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## The Influence of Perceived Ease of Use, Perceived Usefulness and Effort Expectancy with Intention to Use as an Intervening Variable on Use Behavior Mobile Banking: Study at Bank BNI in DKI Jakarta, Indonesia

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### Abstract:

*This study aims to Determine the influence of Perceived ease of use, Perceived usefulness and Effort expectancy with intention to use as an intervening variable and it's influence on Use Behavior Mobile Banking application. This research uses explanatory (explanation) with a quantitative approach, The Population in this Study Costumers Using Mobile Banking Application BNI in Jakarta. Sampling was done by Purposive Sampling, with criteria Costumers Using Mobile Banking Application BNI in Jakarta. The sampels used in the study is as much 110 sampels. Technical analysis of the data used is Structural Equation Modeling (SEM). The results of this study shows that: 1) Perceived Ease Of Use has no significant and negative influence on Intention to use: 2) Peceived Usefulness has a Significant and positive influence on intention to use: 3) Effort Expectancy has no significant influence on Intention to use: 4) Intention to use has a significant and positive influence on Use Behavior.*

**Keywords:** Perceived ease of use, perceived usefulness, effort expectancy, intention to use, use behavior, mobile banking

### 1. Introduction

The development of information technology has provided changes in individual behavior in using information system applications like e-commerce, online transportation, online tickets and also the use of applications in banking product. Additionally, the development of information technology also has an impact on banking product innovations like mobile banking services.



Figure 1: Indonesian Internet Users in 2020

There area unit around 175.4 million (64 percent) internet users out of a total population of 272.1 million people in Indonesia. Meanwhile, mobile phone device users in Indonesia are 338.2 million (124 percent) of the total population. This means that only 64 percent of the Internet users who use mobile phone devices in Indonesia, whereas another 60 % of smartphone device users in Indonesia haven't accessed the internet.



Figure 2: Utilization of the Internet in the Economic Field

Based on data from APJII 2017 Utilization of the Internet in Economic Field as seen in Figure 2. majority of internet usage for Indonesians in the economic sector is searching for information such as information on product prices, job information and information on products sold online by 124.36 percent. However, the use of the internet in the economic sector is banking transaction activity of 17.04 percent. According to Suoranta & Mattila (2004) the banking industry has experienced improvements in banking services with the adoption of information technology developments. This is based on customer demand in the form of a banking product information system application that is easy, fast and secure.

Survey conducted by Databooks.co.id. the Digital Banking is most often used during a pandemic majority of the uses of internet / Mobile Banking services tended to be used more often by the Indonesian people than E-Wallets and considers that the service from using Mobile Banking can be used as a competitive advantage. This application offers a variety of services to users, allowing to check balances, pay bills, get account information, transfer money, make purchases, access bank statements and even invest in shares Rahmani et al, (2012). The benefits of using mobile banking services from the banking side are that banks will gain operational cost efficiency (cost and time) and provide convenience to customers Alalwan et al. Based on data from Kontan.co.id finance in the first quarter of 2019, BNI bank was ranked second in terms of mobile banking service users by 87.2 percent, while regarding of the number of BNI bank transactions, it increased by 154.9 percent. This means that the management of Bank BNI needs to improve mobile banking services both in terms of service (friendliness of customer service and education to customers) and in terms of IT devices (security, ease of use, and attractive features).

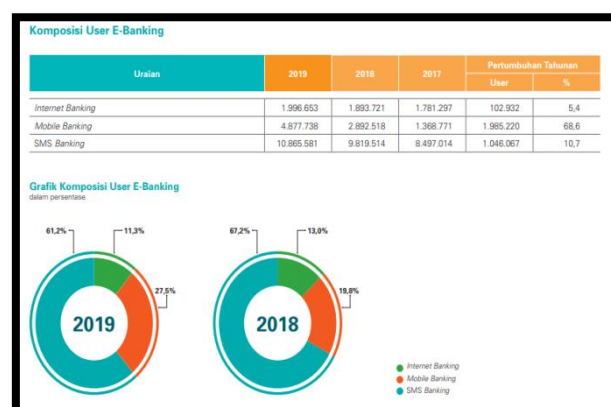


Figure 3: E-Banking Usage Data at BNI Annual Report 2019

BNI Annual Report, mobile banking users in 2019 had an increase from the previous year of around 68.6% with 4.87 users, which is viewed from SMS banking users there were an increase of around 10.7% with 10 million users and Followed also from Internet Banking, an increase of around 5.4% with 1.9 million users. This means that even though Mobile banking received a high enough increase of around 68.6% with 4.87 users, it is still below SMS banking users with more than 10 million users.

Based on data from the Top Brand Award in 2020 regarding banking savings products as seen in Figure 4, BNI is allegedly still inadequate in the convincing people to save or open Savings products at BNI. BNI bank management needs to improve services, promotion, socialization and education on the use of mobile banking technology, by making mobile banking as one of the E-Banking services that is quite good and practical for it becomes easier to carry out banking activities because you have become a customer and save at BNI.

TOP BRAND INDEX FASE 1 2020			
PRODUK TABUNGAN		TABUNGAN DAERAH	
BRAND	TBI 2020	BRAND	TBI 2020
Talipapan BCA	32.9%	TOP	
BritAma	23.7%	TOP	
Simpedes	10.1%	TOP	
BNI Taplus	9.2%		
Tabungan Mandiri	7.3%		
		Tabungan Monas (Bank DKI)	21.3% TOP
		Tandamata My First (Bank BJB)	17.2% TOP
		Tabungan Martabe (Bank Sumut)	11.5% TOP

Figure 4: Top Brand Award for Savings Banking Products

When the whole world, including Indonesia, is experiencing the Covid-19 pandemic outbreak, which has an impact on the banking industry in the form of increasing use of mobile banking services from the customer side. This means that the conditions of the COVID-19 pandemic outbreak provide opportunities for mobile banking service products, which are based on the results of interviews with management conducted by the researchers at one of the BNI Bank branch offices in DKI Jakarta in April 2020, there was an increase in the number of customers who activated mobile banking services by 10 customers every day and Based on the results of the pre-survey of the 30 selected respondents, where there are main reasons for customers using mobile banking services, namely perceived ease of use, perceived usefulness and effort expectancy. So that the three main factors will be tested to find out which one has the greatest impact on customers in using the mobile banking application.

There are several literatures that examine and analyze the adoption of the use of information systems by the individuals. Koksai (2016), Prove that perceived ease of use and perceived usefulness have a significant influence on Intention to use, which is the main factor determining someone use and adopting ICT, in this case internet banking. Makanyeza, (2017) Prove that Perceived usefulness has a significant influence on intention to use but Perceived ease of use has no significant influence on intention to use mobile banking, Farah et al. (2018) prove that effort expectancy has a significant influence on the intention to use mobile banking as well as research according to Merhi, Hone & Tarhini, (2019) Prove that Effort expectancy has a significant influence in England but does not have a significant influence on Lebanon on behavioral intention. Behavioral Intention tends to mediate the relationship between variable causes of behavior and use behavior, thus causing individual interest to accurately predict future actions. Baker et al (2007). Some experts such as Farah et al (2018) said that adaption intention has a significant influence on usage behavior, in this case it shows that adoption of intention is one of the main motivations for use behavior.

This research focuses on the factors that affect customers in Intention to use and use behavior mobile banking by taking a case study on a customer BNI in DKI Jakarta and the results of this research can be used as input for banking management, particularly BNI Bank in making policies, banking strategies that can provide competitive advantage and have an impact on improving banking performance.

## 2. Literature Review and Framework

Several theories related to the adoption of information and communication technology are the concept of consumer behavior, TAM And UTAUT. Consumer Behavior (Kotler 2009) which according to this Theory Study is about how individuals, groups, and organizations choose, use and how about goods, services, concepts or experiences to satisfy needs. And desire, as for the Technology Acceptance Model (TAM) (Davis, 1989), wherever the factors that influence individuals to adopt ICT are individual behavior in which these behavioral factors are influenced by perceived ease of use and perceived usefulness. It is different with the UTAUT Model concept which was developed based on the eight previous technological theory models formulated by Venkatesh et al (2003), namely Theory of Reasoned Action (TRA), Theory of Planned Behavior (TPB), Technology Acceptance Model (TAM), Motivation Model (MM), Combined TAM and TPB, Model of PC Utilization (MPTU), Innovation Diffusion Theory (IDT) and Social Cognitive Theory (SCT). Of the eight theoretical models, there are four main constructs that can influence Behavioral Intention and Use Behavior According to (Venkatesh et al, 2003) there are four variables in the UTAUT model that determine individual acceptance of the intention to use technology, namely; Performance expectations Effort Expectancy, Social Influence and conditions Facilitating Conditions.

Davis (1989) Perceived ease of use is defined as the extent to which a person or individual believes that using a particular system will be freed from the same view given by Püschel et al. (2010) which states perceived ease of use is the extent to which consumers believe that using a particular innovations system will become easier. Meanwhile, according to Zeithami et al. (2002) that the ability to understand in this case studying and implementing innovations as needed can be related to perceived ease of use, as well as according to Karahanna et al. (1999). Some studies show that perceived ease of use has a significant impact on Intention to use (Koksai 2016; kurniawati, et al., 2017; Prabawalingga and Yadnyana, 2016; Alalwan, et al., 2016; Kumar, et al., 2017; Rouibah 2011; Karim, et al. 2020 Adzima and Ariyanti 2018) however Makanyeza, (2017) show that perceived ease of use has no significant impact on Intention to use.

Davis (1989) defines perceived usefulness as an individual's perception that using new technology will be improved performance, so in this case the extent to which someone believes that adopting a particular system will increase its effectiveness and work performance. Measurement of this construct consists of making work faster, useful, increasing productivity, increasing effectiveness and developing job performance. whereas according to Guriting and

Ndubisi (2006) in Cabanillas and Montoro-Ríos (2017) The importance of perceived usefulness has been widely recognized in various studies. Perceived usefulness is the subjective probability that technology can improve the way consumers complete a goal. Some studies show that perceived usefulness has a significant impact on Intention to use (Bryson, et al. 2015; kurniawati, et al. 2017; Youssef, et al., 2017; laksana, et al., 2015; Koksai, 2016; Makanyeza 2017; Montoro-Ríos, 2017; Rouibah, 2011; mwiya 2017; Alalwan, et al. 2016; Kumar et al. 2017; Prabawalingga and Yadnyana 2016; Karim et al. 2020).

Effort expectancy is defined as the level of ease of use of information systems that can reduce individual effort (effort and time) in activities (Venkatesh et al 2003). This concept illustrates that effort expectancy is a level at which a person believes that information technology can be easily understood, by determining how much effort is done needs to learn how to handle technology (Tai and Ku, 2013). This construct is developed and formulated based on 3 constructs in the previous model or theory, namely the perception variable of the ease of use of Davis (1989), the complexity of Thompson et al, (1991), and the ease of use of Moore and Benbasat, (1991). Maduku, (2015) said that this construct combines Perceived Ease of Use, Complexity, and Ease of use and is determined by many factors, such as usability, flexibility, user friendliness and overall navigation facilities (Chiwara in Farah et al 2018). Some studies show that Effort Expectancy has a significant impact on Intention to use (Farah et al. 2018; Premi et al, 2020; Yaseen and Qirem 2018; Merhi, et al 2019; Rahi et al. 2019; Dewayanti et al 2018; Dinigrat 2019) Meanwhile, (Kwateng et al. 2018; pertiwi and ariyanto, 2017; Wardhani dan hidayatulah 2018; Fernandez and Pujiani, 2019) show that has no significant influence on Intention to use.

Davis. F. (1989) defines behavioral intention as the extent to which a person realizes and plans to do or not take some action in the future which is determined by behavior. in other words, how much a person is willing to strive to use technology in an environment to support their performance and can measure the likelihood that consumers will act in a certain way in the future, such as buying or using a product again and recommending it to others, and planning to use it frequently (Venkatesh et al. 2012). Ajzen and Fishbein (1980) said that individual intention is a direct determinant of behavior and when the right measure of intention is obtained, it will provide many accurate predictions of behavior. all TAM theories including UTAUT and UTAUT2 rely on three main constructs, intention is defined as the desire to carry out a behavior. intention are not always static, Intention may change over time Hartanto (2007). Behavioral intention is still an interest and is not yet a behavior. Venkatesh et al. (2003) stated that the higher the level of intention, the higher the likelihood that the use behavior of technology will be carried out. Behavioral intention tends to mediate the relationship between Behavioral and actual behavior variables, thereby causing interest (intention) to accurately predict future actions. Some studies show that Intention to use has a significant impact on Use Behavior (Farah et al 2018; Makanyeza, 2017; pertiwi and ariyanto, 2017; Premi et al., 2020; Kwateng et al., 2018; Yaseen and Qirem, 2018; Fernandez and Pujiani 2019; Prabawalingga and Yadnyana 2016).

Venkatesh et al,(2012) define use behavior as positive or negative feelings of individuals in using a technology with the frequency of using applications as an indicator. Ease of use reduces both the time and effort of the user in learning the ins and outs of transacting through technology. An information technology is very good or bad depending on what the user feels after the individual uses the information technology. Individual belief in the benefits of a system can increase interest, then the individual will eventually use a certain system in their activities.

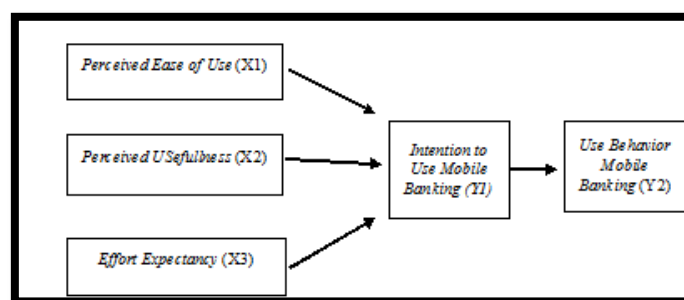


Figure 5: Research Model

The researcher made assumptions about several hypotheses that have the potential may have an influence on each other between variables in this study, the research hypothesis is obtained as follows:

- H1: Perceived Ease of Use has a Positive and Significant influence on Intention to Use Mobile Banking
- H2: Perceived Usefulness has a Positive and Significant influence on Intention to Use Mobile Banking.
- H3: Effort Expectancy has a Positive and Significant influence on Intention to Use Mobile Banking
- H4: Intention to use has a Positive and Significant influence on Use Behavior Mobile Banking

### 3. Methodology

This type of research is an explanatory research with a quantitative approach, so the method used is the survey method. The population in this study are customers of Bank BNI Jakarta who has used the mobile banking application. This study refers to Hair et al (1998) which suggests that if the population is not known, the number that the appropriate sample size is 100 to 200. It is also explained that the minimum sample size is 5 observations for each the estimated parameter and the maximum are 10 observations from each estimated parameter. In this study, the number of research

indicators was 22, so the minimum sample size was 5 times the number of indicators or as many as  $22 \times 5 = 110$  samples. As for the criteria in determining the sample are: BNI Costumers who live in DKI Jakarta, Customers who have used the BNI Mobile Banking Service for more than one time, Customers are willing to be respondents in this study.

No	Variable	Indicator	Measurement Scale	No Questionnaire
1	Perceived Ease of use, Rouibah et al. (2011)	1. Mobile banking is clear and understandable	Likert scale	(1)
		2. Mobile banking is easy to do as you wish		(2)
		3. Easy Learning to operate mobile banking		(3)
		4. Flexible mobile banking to interact		(4)
		5. It is easy to become skilled in using mobile banking		(5)
		6. Mobile banking is easy to use		(6)
2	Perceived Usefulness Rouibah et al. (2011)	1. mobile banking improves the quality of performance in banking transactions		(7)
		2. mobile banking increases the effectiveness of transactions		(8)
		3. Mobile banking completes tasks or transactions faster according to the purpose		(9)
		4. mobile banking increases the availability of time from the limitations of space and time		(10)
		5. Mobile banking makes it easy to carry out banking transactions.		(11)
		6. Mobile banking is useful		(12)
3	Effort Expectacy Farah et al. (2018)	1. Learn and use mobile banking easier		(13)
		2. Become an expert in using easy mobile banking		(14)
		3. Interaction Using mobile banking is easier		(15)
		4. The features of mobile banking are easy to use		(16)
4	Intention to use Mobile Banking Mwiya, et al. (2017)	1. intends to use the mobile banking Application in the future		(17)
		2. Planning to use mobile banking regularly in the future		(18)
		3. Based on experience, it is possible to re-use the mobile banking application		(19)
		4. If have a mobile banking application, and plan to use it		(20)
5	Use Behavior Mobile Banking Makanyeza et al, (2017)	1. Use mobile banking quite often		(21)
		2. accustomed to using mobile banking		(22)

Table 1: Operational Research Variables

#### 4. Analysis and Result

Based on the results of distributing questionnaires via google form as many 110 Respondents, it is known that 44.5% (49 respondents) were male, and 55.5% (61 respondents) were female. This shows that the majority of users of mobile banking services at BNI banks are women because the majority of women use the mobile banking application for online payment transactions. Based on the type of age, the majority of mobile banking service users at BNI bank are aged 21-30 years, amounting to 76.4%, this shows that customers or application users who use BNI Mobile banking are in the productive age and millennial generation. Based on the type of work, the majority of respondents have jobs as private employees 56.4% (62 respondents). Based on the type of education, the majority of respondents had undergraduate education background of 73%. This indicates that the majority of mobile banking service users already have knowledge



and skills in banking transactions and the use of mobile banking applications. Based on the DKI Jakarta area, the majority of respondents are domiciled in South Jakarta with 42.7%, while the rest are domiciled in the East Jakarta area. This indicates that the majority of mobile banking service users reside in East Jakarta and South Jakarta because these areas are residential areas.

This research model was tested with the SEM statistical test tool, where there are three stages of testing, namely the overall model fit test, measurement suitability test and structural equation compatibility test using the Lisrel 8.8 software.

#### 4.1. Overall Model Fit Results

The following will be shown about the model fit test. A measurement and structural model are said to be Fit or in accordance with the word if the sample covariance matrix does not differ from the resulting population covariance matrix estimate.

Ukuran GOF	Hasil Estimasi	Kriteria	Kesimpulan
Statistic $\chi^2$	Df= 202 $\chi^2= 598,2$	$0 \leq \chi^2 \leq 2df$ , $2df < \chi^2 \leq 3df$	Poor fit
P-Value	0,0	$0.05 \leq p \leq 1.00$ , $0.01 < p \leq 0.05$	Good fit
NCP	318,42	Must be small	Good fit
Root Mean Square Error (RMSEA)	0,12	$\leq 0,08$ $\leq 0,05$	Good fit
ECVI	5,71	Must be smaller than Saturated ECVI (4,64)	Poor fit
Model AIC	622,42	Must be smaller than Saturated AIC (506.00)	Poor fit
Model CAIC	811,15	Harus Lebih kecil dari Saturated (1442.22)	Good fit
Normal Fit Index (NFI)	0,92	$NFI \geq 0.90$ $0.80 \leq NFI < 0.90$	Good fit
Non-Normed Fit Index (NNFI)	0,94	$0.80 < NNFI < 0.90$	Good fit
PNFI	0,81	Must be small	Good fit
Comparative Fit Index (CFI)	0,95	$CFI > 0.97$ $0.90 < CFI < 0.97$	Marginal fit
Incremental Fit Index (IFI)	0,95	$IFI > 0.90$ $0.80 < RFI < 0.90$	Good fit
Relative Fit Index (RFI)	0,91	$RFI > 0.90$ $0.80 < RFI < 0.90$	Good fit
CN	46,86	$CN > 200$	Poor fit
SRMR	0,67	$SRMR \leq 0,05$ $0,010 < SRMR < 0,05$	Poor fit
GFI	0,70	$GFI > 0.90$ $0,70 < GFI < 0,90$	Marginal fit
AGFI	0,62	$AGFI > 0,89$ $0,80 < RFI < 0,89$	Marginal fit
PGFI	0,56	Approaching 1	Good fit

Table 2: Goodness of Fit Full Model

Based on the results of table 2 above where the values of GFI, AGFI, PGFI are below 0.8 (not in accordance with the standard), this can be concluded as marginal fit. Meanwhile, the value of NFI, NNFI, CFI, IFI is above 0.9. This means that this model is declared in accordance with the requirements (Good fit). From the table above, it can be concluded that more than 50% of the parameters for measuring the suitability of the entire model has met the requirements for data processing by SEM.

#### 4.2. Results of Measurement Model Testing

The measurement model testing in SEM analysis is used to test the validity of the indicators for each construct. The construct validity test can be done by looking at the loading factor value of each indicator in the construct. In this test, the indicator is declared valid if it has a loading factor value  $\geq 0.5$  and a T-value  $\geq 1.96$ , while the construct reliability test that done by calculating the AVE and CR values of the constructs. The construct is declared reliable if the AVE model  $\geq 0.5$  and the CR model  $\geq 0.7$ . The following are the results of testing the measurement model of all constructs to be analyzed in the SEM analysis. the formulas used to calculate construct reliability (CR) and Variance Extracted are:

$$\text{Construct Reliability} = \frac{(\sum_i^n \text{Standardized Loading Factor})^2}{(\sum_i^n \text{Standardized Loading Factor})^2 + (\sum \text{Standard Errors})}$$

$$\text{Variance Extracted} = \frac{\sum_i^n \text{Standardized Loading Factor}^2}{\sum_i^n \text{Standardized Loading Factor}^2 + (\sum \text{Standard Errors})}$$

Based on Result the T Value, concluded that all indicators of Perceived ease of use, Perceived usefulness, Effort Expectancy, Intention to use, and Use Behavior have a calculated T value  $\geq 1.96$ . This means that all indicators are significant for the Perceived ease of Use, Perceived usefulness, effort expectancy intention to use and Use Behavior variable. the results of the validity and reliability test for the variable perceived eased of use, Perceived Usefulness, Effort Expectancy, Intention to use, and use behavior, where all variable indicators are significantly valid. While the CR and VE values variable are above 0.5 so it can be concluded that the variable is declared reliable.

#### 4.3. Analysis of the Structural Model

To determine the influence between latent variables, both directly and indirectly, it can be seen from the results of the structural model test as shown in Figures 6 and Figures 7.

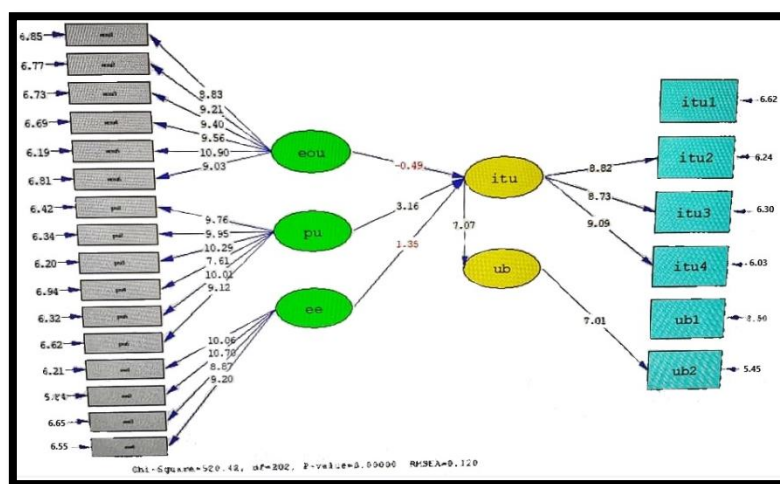


Figure 6: Structural Model Results Based on the t-value

Based on Figure 6, it can be seen that the t-value value Perceived ease of use and Effort Expectancy on intention to use is below 1.96. This means that 2 hypotheses are rejected, namely (1) there is no significant influence of perceived ease of use on intention to use; (2) there is no significant influence of effort expectancy on intention to use. Meanwhile, the t-value of Perceived usefulness and intention to use is above 1.96. This means that 2 hypotheses are accepted, namely (1) there is a significant influence on perceived usefulness on intention to use; (2) there is a significant influence on intention to use on use behavior.

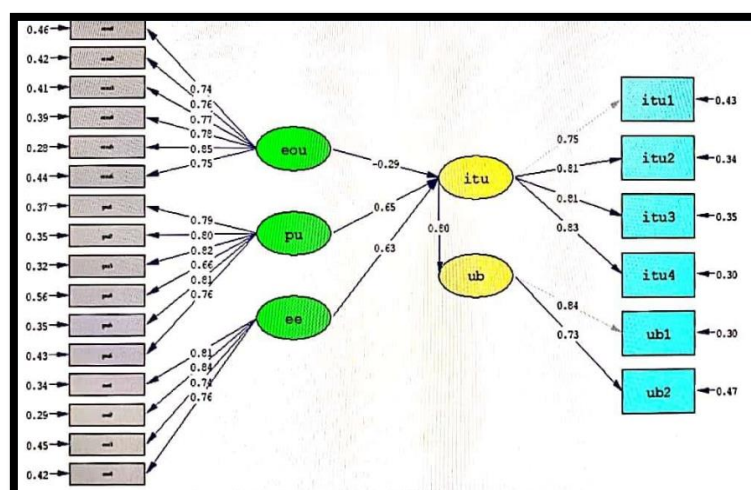


Figure 7: Results of the Structural Model of BNI Mobile Banking (Standard Solution)

Based on Figure 7, it can be concluded that the variable that has the greatest influence on Use Behavior in the BNI Mobile banking application is the intention to use variable of 0.80. This means that if the customer has a high enough interest in using the mobile banking application, the customer will increase the use of the mobile banking application because the high mobile banking application users start with a high interest in using the mobile banking application.

Meanwhile, the variable that affects the interest in using mobile banking applications is the perceived usefulness of 0.65%. This means that if individuals to perceive the usefulness of the mobile banking application as high, it will increase interest in using the mobile banking application, when viewed from the indicators that affect the perceived usefulness variable, namely that for customers, if the Mobile banking application is useful for completing tasks, it can be done faster. increase interest in using so that the use of mobile banking applications will continue to increase. Thus, banking management, especially BNI bank management, needs to improve the use of mobile banking applications among customers and prospective customers of BNI bank.

The mathematical model of the structural model Where the determination value for the intention to use model is 0.87. This means that the intention to use is influenced by the variable perceived Ease of use, Perceived usefulness and effort expectancy, the remaining 87% is influenced by other variables not examined in this study. While the value of determination for the use behavior models is 0.64. This means that use behavior is influenced by the intention to use variable. 64% of the rest is influenced by other variables not examined in this study.

Based on the results of the fit test of the structural model above, it can be concluded from the four research hypotheses that two hypotheses were accepted and two hypotheses were rejected that were carried out previously. In general, the conclusion of the hypothesis test results can be seen in the table below.

The Relationship between Constructs	Coefficient (Standard Solution)	T-Value	Information
PEOU-> THAT	-0.29	-0.49	Negative influence, not significant
PU-> THAT	0.65	3.16	Significant Positive influence
EE-> THAT	0.63	1.36	Positive influence, not significant
ITU-> UB	0.80	7.07	Significant Positive influence

*Table 3: Hypothesis Testing Results*  
*Source: Results of Analysis using Lisrel 8.8*

Based on table 3 above, it can be concluded that the value of t-Values Perceived ease of use is -0.49 (smaller 1.96). Perceived ease of use is defined as the level of confidence about the extent to which a person believes that using a certain system will be free of effort, where applications that are clear and easy to understand can perform as desired, easy to learn to operate, flexible, easy to be skilled and easy to use does not have a significant influence and negative because the majority of respondents in DKI Jakarta are millennial generation and have undergraduate education which is possible that many already have the knowledge and skills to use ICT applications, so that the higher the perceived ease of use, it can reduce the interest and behavior of using mobile banking applications. For this reason, banking management does not need to prioritize concerning providing ease of use of mobile banking applications because using a mobile banking application is almost the same as using other ICT applications (e-commers, e-payments and online transportation applications) where if management still prioritizes the perception of ease of use then will be able to reduce interest in using because the Customer considers that this application is the same as other applications, so that perceived ease of use does not have a significant influence on the intention to use mobile banking. This is relevant to previous research conducted by makayenza (2017) Perceived ease of use has no significant influence on intention to use, this result is different and refutes the results of previous research which according to (Kokskal 2016; Laksana 2017; Alalwan, et al., 2016; Kurniawati, et al., 2017; Kumar, et al., 2017; Rouibah, 2011; karim, et al., 2020; adzima and Ariyanti, 2018., Prabawalingga and Yadnyana, 2016) Perceived ease of use has a significant influence on intention to use.

Based on table 3 above, it can be concluded that the t-Values Perceived usefulness is 3.16 (greater than 1.96). This means that Perceived usefulness has a significant influence on intention to use. Perceived Usefulness is defined as the level of confidence or trust to which a person believes that adopting a certain system will increase its effectiveness and work performance which will bring benefits or perceived usefulness for those who use it. By having a significant influence on this, the banking management in looking at user factors, the majority of respondents are millennials who have an undergraduate education who have the knowledge and skills to use ICT applications, in this case the customer wants and has the perception that mobile banking applications can improve performance quality, increase effectiveness, it is useful to complete tasks faster, increase time availability, make transactions easier and useful or useful, with indicators that have a big influence that the mobile banking application is useful for completing tasks or transactions faster. The results of this study are relevant to (Bryson et al. 2015; Kurniawati, et al., 2017; Youssef et al., 2017; laksana, et al., 2015; Koksal, 2016; Makanyeza, 2017; Montoro-Ríos 2017; Rouibah 2011; Alalwan et al. 2016; Prabawalingga and Yadnyana 2016; Kumar, et al., 2017; Karim, et al., 2020 Perceived usefulness has a positive and significant influence on intention to use.

Based on table 3 above, it can be concluded that the t-Values Effort expectancy value is 1.36 (smaller 1.96). This means that Effort expectancy does not have a significant influence on intention to use. Effort expectancy is defined as the level of ease in using technology that will reduce effort (energy and time) by handling and believing that using a mobile banking application about how much effort is needed will help customers to maximize and optimize performance at work. Which is easy though learns to use mobile banking, easy to become an expert, easy interaction with mobile banking, and easy to use has a positive but not significant influence, so that Effort Expectancy does not have a significant influence on intention to use, therefore banking management does not need to prioritize and investigate customer business expectations. to use the mobile banking application because the Customer does not really see or perceive (Effort Expectancy) as a more business expectation to be freed from the effort (energy and time) of using ICT technology, in this case using the mobile banking application. This is relevant to the research of (Kwateng, et al., 2018; Wardhani and



hidayatulah, 2018; pertiwi and Ariyanto, 2017; Fernandez and Pujiani 2019) which states that Effort expectancy has no significant influence on intention to use. this is different and refutes the results research by (Farah, et al., 2018; Premi, et al., 2020 Yaseen and Qirem, 2018; Dewayanti, et al., 2018; Dinigrat, 2019; Rahi, et al. 2019) Effort Expectancy has a significant influence on the intention to use.

Based on table 3 above, it can be concluded that the t-value of Intention to use is 7.07 (greater than 1.96). This means that Intention to use has a significant influence on Use Behavior. Intention to use is defined as the extent to which a person realizes and plans to do or not take some action in the future which is determined by behavior or determined by someone who feels an attitude towards the use of technology. For this reason, the banking management in looking at user factors, the majority of respondents is millennials who have undergraduate education, who have the knowledge and skills to use the Mobile banking application. The results of this study are relevant to the research results of (Farah, et al, 2018; Pertiwi and Ariyanto, 2017; Fernandez and Pujiani. 2019; Makanyeza, 2017; Kwateng et al. 2018; Yaseen and Qirem 2018) say intention to use has a significant influence on use behavior.

## 5. Discussion and Conclusion

Perceived Usefulness variable has a significant influence on Intention to use. This means that BNI bank management needs to increase the use and benefits of mobile banking, so that it can increase customer interest using the BNI Mobile banking application. While the effect of perceived usefulness is 0.65. This means that improving quality, increasing effectiveness, completing tasks or transactions faster, increasing available time, making transactions easy and useful will lead to intention to use and variable Intention to use has an important influence on Use Behavior. This means that banking management needs to increase the interest of customers and prospective customers to increase the use of mobile banking applications.

This research can be a reference or input for future researchers related to the behavioral model of using mobile banking applications. Researchers suggest that future researchers related to the behavioral model of using mobile banking applications, examining other variables besides the variables in this study such as the use and testing of the UTAUT theory, namely, performance expectancy, social influence, and facilitating conditions. While suggestions need to be developed by further researchers because the UTAUT model was born from models of several previous theories, one of which is the TAM model, it should be noted that the Effort Expectancy variable from the UTAUT model has almost the same definition as the Perceived ease of use variable from TAM, because of this UTAUT Theory model. namely Effort Expectancy was born from a combination of previous theories, namely perceived ease of use, complexity and ease of use, so it is felt that the UTAUT model research needs to be developed by further researchers.

This research can be a reference and input for banking management, especially BNI bank in DKI Jakarta in the form of developing policies, strategies and marketing programs according to the mission of the BNI bank by providing excellent service and digital solutions to all customers. The factors that need to be considered and improved by BNI bank management in increasing the use of mobile banking applications are as follows. Managerial Bank BNI needs to increase the usability of the mobile banking application to increase the number of interests and the number of users of the mobile banking application, such as; (1) because the Pandemic COVID-19 situation should be an opportunity, management needs to consider the usefulness and continue to develop BNI Mobile banking features in the form of payment transactions, purchases and other banking transactions, so that customers get benefits and no longer needed to go to the bank to complete banking transactions because the faster and more useful. (2) To increase the volume of customer transactions through BNI Mobile banking, BNI is expected to consistently manifesting its concern for customers by providing benefits through the Points Plus program from using the mobile banking application so as to get reward points that can be collected and can be exchanged for various attractive prizes or a discount at merchants. In collaboration with BNI besides that, banking management needs to prevent connection errors in the process of using the mobile banking application so that the customer feels a positive feeling of the usefulness and benefits of using the mobile banking application.

## 6. Limitations

This research has several limitations, namely the lack of time to explore this research, because of the Covid 19 pandemic situation, the researchers limit the respondents who use Mobile Banking in DKI Jakarta besides that the researchers only use questionnaires and survey instruments that are carried out to prove the factors that influence the behavior of using the services like mobile banking.

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