

Acceptance Analysis of BRI Mobile Banking (BRIMO) using The Technology Acceptance Model (Study Case: Student at UPN Veteran Jawa Timur)

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Abstract— *BRIMO mobile service ranks first in the number of transactions. However, in its use, there are still many obstacles experienced by users. This study aims to determine the level of user acceptance of BRIMO using the Technology Acceptance Model (TAM) approach. This study used the TAM framework: perceived usefulness, perceived ease of use, attitude to use, behavioral intention, behavior, and experience. The study was conducted on users of the BRIMO application by UPN Veterans East Java students using a purposive non-probability sampling technique, obtaining 100 respondents. The data type used is primary data obtained directly from respondents. Methods of data collection using a questionnaire. Methods of data analysis using the Partial Least Square (PLS) statistical test approach and Bootstrapping. The results showed that Perceived Ease Of Use affected perceived usefulness, Perceived Usefulness influences Behavior, Experience Affects Perceived Ease of Use, and Experience Affects Perceived Usefulness. The implications of the results of this study are input for banks to continue to improve mobile banking services in order to increase the number of mobile banking application users.*

Keywords— *Technology Acceptance Model, TAM, BRIMO, UPN Veteran Jawa Timur, Experienced*

I. INTRODUCTION

The development of information technology has experienced rapid progress in recent years. Almost all aspects of daily life today have been facilitated by advances in information technology [1]. One sector that has been dramatically affected by this technological advancement is the banking sector[2]. Many banking services are currently switching to digital platforms. One of the digital platforms adopted by banking institutions in utilizing advances in information technology is the development of mobile banking services[3]. This aims to make it easier for customers to do banking transactions anywhere and anytime [4].

Bank Rakyat Indonesia (BRI), one of the largest banks in Indonesia, has implemented digital technology in its banking services by launching BRIMO. BRIMO is a financial application complete and integrated with other digital services and ecosystems. This application is designed to provide easy access to customers in managing their banking services.

The use of mobile banking services is increasing along with the movement of customers from conventional transactions to digital transactions. Data from Bank Indonesia shows that the volume of transactions through mobile banking this year to May 2022 increased by 67.87% compared to the previous year[5]. Mobile banking services from Bank BRI, especially BRIMO, ranked first in the number of transactions, with a total value of transactions reaching IDR 884 trillion and more than 26.3 million users in 2023. However, several user complaints remain regarding using BRIMO, such as application access problems. Bank BRI needs to pay attention to these complaints so that the number of users continues to increase.

In the context described above, it is essential to analyze and evaluate the use of BRIMO because personal acceptance and use influence the decision to use an information technology system. Therefore, this study will use the Technology Acceptance Model (TAM) approach to measure the level of user acceptance of the BRIMO mobile banking application. This study will use the TAM framework, which includes experience, perceived usefulness, perceived ease of use, attitude toward using, behavioral intention, and behavior. The TAM model was chosen because it is based on a solid theoretical basis and can answer questions regarding information technology systems [6]. Besides that, TAM has several advantages, namely, the team as an alternative answer when a system cannot answer user needs, so users lose interest in using the system. [7]. Researchers are interested in seeing

the use of BRImo with the TAM approach as a conceptual framework in this study.

Research related to the use of mobile banking with the TAM approach has been carried out by many previous studies. One such study entitled "Analysis of the Acceptance Rate of BCA Moble Applications in Karawang using the Technology Acceptance Model (TAM) approach" yielded information that perceptions of usability and convenience have a positive impact on user acceptance of the BCA m-banking application[8]. In addition, this study continues previous research entitled "Antecedents of Interest in Using BRI MOBILE (BRIMO) for Sasetan Denpasar Branch Office Customers which yielded information that perceived benefits, perceived convenience, and perceived security have a positive influence on the use of BRIMO[9].

II. RESEARCH AND METHODOLOGY

The population in this study were UPN Veterans East Java students who used the BRIMO application. The sampling technique in this study is non-probability sampling by adopting a purposive sampling technique. Meanwhile, to determine the number of samples in this study, the researchers used the slovin formula, which resulted in 100 samples of UPN Veterans East Java students using the BRIMO application. The data collected as a whole is primary data. Primary data is information obtained directly from the source [10], which is obtained through closed questionnaires that already contain related variable instruments.

The data collection process was carried out quantitatively by distributing questionnaires to respondents using a Likert scale with a value range of 1 (Strongly Disagree) to a value of 5 (strongly agree)

The model developed in this study is based on previous research [11], so this study intends to examine the effect of experience on users' acceptance of BRIMO use. Researchers use User Experience (User Experience) as an external variable. The developed model is as follows

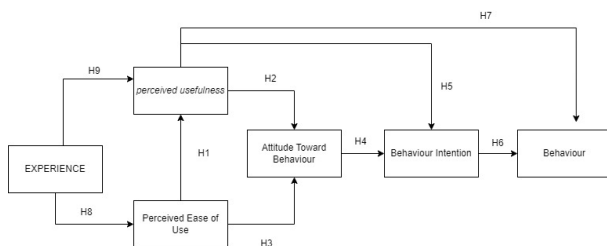


Fig. 1. Developed Model

Where in this study, researchers will test related hypotheses:

- 1) H1: Perceived Ease Of Use affects perceived usefulness
- 2) H2: Perceived usefulness influences attitude toward using

- 3) H3: Perceived Ease Of Use Influences Attitudes toward Using
- 4) H4: Attitude Toward Using Influences Behavior Intention
- 5) H5: Perceived Usefulness Has an Effect on Behavior Intention
- 6) H6: Behavior Intention Affects Behavior
- 7) H7: Perceived Usefulness Influences Behavior
- 8) H8: Experience Affects Perceived Ease of Use
- 9) H9: Experience Affects Perceived Usefulness

From the hypothesis and conceptual model above, the construct dimensions for each variable to be studied are developed as follows.

TABLE I. VARIABEL LATEN AND CONSTRUCK

Laten Variable	Construct Dimensions
Perceived Usefulness (PU)	The use of BRIMO can enable faster settlement of transactions (PU1)
	Using BRIMO can improve my performance (PU2)
	using BRIMO can make my work easier (PU3)
	Using Brimo can increase my work productivity (PU4)
	use of brimo can increase work effectiveness (PU5)
Perceived Ease Of Use (PEU)	learning brimo is easy for me (PEU1)
	I got many things by using brimo (PEU2)
	I think brimo is clear and easy to understand (PEU3)
	I think brimo is flexible (PEU4)
	I think brimo is easy to use (PEU5)
Attitude Towards Using (ATU)	I like using BRIMO (ATU1)
	I enjoy using BRIMO (ATU2)
	I Don't Get Bored Using BRIMO (ATU3)
Behaviour Intention To Use (BI)	I choose to use BRIMO to complete my transaction (BI1)
	I plan to use BRIMO to complete transactions in the future (BI2)
	I am interested in using BRIMO in the future (BI3)
	I hope to continue using BRIMO in the future (BI4)
Behaviour (B)	I use BRIMO in making transactions (B1)
	I Often Use BRIMO in Transactions (B2)
Experience (E)	I have much experience in transacting using BRIMO (E1)

I have been using BRIMO for a long time (More than a year) (E2)

From the results of the questionnaires that have been distributed, the researcher then measures the outer model and inner model so that the validity and reliability values of the data can be tested. Meanwhile, the SEM PLS (Structural Equation Model – Partial Least Square) method was used to analyze the data in this study.

III. RESULT AND DISCUSSION

Before you begin to format your paper, first write and save the content as a separate text file. Keep your text and graphic files separate until after the text has been formatted and styled. Do not use hard tabs, and limit use of hard returns to only one return at the end of a paragraph. Do not add any kind of pagination anywhere in the paper. Do not number text heads- the template will do that for you.

Finally, complete content and organizational editing before formatting. Please take note of the following items when proofreading spelling and grammar.

A. Respondent Demographic Results

Researchers collected as many as 100 respondents classified by gender and faculty. Several data obtained can be seen in the following table.

TABLE II. RESPONDENT DEMOGRAPHIC RESULTS

	Indicator	Total
Gender	Male	60
	Female	40
Faculty	Computer Science	44
	Social and political science	13
	Economy and Business	17
	Technique	
	Architecture and Design	9
	Agriculture	9
	Law	8
Generation	2019	15
	2020	55
	2021	15
	2022	15

B. Inferential Statitiscal Analysis

Inferential Statistical Analysis is a process of estimating and drawing a conclusion regarding the characteristics of a population based on a sample [12].

- *Outer Model* : The loading factor is used to describe the validity value of a construct, where the minimum loading factor value in this study is 0.7. If there is a constructed value below the specified value, the value is said to be invalid

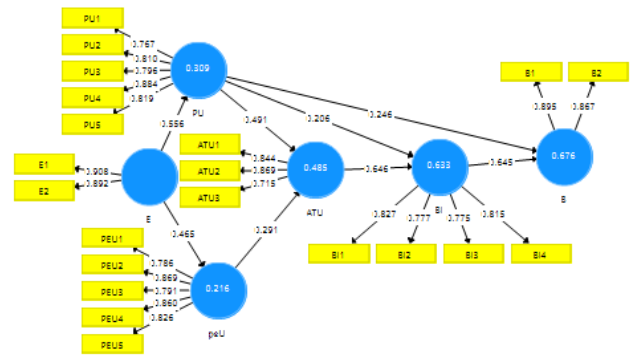


Fig. 2. Inferential Analysis

Following are the results of the Loading Factor analysis for each indicator from SMART PLS.

TABLE III. OUTER LOADING

Variable	Indicator	Outer Loading
Perceived Usefulness (PU)	PU1	0.767
	PU2	0.810
	PU3	0.796
	PU4	0.844
	PU5	0.819
Perceived Ease Of Use (PEU)	PEU1	0.786
	PEU2	0.869
	PEU3	0.791
	PEU4	0.860
	PEU5	0.826
Attitude Towards Using (ATU)	ATU1	0.844
	ATU2	0.869
	ATU3	0.715
Behaviour Intention To Use (BI)	BI1	0.895
	BI2	0.867
	BI3	0.775
	BI4	0.815
Behaaviour (B)	B1	0.895
	B2	0.867
Experience (E)	E1	0.908
	E2	0.892

Following are the results. From the table data, it is known that all indicators are more significant than 0.7. this means that the respondent can understand each indicator of the latent variable in this study according to what the researcher intended.

A convergent validity test determines every relationship between each indicator and latent or construct variables. Convergent validity is calculated

based on the AVE (Average Variance Extracted) value, with a minimum requirement of 0.50. The following is a table of Convergent Validity Test results and the Loading Factor analysis for each indicator from SMART PLS.

TABLE IV. AVE RESULT

Variable	AVE	Result
PU	0.666	Accepted
PEU	0.684	Accepted
ATU	0.659	Accepted
BI	0.638	Accepted
B	0.776	Accepted
E	0.810	Accepted

From the results of the Validity Test, it shows that all variables have fulfilled the requirements of the Validity test, namely above > 0.50

While the Reliability Test is used to show consistency, accuracy, and accuracy of instruments in measuring variables. The reliability test is calculated based on the composite reliability value with a minimum value of 0.70. As well as the value of Cronbach's alpha with a minimum value of 0.70.

TABLE V. CRONCBANCH ALPHA RESULT

Variabel	Cronbach Alpha	Result
PU	0.876	Accepted
PEU	0.884	Accepted
ATU	0.743	Accepted
BI	0.812	Accepted
B	0.713	Accepted
E	0.766	Accepted

Based on the tests that have been carried out, all variables have met the requirements of reliability, namely the Croncbanch Alpha value > 0.70

- Inner Model : The relationship between variables can be described through the inner model resulting from the R-Square value. Where the R-square is generated from the dependent variable. The following are the results of the R-Square test from this study.

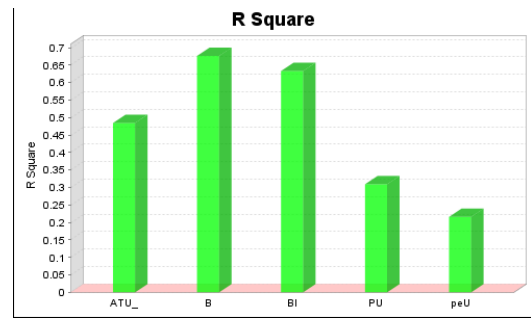


Fig. 3. R Square

C. Letters Of Documents

The test was carried out using the bootstrapping method, where the hypothesis is significant if the P values are < 0.05 [13]. The results of hypothesis testing can be seen in the following table :

TABLE VI. HYPOTHESIS TESTING RESULT

Hypothesis	O	M	STDEV	P Values	Accepted
H1	0.384	0.383	0.089	0.000	Accepted
H2	0.494	0.498	0.076	0.000	Accepted
H3	0.287	0.288	0.076	0.000	Accepted
H4	0.644	0.644	0.082	0.000	Accepted
H5	0.208	0.213	0.099	0.036	Accepted
H6	0.644	0.643	0.072	0.000	Accepted
H7	0.247	0.250	0.087	0.005	Accepted
H8	0.465	0.477	0.074	0.000	Accepted
H9	0.379	0.385	0.094	0.000	Accepted

In the table, "O" represents the original sample, "M" represents the sample average, "STDEV" represents the division standard, and "O/STDEV" represents T Statistics. In addition, from the table, it can be concluded that:

- Perceived Ease Of Use affects perceived usefulness : The test results show that H1 is accepted with a P-Values of 0.000. This means that the ease of using the BRIMO application positively influences the perceived benefits of using the BRIMO application by UPN Veteran Jawa Timur students.
- Perceived usefulness influences attitude toward using : The test results show that H2 is accepted with a P-Values of 0.000. which means that the perception of the benefits of the BRIMO application will determine the attitude toward using the BRIMO application by UPN Veteran Jawa Timur students.
- Perceived Ease of Use influences Attitude toward Using : The test results show that H3 is accepted with a P-Values of 0.000. which means that the perceived ease of using the BRIMO application will determine the attitude of using the BRIMO application by UPN Veteran Jawa Timur students.

- Attitude Toward Using Influences Behavior Intention: The test results show that H4 is accepted with a P-Values of 0.000, which means that the attitude of using the BRIMO application has a positive effect on the interest in the Behavior of using the BRIMO application by UPN Veteran Jawa Timur students
- Perceived Usefulness Influences Behavior Intention: The test results show that H5 is accepted with a P-Values of 0.036, which means that the perception of the benefits of the BRIMO application has a positive effect on behavioral interest in using the BRIMO application UPN Veteran Jawa Timur students.
- Behavior Intention influences Behavior : The test results show that H6 is accepted with a P-Values of 0.000, which means that interest in using the BRIMO application has a positive effect on the Behavior of using the BRIMO application by UPN Veteran Jawa Timur students.
- Perceived Usefulness influences Behavior : The test results show that H7 is accepted with a P-Values of 0.005, which means that the perceived benefits of using the BRIMO application have a positive effect on the Behavior of using the BRIMO application by UPN Veteran Jawa Timur students.
- Experience affects perceived ease of use: The test results show that H8 is accepted with a P-Values of 0.000, which means that experience in using the BRIMO application positively affects the perceived ease of using the BRIMO application by UPN Veterans East Java students.
- Experience Influences Perceived Usefulness : The test results show that H9 is accepted with a P-Values of 0.000, which means that experience in using the BRIMO application positively affects the perception of the benefits of using the BRIMO application by UPN Veterans East Java students.

IV. CONCLUSION

The Acceptance Analysis of the BRI Mobile Banking (BRIMO) study using the Technology Acceptance Model (Study Case: Student at UPN Veterans East Java) was conducted on 100 UPN Veterans East Java students who used the BRIMO application. In this study, there were 9 hypotheses and 21 indicators tested using the PLS and Bootstrapping methods, the results obtained were: Perceived Ease Of Use had an effect on perceived usefulness, Perceived Usefulness

had an effect on Attitude toward using, Perceived Ease Of Use had an effect on Attitude Using toward, Attitude Toward Using influences Behavior Intention, Perceived Usefulness influences Behavior Intention, Behavior Intention influences Behavior, Perceived Usefulness influences Behavior, Experience Affects Perceived Ease of Use.

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