method obtained R² (Coefficient of Determination) of 0.518, meaning that the attitude variable can be explained by the perceived usefulness and perceived convenience simultaneously by 51.8%, while the remaining 48.2% is explained by other variables outside the model .

The results of the regression with the OLS method obtained R² (Coefficient of Determination) of 0.69, meaning that the variable Interest in using Mobile can be explained by the Perceived Usefulness and Perceived Usefulness simultaneously by 69.8%, while the remaining 31.2% is explained by the variable others outside the model.

CONCLUSION

Based on the results of the research and discussion, several conclusions can be drawn as follows The results of the analysis show that the perceived usefulness variable has a significant effect on attitude. This can be interpreted, if the Perception of Usefulness increases, then the Attitude to use mobile banking has increased. *the Partial Least Square (PLS)* analysis show that the variable Perceived Convenience has a significant effect on Attitude. This can be interpreted, if Perceived Convenience increases, then Ready to use mobile banking has increased. *the Partial Least Square (PLS)* analysis show that the perceived usefulness variable has a significant effect on interest in using mobile banking. This can be interpreted, if the perceived usefulness increases, the interest in using Mobile Banking will increase. *the Partial Least Square (PLS)* analysis show that the variable Perceived Convenience has a significant effect on Interest in using Mobile Banking. This can

be interpreted, if the Perception of Convenience increases, the interest in using Mobile Banking will increase.

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