

Comparative Analysis of the Technology Acceptance Model (TAM) Method with the Unified Theory of Acceptance and Use of Technology 2 (UTAUT 2) on the Use Behavior of Mobile Banking for Bank Negara Indonesia (BNI) Customers

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Abstract

This article reviews the comparison of the Technology Acceptance Model (TAM) method with Unified Theory of Acceptance and Use of Technology 2 (UTAUT 2) on the behavior of using mobile banking on Bank Negara Indonesia (BNI) customers. As we know that technological developments in the banking sector are so rapid, one of which is Mobile Banking innovation. Which makes it easy for the individual. The purpose of this research is to test and analyze how much Perceived Usefulness (PU), Perceived Ease to Use (PE), Attitude Toward Using (AT), Behavioral Intention to Use (BI), Actual Use, Experience, Complexity and Job Fit influence Use Behavior (B) Mobile Banking on BNI Bank customers. To answer these questions, this study used a quantitative research method, with a total of 252 respondents and a non-probability sampling technique using a purposive sampling method. The respondents in this study were customers using BNI Mobile Banking services. The analysis test tool used is the Structural Equation Model (SEM) with the help of analysis of moment structure (AMOS) statistical software. The results of this study are that in the model of the 8 hypotheses proposed in the TAM model, there are 4 hypotheses that are rejected. Variables Perceived Usefulness, Actual Use (AU), Job Fit (JF), Complexity (CO) affect the Use Behavior variable. Meanwhile, of the 5 hypotheses that were redeemed in the UTAUT 2 models, only 1 was accepted. There is an influence between Facility Condition (FC) on Use Behavior (UB). Based on this, it can be seen that the UTAUT 2 model can only explain the Use Behavior variable of 8.1%.

Keywords: Mobile Banking, Technology Acceptance Model (TAM) and Unified Theory of Acceptance and Use of Technology 2 (UTAUT 2).

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I. Introduction

The development of technology-based information systems has developed so rapidly in this era of globalization. One form of service developed by the banking sector is online banking. Online banking is a banking transaction service that can be carried out by customers wherever they are, whether at home, at work or other locations that are not in a location (branch office) by using a communication device that is directly connected to the internet. Mobile Banking is a banking service offered to customers to support smooth and easy financial transactions in an effective and efficient manner that can be accessed directly via internet-based mobile phones. According to research by Mubiyantoro and Saefullah (2013), self-confidence influences interest in using Mobile Banking. Usability in Mobile Banking is almost the same as an ATM. Both the customer and the bank benefit from Mobile Banking. Customers are made easy to use 24 hours a day without having to leave the house to make personal transactions and customers can get banking information quickly, effectively and efficiently.

Mobile Banking as a Customer Relationship Management (CRM) can bridge the communication between customers and the bank, providing convenience for direct interaction through media that is easy to use (user friendly), easy to obtain, prices are relatively affordable and most used/interested by customers. This phenomenon encourages banks to implement Mobile Banking as one of the reliable e-channel features with the slogan "Banking services in the hand" (Budiardjo, 2009). One of the banking

sectors that uses Mobile Banking application technology is Bank Negara Indonesia (BNI). BNI Mobile Banking can also be activated and used for overseas transactions (www.bni.co.id). Based on data obtained from the BNI Annual Report on www.idx.co.id the number of users, the number of transactions and the transaction volume of Bank BNI Mobile Banking in the last 4 (four) years has tended to continue to increase every year.

However, there are some users/customers who feel unable to use Mobile Banking for various reasons such as feeling they do not understand how to use it, not based on good security, so that not all users have telephones that can connect directly to the internet.

One of the approaches used to see the convenience of a technology is the Technology Acceptance Model (TAM). TAM is an application and development of Theory of Reasoned Action (TRA) developed by Davis (1968) in (Tirtana Shinta Permata Sari, 2014) which is specialized for modeling user acceptance (User Acceptance) of information systems. There are 4 (four) main factors or variables that play an important role as direct determinants of Behavior Intention and Use Behavior, namely Performance Expectancy, Effort Expectancy, Social Influence and Facilitating Conditions. While the others are not significant as a direct determinant of Behavioral Intention.

Bank

II. Literature Review

Khasmir (2016) states that a bank is a financial institution whose main activity is to collect funds from the public and channel these funds back to the community and provide other bank services. In general, the function of banking is to collect funds from the public, distribute funds to the public, and provide other bank services.

The Role of Information Technology in Banking

In general, banking information technology that uses services such as ATM Banking are Internet Banking, Mobile Banking and Phone Banking but cannot be used to withdraw or deposit cash. Hutabarat (2010), Mobile Banking is a banking facility through mobile communications such as mobile phones with the provision of facilities that are almost the same as ATMs except for taking cash.

The Technology Acceptance Model (TAM) Method

This theory was put forward by Davis (1989) which was the result of the development of Theory of Reasoned Action (TRA) which was based on Ajzen and Fishbein in 1980. In the TAM model, the level of use of information technology is determined by 8 (eight) constructs which consist of 5 (five) main constructs and 3 (three) external constructs, namely Perceived Use Fullness (PU), Perceived Ease of Use (PE), Attitude Toward Using (A), Behavioral Intention to Use (BI), Actual Use, Experience as an External Variable, Complexity as an External Variable, Job Fit as an External Variable.

Unified Theory of Acceptance and Use of Technology 2 (UTAUT 2)

UTAUT2 is a technology acceptance model from Vankatesh, Thong and Xu (2012). This model explains the acceptance of a technology based on the user side with a better percentage of improvement from 56% to 74% for acceptance in the form of intention to use behavior and improvement.

The Research Hypothesis

The Technology Acceptance Model (TAM)

Ha1 : There is an influence between Perceived Usefulness on the use behavior of M-Banking in Bank Negara Indonesia customers.

Ha2 : There is an influence between Perceived Ease to Use on use behavior in M-Banking Bank Negara Indonesia customers.

Ha3 : There is an influence between Attitude Toward Using on the use behavior of M-Banking in Bank Negara Indonesia customers.

Ha4 : There is an influence between the Behavioral Intention to Use on the use behavior of M-Banking on Bank Negara Indonesia customers.

Ha5 : There is an influence between Actual Use on the use behavior of M-Banking on Bank Customers Indonesian country.

ha6 : There is an influence between *External Variables* namely the use of M-Banking behavior on Bank Customers Indonesian country.

Unified Theory of Acceptance and Use of Technology 2 (UTAUT 2)

Ha1 : There is an influence between *Performance Expectations* on the use behavior of M-Banking on Bank Negara Indonesia customers.

Ha2 : There is an influence between *Effort Expectacy* on the use behavior of M-Banking on customers Indonesian State Bank.

Ha3 : There is an influence between *Social Influence* on the use behavior of M-Banking on customers Indonesian State Bank.

Ha4 : There is an influence between *Facilitating Conditions* on the use behavior of M-Banking on Bank Negara Indonesia customers.

Ha5 : There is an influence between *Hedonic Motivation* on the use behavior of M-Banking on Customers Indonesian State Bank.

ha6 : There is an influence between *Habits* on the use behavior of M-Banking on Bank Negara customers Indonesia.

ha7 : There is an influence between *Price Value* on the use behavior of M-Banking on Bank Customers Indonesian country.

Method of Data Collection

I. Research Methods

The object chosen for this research is Bank Negara Indonesia Mobile Banking (BNI) using 2 (two) methods, namely the TAM method and the UTAUT 2 method for Use Behavior. The population used by researchers is customers or users of Bank BNI Mobile Banking.

Population and Sample

The sample is part of the number and characteristics possessed by the population (Sugiono: 2016). The sampling technique used in this study is Nonprobability Sampling. Judging from its nature, the population can be homogeneous or heterogeneous (Husaini Usman and Purnomo Setiyadi Akbar (2006). The population used by researchers is customers or users of Bank BNI Mobile Banking. This sampling was determined on BNI Mobile Banking users for more than 1 year. In this study there were 260 respondents and the number of selected samples used was 252 respondents.

Method of Data Analysis

Collecting data through instruments or questionnaires that contain a number of structured written questions to obtain information from respondents. Statements in the questionnaire are measured using a Likert scale. Structural Equation Models (SEM) are used in this research. Sugiyono (2003) explains that a Likert scale of 1-5 is used to measure attitudes, opinions and perceptions of a person or group of people about social phenomena which is a bipolar continuum scale.

III. Results and Discussion

hypothesis	Estimates	SE	CR	P	Label
<i>Perceived Usefulness</i> (PU) to Use Behavior (UB)	0.489	0.198	2,474	0.013	Influential
<i>Perceive Ease</i> (PE) on Use Behavior (UB)	-0.050	0.102	-0.491	0.623	No effect
<i>Attitude Towards Using</i> (A) on Use behavior (UB)	-0.079	0.098	-0.802	0.422	No effect
<i>Behavioral intention to use</i> (BI) on Use Behavior (UB)	0.270	0.178	1.516	0.130	No effect

hypothesis	Estimates	SE	CR	P	Label
<i>Actual Use</i> (AU) to Use Behavior (UB)	-0.447	0.212	-2.104	0.035	Influential
<i>Experience</i> (EP) against Use Bahvior (UB)	0.014	0.061	0.220	0.826	No effect
<i>JobFit</i> (JF) on Use Behavior (UB)	0.710	0.089	7,994	***	Influential
<i>Complexity</i> (CO) to Use Behavior (UB)	-0.185	0.063	-2.955	0.003	Influential

Table 1.0
TAM Hypothesis Test Results Source: Processed data (2022)

hypothesis	Estimates	SE	CR	P	Label
<i>Performance Expetacy</i> (PE) on Use Behavior (UB)	-0.505	0.242	-2,085	0.037	Influential
<i>Effort Expetacy</i> (EE) on Use Behavior (UB)	0.024	0.173	0.138	0.890	No effect
<i>Social Influents</i> (SI) on Use behavior (UB)	0.153	0.197	0.775	0.438	No effect
<i>Facility Conditions</i> (FC) on Use Behavior (UB)	0.298	0.130	2,285	0.022	Influential
<i>Hedonic Motivation</i> (HM) on Use Behavior (UB)	0.114	0.151	0.753	0.451	No effect
<i>PriceValue</i> (PV) to Use Behavior (UB)	0.185	0.153	1,212	0.225	No effect
<i>Habits</i> (HT) on Use Behavior (UB)	-0.377	0.163	-2.308	0.021	Influential

Table 2.0
UTAUT2 Hypothesis Test Results Source: Processed data (2022)

IV. Conclusion and Suggestion

Conclusion

Based on the results of research that has been carried out by the author by collecting data through distributing questionnaires related to the use of BNI Mobile Banking services. In this study using two models namely TAM and UTAUT. The results obtained after processing the data are as follows:

1. There is a positive influence between Perceived Usefulness on Use Behavior.
2. There is no influence between Perceive Ease on Use Behavior.
3. There is no influence between Attitude Toward Using (A) on Use behavior (UB).
4. There is no influence between Behavioral intention to use (BI) on Use Behavior (UB).
5. There is a negative influence between Actual Use (AU) on Use Behavior (UB).
6. There is no influence between Experience (EP) on Use Behavior (UB).
7. There is an influence between Job Fit (JF) on Use Behavior (UB).
8. There is a negative influence between Complexity (CO) on Use Behavior (UB).
9. There is a negative influence between Performance Expetacy (PE) on Use Behavior (UB).
10. There is no influence between Effort Expetacy (EE) on Use Behavior (UB).
11. There is no influence between Social Influent (SI) on Use behavior (UB).
12. There is an influence between Facility Condition (FC) on Use Behavior (UB).
13. There is no influence between Hedonic Motivation (HM) on Use Behavior (UB).
14. There is no effect of Price Value (PV) on Use Behavior (UB).
15. There is an influence of Habit (HT) on Use Behavior (UB).

Suggestions

Based on the results of the data that has been processed by researchers, there are several suggestions that might be useful for related parties, including based on research that has been done, the importance of socialization from Bank BNI in using the application to make it easier for customers to understand and know the use of features -Features in the BNI Mobile Banking service. Then, in developing application service innovations such as the features in Mobile Banking, BNI needs to pay attention to compatibility with all existing groups. Suggestions for future researchers are expected to conduct deeper research regarding the service of a digital application for its customers by adding variables that have not been used in this study, which will later affect the intensity of a person's use of the application.

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