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Analysis of Continuance Use Intention in Mobile Banking Using the Extended Expectation Confirmation Model

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Abstract

Continuation intention refers to the user's desire to continue using a service or application in the long term after their initial experience. In the context of mobile banking applications, continuance intention is very important to maintain and increase the number of active users, as well as maintain customer loyalty. Although mobile banking can facilitate financial transactions, there are still complaints from users with many negative reviews on the Play Store and App Store regarding the problematic OTP verification and delivery process. This study aims to identify variables that influence the continuance intention to use mobile banking. This study uses the ECM research method to examine the factors that influence the intention to continue using mobile banking. This study tested nine hypotheses, with the results of seven hypotheses accepted and two hypotheses rejected, namely the relationship between trust → satisfaction with a t-test result of 0.755 and confirmation → satisfaction with a t-test result of 0.351. It is expected that the results of this study can provide recommendations to mobile banking parties to improve services and increase user satisfaction, thereby maintaining the loyalty of mobile banking users. In addition, this study can be a reference for quantitative research in the field of mobile banking and contribute to the development of strategies and policies to improve user experience.

Keywords: Continuance Use Intention, Expectation Confirmation Model, Mobile Banking.

1. Introduction

Continuance use intention is a user's decision to continue using a product after the user has had their first experience with the product [1]. Continuation of intentions can be chosen as a stage to be able to continue to maintain business and reuse services or products from a particular organisation. Customers feel satisfied with the satisfaction provided by the system, so they will intend to continue using the system. However, being able to know the long-term continuity of users' continued intentions for the success of a system is difficult [2].

With the role of the internet, technological developments are now bringing changes to people's lifestyle patterns from traditional to more modern. Currently, most companies in various fields have followed the flow of technological developments, namely by utilising information technology and the internet to support the company's business processes. It cannot be denied that the banking industry plays a very important role in improving a country's economy [3].

Excelcom launched mobile banking services in late 1995. Banks want to gain customer trust by using technology, which is driving the emergence of mobile banking [4]. Many banks in Indonesia offer online banking services, which make daily transactions easier for their customers [5]

The following are mobile banking applications that are often used by Katadata Insight Centre (KIC). In the survey there were several applications used with varying percentages, but of the many applications there were 3 applications that were the most widely used, in first position namely BCA Mobile with a percentage of 85.2%, in second position there was BRImo with a percentage of 78 .1% and in third position is Mandiri Livin with a percentage of 77.8% [6].

Bank Service Excellence Monitoring is an annual award held by Marketing Research Indonesia in the banking sector, which carries out an overall assessment of all types of services in the banking sector [7]. One of the assessments in BSEM MRI is the best performance in mobile banking. The assessment indicators for the best performance in mobile banking are based on various aspects, including customer satisfaction, service innovation and operational performance through surveys from MRI [8].

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Referring to similar research conducted by Nematolahi using ECM, it shows that variables such as confirmation, perceived usefulness, satisfaction, and continuance use intention have a significant influence on each other; these variables are closely related to each other and have a significant impact on continuous use intention [9].
Gap analysis in this research is found in the results of the ECM variable and the extended variable, where in previous research, the confirmation variable had a significant effect on the satisfaction variable [9]–[11] and the trust variable influence on the satisfaction variable [12]. However, in this study, both hypotheses were significant or rejected. Apart from that, differences in research objects are also different from previous research.

2. Research Methods

2.1. Research Approach

This research process uses a quantitative approach, which aims to determine a continuous use intention or intention to continue using BCA mobile banking, as well as identifying what variables have an influence. This research method includes several research stages, including the stage of collecting data, processing research data, analysing data and interpreting research results, which ultimately leads to the preparation of recommendations at the end.

2.2. Research Model

In this research, quantitative research methods are used to analyse the ECM model. This ECM model was developed by Bhattacherjee and has four variables, namely perceived usefulness, confirmation, satisfaction, and continuance use intention [22].
Perceived security is the consideration made by users of digital services when making decisions regarding repeated use of services. This refers to the user's perception of the extent to which the service is safe and can protect personal information, sensitive data, as well as against potential risks and security threats [23].
User trust is a crucial factor that needs to be improved in digital banking services. This is because trust is the main foundation in business, especially in the digital banking industry. Once the initial customer uses the application, the user's decision to continue using the service will depend largely on the level of trust they feel in the platform [24].

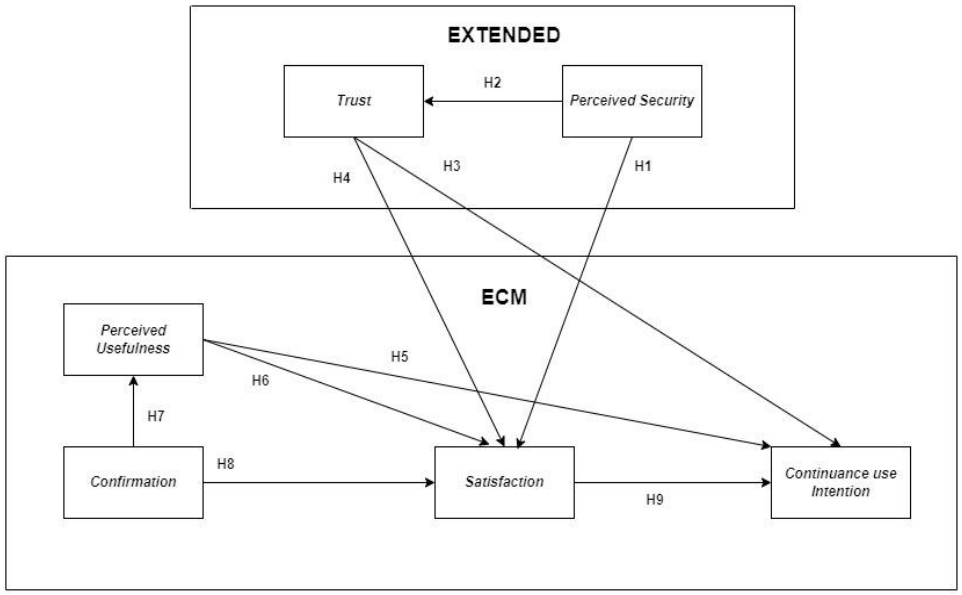

Figure 1. Research Model

The following are the hypotheses used in this study.
H1: Does the variable Perceived Security affect the Satisfaction variable?
H2: Does the Perceived Security variable affect the Trust variable?
H3: Does the Trust variable affect the Continuance Use Intention variable?
H4: Does the Trust variable affect the Satisfaction variable?
H5: Does the Perceived Usefulness variable affect the Continuance Use Intention variable?
H6: Does the Perceived Usefulness variable affect the Satisfaction variable?

H7: Does the Confirmation variable affect the Perceived Usefulness variable?
H8: Does the Confirmation variable affect the Satisfaction variable?
H9: Does the Satisfaction variable affect the Continuance Use Intention variable?

2.3 Population & Sample

The population, as seen from the total number of users of the BCA Mobile application, referring to the official BCA website in the annual report, can be seen at 30.2 million users in 2023. The minimum sample is determined using the Slovin Calculation formula with a margin of error of 10%. The reason is that an error of 10% is used that is, it refers the maximum level of error that can be tolerated in social science research.

This research has utilised a sampling technique, namely purposive sampling, of respondents who made transactions at BCA Mobile at least twice. This is done so that respondents who fill out the questionnaire in this research are respondents who have previously used BCA Mobile, in line with the title of this research, to analyse the sustainability of use.

3. Results and Discussion

The number of respondents was 100, with 45 BCA Mobile users being women and 55 being men. With Gen Z as the majority of respondents, 54% are students, 59% of respondents have an income between 0-4,500,000, and 60% have used BCA Mobile for more than 3 years.

3.1. Outer Model Analysis

There are 4 (four) test steps used for the analysis of the outer model, namely Individual Item Reliability, Internal Consistency Reliability, Average Variance Extracted (AVE), and Discriminant Validity. The results of this study are shown by the outer loading value of each indicator, the AVE value, and the Composite Reliability (CR) value for each variable, as shown in Table 1.

Table 1. Outer Model Analysis

Variable	Code	Outer Loading	AVE	CR
Confirmation (C)	C1	0.904	0.843	0.942
	C2	0.953		
	C3	0.897		
Continuance Use Intention (CUI)	CUI1	0.750	0.630	0.836
	CUI2	0.861		
	CUI3	0.766		
Perceived Security (PS)	PS1	0.792	0.622	0.868
	PS2	0.730		
	PS3	0.813		
	PS4	0.817		
Perceived Usefulness (PU)	PU1	0.927	0.791	0.919
	PU2	0.904		
	PU3	0.834		
Satisfaction (S)	S1	0.862	0.686	0.866
	S2	0.890		
	S3	0.722		
Trust (T)	T1	0.710	0.682	0.895
	T2	0.919		
	T3	0.782		
	T4	0.876		

The results of the outer model analysis show that the proposed research model has met the criteria at each stage of testing. As a result, all the variables and indicators of the study were considered to have good validity and reliability, thus qualifying for further testing in the inner model analysis.

3.2. Inner Model Analysis

There are 6 (six) test steps used for inner model analysis, namely Path Coefficient, Coefficient Determination, T-Test, Effect Size, Predictive Relevance, and Relative Impact. The results of this test can be seen in Table 2.

Table 2. Inner Model Analysis

Path	Path Coefficient	*T*-Test	Analysis		Predictive Relevance	Effect Size	Relative Impact
			Path Coefficient	*T*-Test			
PS à S	0.268	2,963	Positive	Accepted	Predictive	Small	Low
PS àT	0.254	2,375	Positive	Accepted	Predictive	Small	Low
T àCUI	0.239	2,406	Positive	Accepted	Predictive	Small	Low
T àS	0.076	0,755	Positive	Rejected	Predictive	Small	Low
PU àCUI	0.292	3,342	Positive	Accepted	Predictive	Small	Low
PU àS	- 0.292	1,190	Negative	Accepted	Predictive	Small	Low
C àPU	0.198	2,194	Positive	Accepted	Predictive	Small	Low
C àS	0.040	0,351	Positive	Rejected	Predictive	Small	Low
S àCUI	0.237	2,600	Positive	Accepted	Predictive	Small	Low

Table 2 presents the complete results of the model testing, which illustrates the analysis of relationships between variables in the study. Out of the nine hypotheses tested, seven were accepted as they had t-test values above the threshold of 1.96 and demonstrated positive relationships between variables. The two rejected hypotheses were the relationship between Trust and Satisfaction, with a t-test value of 0.755, and the relationship between Confirmation and Satisfaction, with a t-test value of 0.351. These hypotheses were rejected because their t-test values were below the minimum threshold of 1.96, indicating no significant influence between these variables. The test results also show that all paths have predictive relevance with small effect sizes and relatively low impact on the overall model.

4. Conclusion

This study has identified the variables that influence the intention of continued usage or sustainable use of BCA Mobile and determined the hypotheses that do not have an impact in this research. The conclusions of the study regarding the analysis of continued usage intention of BCA Mobile Banking using the Expectation Confirmation Model (ECM) are as follows: The research results succeeded in finding out what variables influence Continuance Use Intention on BCA Mobile. Variables that influence continued use intention at BCA Mobile include: Trust, Perceived Usefulness and Satisfaction, and the study found that two hypotheses were rejected because their t-test values were below 1.96, specifically Hypothesis 4 and Hypothesis 8.

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