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ANALISYS OF FACTORS AFFECTING CUSTOMER SATISFACTION AND LOYALITY OF MOBILE BANKING AT PRIVATE BANK COMPANY

Arif Kurniawan[1], Jarot S.Suroso,[2]
Bina Nusantara University, Jakarta, Indonesia
arif.kurniawan@binus.ac.id, jsembodo@binus.edu

Abstract

Retaining customers is considered important compared to attracting new customers, because it can be considered cheaper than attracting customers who have left, customer loyalty will reduce bank costs to find new customers. Therefore, customer satisfaction and loyalty are very important for the banking world. This can be measured using the TAM method. Customers will be very satisfied and loyal to a bank, but will also quickly move to another bank that can provide better satisfaction than other banks. For this reason, it is necessary to periodically improve mobile banking service facilities as factors of customer interest in performing self-service.

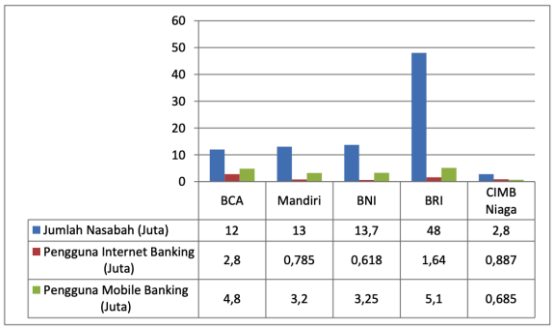
Keywords: *mobile, customers, TAM, Loyality, satisfaction, banking.*

Pendahuluan

The development of Information System technology is very rapid. The successful use of information systems can help in making good decisions for the organization (McHaney & Cronan, 2001). The percentage of mobile banking penetration reached 41.20%, while the percentage of internet banking penetration was only 8.1% in a survey conducted by MARS Research Specialist Indonesia.

One application that relies on the internet in it and plays an important role in the banking process is mobile banking. Mobile banking allows customers to perform banking tasks such as paying bills, monitoring account balances, finding ATM locations or making money transfers online (Oliveira, Faria, Thomas, & Popovič, 2014). With mobile banking, customers can perform banking activities in real-time without having to come to a branch office or ATM, except for cash withdrawal and deposit activities.

Since the pandemic the value of electronic money transactions has increased by 30.17%, digital banking transactions have increased in volume even up to 60%. So, this shows that in the midst of all the downturn, there is an upward trend in digital payments. The Financial Services Authority (OJK) noted that at least 80 banks have tried to provide digital banking services for their customers.



	BCA	Mandiri	BNI	BRI	CIMB Niaga
Jumlah Nasabah (Juta)	12	13	13,7	48	2,8
Pengguna Internet Banking (Juta)	2,8	0,785	0,618	1,64	0,887
Pengguna Mobile Banking (Juta)	4,8	3,2	3,25	5,1	0,685

Figure 1. Comparison of the number of customers and users of internet and mobile banking at the five major banks in Indonesia in 2020.

Based on Law No. 7 of 1992 concerning banking, it is stated that a bank is a business that collects funds from the public in the form of savings and distributes them to the public in order to improve the standard of living of many people. The definition of a bank is based on Law No. 10 of 1998 which enhances Law no. 7 of 1992, is: "Bank is a business entity that collects funds from the public in the form of savings and distributes it to the public in the form of credit and other forms in order to improve the standard living of the people at large." Banks are institutions engaged in the financial sector. The main activity of the bank is to collect funds from the public in the form of savings or deposits and the bank will channel it back to the community in the form of loans or credit (Fitrianie, Horsch, Beun, Griffioen-Both, & Brinkman, 2021).

Mobile banking can be defined as the implementation of financial services using cellular communications in conjunction with mobile devices (Mensah, Chuanyong, & Zeng, 2020). According to OJK, Mobile Banking, or commonly abbreviated as mBanking, is defined as banking transactions through mobile media, either in the form of the m-Banking application or the mobile operator's default application. (OJK, 2018).

Technology Acceptance Model (TAM) is one model that can be used to analyze the factors that influence the acceptance of an information system.

Before the TAM model appeared, there was a theory known as Theory of Reasoned Action (TRA) which was developed by Martin Fishbein and Icek Ajzen (1975, 1980). Derived from previous research that started from the theory of attitudes and behavior, the emphasis of TRA at that time was on attitudes that were viewed from a psychological point of view. The principles are: determining how to measure the relevant behavioral components of behavior, distinguishing between beliefs or attitudes, and determining external stimuli. So that the TRA model causes user reactions and perceptions of the information system to determine the user's attitudes and behavior. (Shankar, Inman, Mantrala, Kelley, & Rizley, 2011) (Davis, Bagozzi, & Warshaw, 1989) (Lai, 2017)

Then in 1986 Davis conducted dissertation research by adapting the TRA. Then in 1989 Davis published the results of his dissertation research in the journal MIS Quarterly, thus giving rise to the TAM theory with an emphasis on perceived ease of use and usefulness which have a relationship to predict attitudes in using information systems. (Marianingsih & Supianto, 2018) So, in its application, the TAM model is

clearly much broader than the TRA model. Davis explained that the behavioral intention of technology use (behavioral intention) is determined by the perceived ease of use and perceived usefulness of the technology. (Alrawi, GanthanNarayanaSamy, Shanmugam, Lakshmiganthan, & NurazeanMaarop, 2020) Perceptions related to ease of use are defined as a person's level of belief in using technology, that technology can bring them to feel easier without having to spend excessive energy (Rigopoulos & Askounis, 1970).

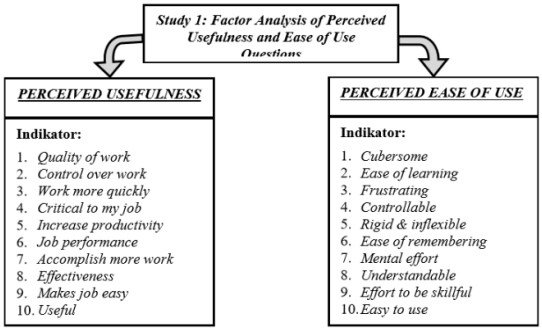


Figure 2 Factor Analysis of TAM Questions

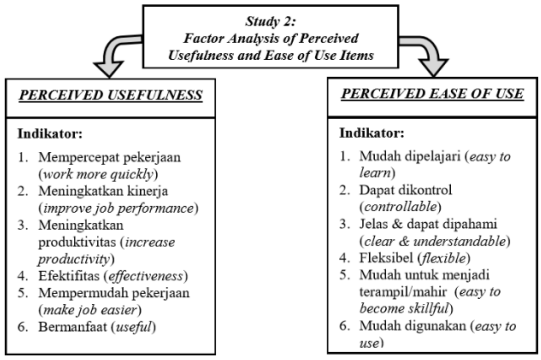


Figure 3 Factor Analysis of TAM Items

Based on previous research on the acceptance system model. The UTAUT model is the most aggressive model that suits any model evaluation of the acceptance system. In this research, there is some variables are used. (Sim et al., 2018) The variable that will be used in this research such as Performance Expectancy, Effort Expectancy, Social Influence, Facilitating Conditions, Behavioral Intention, Use Behavior, and Sales Application Quality. (Sibuea & Napitupulu, n.d.) (Utaminingsih & Alianto, 2020).

Metode

This chapter describes the methods used in research which include research processes, research models, hypotheses, research variables, operational variables, population, methods, data collection tools, research instruments, validity and reliability, analytical methods, and hypothesis testing methods.

Theoretical Framework

The theoretical framework study is used to this research can be seen in Figure:

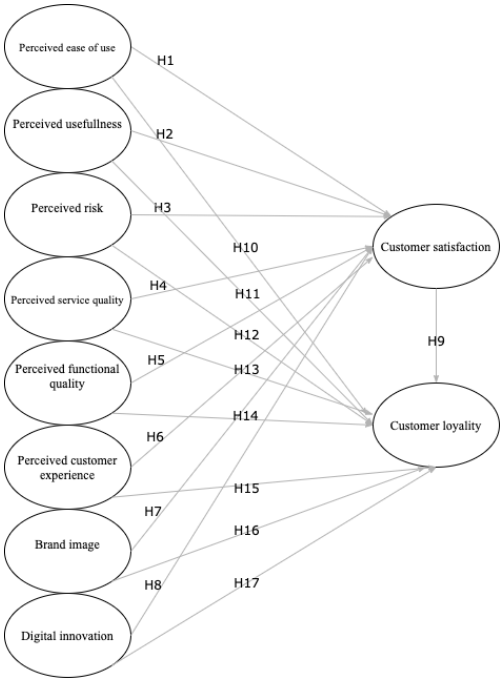


Figure 4 : Acceptance Model

The following is a description of the hypothesis in Figure:

1. Perceived ease of use has a positive influence on customer satisfaction.
2. Perceived Usefulness has a positive influence on customer satisfaction.
3. Perceived Risk has a positive influence on customer satisfaction.
4. Perceived Service Quality has a positive influence on customer satisfaction.
5. Perceived Functional Quality has a positive influence on customer satisfaction.
6. Perceived Customer Experience has a positive influence on customer satisfaction.
7. Brand Image has a positive influence on customer satisfaction.
8. Digital Innovation has a positive influence on customer satisfaction.
9. Customer satisfaction has a positive influence on customer loyalty.
10. Perceived ease of use has a positive influence on customer loyalty.
11. Perceived Usefulness has a positive influence on customer loyalty.
12. Perceived Risk has a positive influence on customer loyalty.
13. Perceived Service Quality has a positive influence on customer loyalty.
14. Perceived Functional Quality has a positive influence on customer loyalty.
15. Perceived Customer Experience has a positive influence on customer loyalty.
16. Brand Image has a positive influence on customer loyalty.
17. Digital Innovation has a positive influence on customer loyalty.

Data Collection Method

Primary data used in this study was obtained through distributing questionnaires to users of mobile banking by Banking industry in Indonesia. with the criteria of an adult age range from 18 years to 60 years. And has also used the mobile banking service

of mobile banking more than 2 times, because it will be easier to measure the satisfaction if the customer has used the service more than 2 times.

The analysis was carried out by means of two stages of testing. The first stage is testing the measurement model (outer model), followed by the second stage, namely testing the structural model (inner model).

Data Analysis

The data analysis method used in this research is Partial Least Square (PLS). PLS was discovered by Herman Wold in 1974 and is a component or variant-based Structural Equation Modeling (SEM) analysis model. PLS is very suitable to be used as a data analysis method in this study because PLS has the ability to predict the relationship between variables, the relationship between variables and indicators, and measure the level of relationship between these variables.

The scale that will be used in this study is the Likert scale. The Likert scale uses several questions to measure individual behavior by responding to 5 choice points on each question item, namely strongly disagree, disagree, disagree, agree, and strongly agree.

Hasil dan Pembahasan

Research Object

This study focuses on identifying and analyzing the use of mobile banking with independent variables.

Processing and associating data to obtain conclusions with Structural Equation Modeling with the help of SMARTPLS 3.0 software.

The following is an example of the UI/UX display of mobile banking at private banking, in this study:

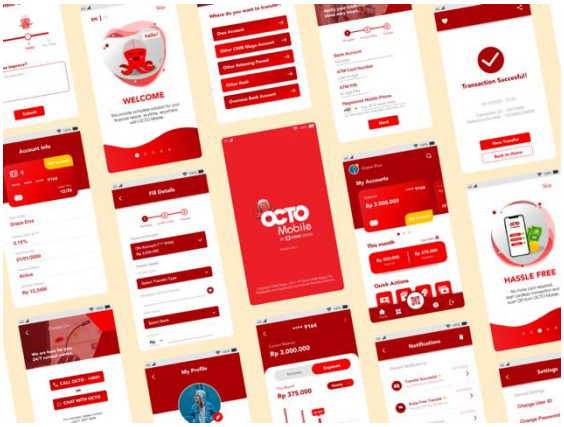


Figure 5: Sample Application mobile banking at private banking

Hypothesis Test and Discussion

The research model in Figure can be translated into a statistical model, namely the regression equation as follows:

The regression equation of this research model can be written as follows:

KN=
10+β11PEoU+β12PU+β13PR+β14PSQ+β15PFQ+β16PCE+β17BI+β18DI+ε1 ..... (1)

Description:

KN: Customer satisfaction

10: Regression constant

11, 12, 13, ... 18: Regression coefficient

PEoU: Perceived Ease of Use, independent variable

PU: Perceived Usefulness, independent variable

PR: Perceived Risk, independent variable

PSQ: Perceived Service Quality, independent variable

PFQ: Perceived Functional Quality, independent variable

PCE: Perceived Customer Experience, independent variable

BI: Brand Image, independent variable

DI: Digital Innovation, independent variable

ε1: error

In addition, the authors will also examine whether the factors that influence customer satisfaction have an effect on customer loyalty. The regression equation can be written as follows:

LN=β20+β21PEoU+β22PU+β23PR+β24PSQ+β25PFQ+β26PCE+β27BI+β28DI+ β29KN+ε2

Description:

LN: Customer loyalty

20: Regression constant

21, 22, 23, ... 29: Regression coefficient

PEoU: Perceived Ease of Use, independent variable

PU: Perceived Usefulness, independent variable

PR: Perceived Risk, independent variable

PSQ: Perceived Service Quality, independent variable

PFQ: Perceived Functional Quality, independent variable

PCE: Perceived Customer Experience, independent variable

BI: Brand Image, independent variable

DI: Digital Innovation, independent variable

KN: Customer Satisfaction, independent variable

ε2: error

Furthermore, these regression equations will be estimated using SmartPLS. The value of the path coefficient and t-statistics will later be used to analyze whether the

proposed hypotheses can be accepted or rejected. From the regression model above, the statistical hypothesis from section 3.4 can be tested as follows:

Hypothesis 1: If p-value >= 0.05, then Hypothesis H0 is accepted, but if p-value <0.05, then Hypothesis H1 is accepted.

H0: 11 = 0

H1: 11 >0

Hypothesis 2: If p-value >= 0.05, then Hypothesis H0 is accepted, but if p-value <0.05, then Hypothesis H1 is accepted.

H0: 12 = 0

H1: 12 >0

Hypothesis 3: If p-value >= 0.05, then Hypothesis H0 is accepted, but if p-value <0.05, then Hypothesis H1 is accepted.

H0: 13 = 0

H1: 13 >0

Hypothesis 4: If p-value >= 0.05, then Hypothesis H0 is accepted, but if p-value <0.05, then Hypothesis H1 is accepted.

H0: 14 = 0

H1: 14 >0

Hypothesis 5: If p-value >= 0.05, then Hypothesis H0 is accepted, but if p-value < 0.05, then the hypothesis H1 is accepted.

H0: 15 = 0

H1: 15 >0

Hypothesis 6: If p-value >= 0.05, then Hypothesis H0 is accepted, but if p-value <0.05, then Hypothesis H1 is accepted.

H0: 16 = 0

H1: 16 >0

Hypothesis 7: If p-value >= 0.05, then Hypothesis H0 is accepted, but if p-value <0.05, then Hypothesis H1 is accepted.

H0: 17 = 0

H1: 17 >0

Hypothesis 8: If p-value >= 0.05, then Hypothesis H0 is accepted, but if p-value <0.05, then Hypothesis H1 is accepted.

H0: 18 = 0

H1: 18 >0

Hypothesis 9: If p-value >= 0.05, then Hypothesis H0 is accepted, but if p-value < 0.05, then the hypothesis H1 is accepted.

H0: 21 = 0

H1: 21 >0

Hypothesis 10: If p-value >= 0.05, then Hypothesis H0 is accepted, but if p-value <0.05, then Hypothesis H1 is accepted.

H0: 22 = 0

H1: 22 >0

Hypothesis 11: If p-value >= 0.05, then Hypothesis H0 is accepted, but if p-value <0.05, then Hypothesis H1 is accepted.

H0: 23 = 0

H1: 23 >0

Hypothesis 12: If p-value >= 0.05, then Hypothesis H0 is accepted, but if p-value <0.05, then Hypothesis H1 is accepted.

H0: 24 = 0

H1: 24 >0

Hypothesis 13: If p-value >= 0.05, then Hypothesis H0 is accepted, but if p-value <0.05, then Hypothesis H1 is accepted.

H0: 25 = 0

H1: 25 >0

Hypothesis 14: If p-value >= 0.05, then Hypothesis H0 is accepted, but if p-value <0.05, then Hypothesis H1 is accepted.

H0: 26 = 0

H1: 26 >0

Hypothesis 15: If p-value >= 0.05, then Hypothesis H0 is accepted, but if p-value <0.05, then Hypothesis H1 is accepted.

H0: 27 = 0

H1: 27 >0

Hypothesis 16: If p-value >= 0.05, then Hypothesis H0 is accepted, but if p-value <0.05, then Hypothesis H1 is accepted.

H0: 28 = 0

H1: 28 >0

Hypothesis 17: If p-value >= 0.05, then Hypothesis H0 is accepted, but if p-value <0.05, then Hypothesis H1 is accepted.

H0: 29 = 0

H1: 29 >0

Based on 17 hypotheses tested, there are 5 accepted hypotheses and 12 rejected hypotheses. Which means, not all of the factors proposed in this study affect the satisfaction and loyalty of mobile banking customers in applying. The following will explain the effect of the independent variable on the dependent variable produced in this study.

Hipotesis			**Path coefficient**	**P-Values**	**Result**
Code	**Variable**	**effect**			

H1	Perceived Ease of Use (PEOU) → Satisfaction Customer (SC)	Positif Signifikan	0,254	0,004361	Diterima
H2	Perceived Usefullness (PU) → Satisfaction Customer (SC)	Positif Signifikan	0,124	0,058750	Ditolak
H3	Perceived Risk (PR) → Satisfaction Customer (SC)	Negatif Signifikan	-0,061	0,002448	Diterima
H4	Perceived Service Quality (PSQ) → Satisfaction Customer (SC)	Positif Signifikan	0,298	0,000001	Diterima
H5	Perceived Functional Quality (PFQ) → Satisfaction Customer (SC)	Positif Signifikan	0,220	0,002448	Diterima
H6	Perceived Customer Experience (PCE) → Satisfaction Customer (SC)	Negatif Signifikan	-0,179	0,008189	Diterima
H7	Brand Image (BI)→ Satisfaction	Positif Signifikan	0,026	0,603717	Ditolak

	Customer (SC)				
H8	Digital Innovation (DI) → Satisfaction Customer (SC)	Positif Signifikan	0,206	0,000314	Diterima
H9	Satisfaction Customer (SC) → Loyalty Customer (LC)	Positif Signifikan	0,644	0,000000	Diterima
H10	Perceived Easy of Use (PEOU) → Loyalty Customer (LC)	Positif Signifikan	0,312	0,002908	Diterima
H11	Perceived Usefullness (PU) → Loyalty Customer (LC)	Positif Signifikan	0,249	0,001646	Diterima
H12	Perceived Risk (PR) → Loyalty Customer (LC)	Negatif Signifikan	-0,061	0,122488	Ditolak
H13	Perceived Service Quality (PSQ) → Loyalty Customer (LC)	Negatif Signifikan	-0,325	0,000000	Diterima
H14	Perceived Functional Quality (PFQ) → Loyalty Customer (LC)	Negatif Signifikan	-0,054	0,424158	Ditolak
H15	Perceived Customer Experience (PCE) → Loyalty Customer (LC)	Positif Signifikan	0,301	0,000000	Diterima
H16	Brand Image (BI)→ Loyalty	Negatif Signifikan	-0,121	0,006824	Diterima

	Customer (LC)				
H17	Digital Innovation (DI) → Loyalty Customer (LC)	Positif Signifikan	0,022	0,664074	Ditolak

Kesimpulan

Based On The Data Obtained By Researchers In Quantitative Research Regarding What Factors Affect The Satisfaction And Loyalty Of Mobile Banking Customers At Private Bank, It Can Be Concluded As Follows:

What Factors Affect The Satisfaction And Loyalty Of Mobile Banking Customers At PT Bank CIMB Niaga :

1. Factors That Affect Mobile Banking Customer Satisfaction At PT Bank CIMB Niaga Are Perceived Ease Of Use (PEOU), Perceived Risk (PR), Perceived Service Quality (PSQ), Perceived Functional Quality (PFQ), Perceived Customer Experience (PCE), Digital Innovation (DI).
2. Factors That Affect Mobile Banking Customer Loyalty At PT Bank CIMB Niaga Are Satisfaction Customer (SC), Perceived Ease Of Use (PEOU), Perceived Usefullness (PU), Perceived Service Quality (PSQ), Perceived Customer Experience (PCE), Brand Image (BI). The Most Influential Factor Is The Customer Satisfaction (SC) Factor.

DAFTAR PUSTAKA

Alrawi, M. A. Sabri, GanthanNarayanaSamy, R. Y., Shanmugam, Bharanidharan, Lakshmiganthan, Rajasekaran, & NurazeanMaarop, Norshaliza Kamaruddin. (2020). Examining factors that effect on the acceptance of mobile commerce in malaysia based on revised UTAUT. *Indones. J. Electr. Eng. Comput. Sci*, *20*(3), 1173–1184.

Davis, Fred D., Bagozzi, Richard P., & Warshaw, Paul R. (1989). User acceptance of computer technology: A comparison of two theoretical models. *Management Science*, *35*(8), 982–1003.

Fitrianie, Siska, Horsch, Corine, Beun, Robbert Jan, Griffioen-Both, Fiemke, & Brinkman, Willem Paul. (2021). Factors Affecting User's Behavioral Intention and Use of a Mobile-Phone-Delivered Cognitive Behavioral Therapy for Insomnia: A Small-Scale UTAUT Analysis. *Journal of Medical Systems*, *45*(12), 1–18.

Lai, Poey Chin. (2017). The literature review of technology adoption models and theories for the novelty technology. *JISTEM-Journal of Information Systems and Technology Management*, *14*, 21–38.

Marianingsih, Susi, & Supianto, Ahmad Afif. (2018). Mobile application sales of handicraft products of papua. *2018 International Conference on Sustainable Information Engineering and Technology (SIET)*, 162–167. IEEE.

Mensah, Isaac Kofi, Chuanyong, Luo, & Zeng, Guohua. (2020). Factors determining the continued intention to use mobile money transfer services (MMTS) among university students in Ghana. *International Journal of Mobile Human Computer Interaction (IJMHCI)*, *12*(1), 1–21.

Rigopoulos, George, & Askounis, Dimitrios. (1970). A TAM Framework to Evaluate UsersÃ¢ Â Â Perception towards Online Electronic Payments. *The Journal of Internet Banking and Commerce*, *12*(3), 1–6.

Shankar, Venkatesh, Inman, J. Jeffrey, Mantrala, Murali, Kelley, Eileen, & Rizley, Ross. (2011). Innovations in shopper marketing: current insights and future research issues. *Journal of Retailing*, *87*, S29–S42.

Sibuea, F. P. J., & Napitupulu, T. A. (n.d.). *Evaluation Of Using Sms Banking Using Modification Of Utaut Model: Case Study Of*. vol.

Sim, Jia Jia, Chia, Zui Ying, Chin, Yhuen Loong, Lee, Mei Qi, Chiam, Vernon Tat Seng, Wong, Kee Luen, Choong, Chee Keong, Loh, Siu Hong, & Yeap, Kim Ho. (2018). Trust in vendor and perceived effectiveness of E-commerce institutional mechanisms in M-commerce adoption: A revised UTAUT model. *2018 8th IEEE International Conference on Control System, Computing and Engineering (ICCSCE)*, 10–15. IEEE.

Utaminingsih, Khairunnisa Tri, & Alianto, Hendra. (2020). The influence of UTAUT model factors on the intension of millennials generation in using mobile wallets in Jakarta. *2020 International Conference on Information Management and Technology (ICIMTech)*, 488–492. IEEE.