

Adoption Factors In The Use Of Mobile Banking Applications In The Jabodetabek Area

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Abstract:

Economic development based on information technology has become a global paradigm, today, every economic actor has used modern banking services to increase the effectiveness of the services provided. Mobile banking is a banking facility that uses mobile communication devices such as cell phones. This technology platform provided by banks makes it easier for users or customers to carry out financial and banking transactions such as checking balances, transferring between accounts, and paying bills. The purpose of this study is to analyze the factors that influence the actual use of mobile banking applications, namely perceived usefulness, perceived ease of use, and subjective norms, which are mediated by behavioral intentions and moderated by gender variables. This research uses primary data, which is obtained by distributing questionnaires via Google Forms. The sampling technique in this study is purposive sampling, where the sampling technique is carried out with certain considerations. The questionnaire was distributed to 200 respondents who used mobile banking applications in the Jakarta, Bogor, Depok, Tangerang, and Bekasi (Jabodetabek) areas of Indonesia. The analysis methods used are path analysis and moderation regression analysis. The results showed that perceived usefulness, perceived ease of use, and subjective norms had a significant effect on actual use through behavioral intentions, and gender moderated the effect of perceived usefulness, perceived ease of use, and subjective norms on behavioral intentions.

Keyword: *perceived usefulness, perceived ease of use, subjective norms, behavioral intentions, actual use*

Date of Submission: 09-09-2023

Date of Acceptance: 19-09-2023

I. Introduction

The advancement of technological development accompanied by the development of technology-based information systems occurs so rapidly in this era of globalization that, with the existence of modern technology (Hapsara, 2015), people can make more use of modernized technology and can also take advantage of the facilities that have been provided. Banking also follows the development of technology by offering banking services through the mobile phones of its customers. The technology platform is mobile banking (Alwan & Al-Zubi, 2016). Mobile banking offers innovative services that increase convenience, effectiveness, and cost savings (Sharma, Govindaluri, Al-Muharrami, & Tarhini, 2017). This gives hope to banks and, of course, the government, as people are increasingly open to banking products that show progress in a country (Chiu, Bool, & Chiu, 2017). The approach used to predict the overall market acceptance of new technology systems and by examining the ease of technology to explain the factors that influence individual preferences in using mobile banking, one of which is the Technology Acceptance Model (TAM), The TAM model can provide an accurate and simple explanation of technology acceptance and user behavior (Safitri, 2016). According to Davis (1989), perceived usefulness is defined as the user's subjective belief that using the system will improve performance. Previous empirical research on technology adoption revealed that perceived ease of use is another important determinant of system usage (Venkatesh & Davis, 2000). Sigh and Srivastava (2018) suggested that friends and family members influence an individual's decision to use mobile banking services, arguing that users are part of a social network, not just technology users.

Koksal (2016) conducted a study on the fundamental factors that highlight the high user intention in choosing mobile banking, namely the variables of perceived usefulness, perceived ease of use, trialability, trust, perceived credibility, perceived self-efficacy, normative pressure, perceived financial cost, and compatibility. Where trialability, perceived usefulness, and perceived ease of use influence the use of mobile banking. Arif, Afshan, and Sharif (2016), in their research, analyzed perceptions and intentions in accepting and adopting mobile banking and found that perceived usefulness and perceived ease of use have a strong and positive influence on user attitudes towards mobile banking.

Further studies take into account customer characteristics based on demographic factors such as gender, age, education, income, and marital status. Differences in gender, age, and education level are logical demographic factors to influence the formation of attitudes and behavioral intentions to use technology (Chawla & Joshi, 2020).

Demographic factors as a mobile banking marketing strategy (Alkhaldi & Kharmah, 2019) are also used to determine mobile banking market segmentation to get the right target market and retain customers.

II. Literature Review

Mobile Banking Adoption

Mobile banking has grown in popularity over time, and now people are used to using mobile banking. Mobile banking has grown rapidly since its inception and has become an excellent technological breakthrough for the modern era (Baptista & Oliveira, 2015; Foroughi, Iranmanesh, & Hyun, 2019). Mobile banking is a more accessible option than ATMs, mobile banking, SMS banking, and internet banking. Apart from mobile banking, other alternative uses require cost and time to conduct banking transactions (Albort-Morant, Sanchs-Pedregosa, & Paredes Paredes, 2022; Plakias, Jodlowski, Giamo, Kavousi, & Taylor, 2021; Siyal, Donghong, Umrani, Siyal, & Bhand, 2019). Therefore, mobile banking has become one of the most popular electronic transactions, with rapid growth to date (Asmy, Anwar, & Hassanudin, 2019). When compared to traditional transactions, mobile banking has its own advantages that can be utilized by customers (Zhang, Lu, & Kizildag, 2018). Some customers may hesitate to use mobile banking due to data security issues. Apart from security, previous research found that a person's failure to use mobile banking is a failure to use mobile banking (Agyei, Sun, Abrokwah, Penney, & Ofori-Boafo, 2020). Apart from customer knowledge, failure can also occur in mobile banking, which often experiences interruptions (Alalwan, Dwivedi, Rana, & Williams 2016). These disruptions can occur due to inadequate equipment and unstable internet networks, such as for people who live in various regions. Information adequacy can be improved by the location of the customer, whether it is far from the city center or not (Mardika, D.R.W., 2022). Data security and internet network stability are now better than when mobile banking was first developed. Data security and internet network stability are also helped by the rapid development of technology and increased public awareness (Mardika, D.R.W., 2022).

Technology Acceptance Model (TAM)

TAM is a very popular and widely used theoretical framework in information systems and mobile banking research that has attracted user attention (Lai, 2017). Overall (Legris, Ingham, & Colletette, 2003), the TAM model is 40% effective in predicting system usage. The TAM theory is used to predict people's intentions to adopt new technology in information systems and mobile banking in developed and developing countries. TAM is a general theoretical part of the Theory of Reasoned Action (TRA) introduced by Fishbein & Ajzen (1975). Davis, F. D., R. P. Bagozzi, and P. R. Warshaw (1989) modified the original TAM model by including behavioral intention as a new variable directly influenced by PEOU and PU. Ajzen (1991) states that a person's behavior is not only influenced by individual control. Venkatesh, Thong, and Xu (2012) define behavioral intention as a person's intention to use a technology continuously, assuming they have access to the system. As a result, behavioral intention can be defined as the behavior performed by a person as measured by the strength of his intention. Sitorus, Govindaraju, Wiratmadja, and Sudirman (2017) argue that the simplicity of the TAM model makes it one of the most widely used models in research. TAM is used with some modifications in many studies related to the concept of actual system adoption and use.

Perceived Usefulness

Perceived usefulness in the TAM model is defined as the extent to which users believe that the application of a particular technology will improve their work effectiveness and performance (Davis, 1993; de Luna, Liebana-Cabanillas, Sanchez-Fernandez, & Munoz-Leiva, 2019). This is the user's perception of how usage increases with the application of new technology (Ooi & Tan, 2016). According to Pham and Ho (2015), perceived usefulness should be the first characteristic of a new technology to be considered. Koksai (2016) found that technologies such as mobile banking allow users to access information about their current balance and previous transactions from anywhere and at any time, thus strengthening users' adoption intentions. Previous research found that perceived usefulness has a positive influence on mobile banking adoption intentions (Tran & Corner, 2016).

Perceived Ease of Use

Davis (1989) defines perceived ease in the TAM model as an individual's perception of the simple, easy, and effortless operation of a technology system. It is an assessment of the effort required to use technology (Venkatesh & Davis, 2000) and is identified as one of the most influential factors for adopting new technology (de Luna et al., 2018). Davis (1989) found that perceived ease of use affects individual attitudes towards using technology, which in turn will determine whether people intend to use technology (intention). The intention to use technology will determine whether people will use technology (behavior). Research conducted by Szajna (1996) shows that perceived ease of use can be used as a tool to predict behavioral intentions when people use information technology.

Subjective Norm

A subjective norm is an individual's perception of perceived social pressure to perform or not perform a behavior. Perceived social pressure can come from relatives, friends, and others close to a person engaging in a particular behavior (Ajzen, 1991). The actions of these people can influence how people perceive technology and even how they act. Individuals tend to behave according to what these referrers tell them (Liebana-Cabanillas, Marinkovi, de Luna, & Kalinic 2018). Davis (1989) defines subjective norms as a construct of social influence. This is also supported by de Luna et al. (2018), Zhou (2011), and Cheung and Lee (2010). According to Lu, Yao, and Yu (2005), social influence may be an important determinant of mobile technology adoption.

Behavioral Intention

Intention is an action that a person wants to take (Zhao & Othman, 2011). A person's attention is focused on a particular object or situation before engaging in an activity. Behavioral intention will determine behavior (Jogiyanto, 2008). Madan and Yadav (2016) define behavioral intention as a measure or level of intensity of an individual's intention to perform a particular behavior. Behavioural intention is a person's subjective likelihood that is meaningful to achieve within a certain period of time (Ajzen, 1988), where it refers to a person's future behavior (Fishbein & Ajzen, 1975). According to Yaseen and El Qirem (2018), behavioral intention is defined as a measure of the "strength" of an individual's intention to perform a particular behavior.

Actual Use

In the context of research on mobile banking adoption, actual usage is usually treated as a variable that reflects the frequency of use of current and/or future banking service distribution channels. According to Tam and Oliveira (2016), it is not only important to attract new users but also to retain existing ones. According to Kim, Ferrin, and Rao (2009), service providers should improve the quality dimension as a key determinant of actual use.

Moderation by Gender

Several scholars have emphasized the importance of gender diversity in challenging environments (Boeve-de Pauw & Van Petegem, 2018; Jones III, Reill, Cox & Cole, 2017). Despite the fact that the gender gap in information systems and mobile technology adoption is apparent, (Chiu, Kim, and Won, 2018) men and women have different considerations, motives, and reasons in the usage process. Chawla and Joshi (2018) found that gender moderates mobile banking adoption. Regarding research on the moderating effect of gender, research by Karjaluoto, Riquelme, and Rios (2010) found that gender has an influence on mobile banking adoption, although there is a gap where women dominate over men.

Hipotesis Penelitian

Based on the exposure of the previous literature, the research carries the TAM model and subjective norm variables as a reference to describe user attitudes toward mobile banking adoption to find demographic differences in the adoption and use of mobile banking applications. The research hypothesis is as follows:

- H1 : Perceived usefulness affects behavioral intention
- H2 : Perceived ease of use affects behavioral intentions
- H3 : Subjective norms affect behavioral intentions
- H4 : Perceived usefulness affects actual use
- H5 : Perceived ease of use affects actual use
- H6 : Subjective norms affect actual use
- H7 : Behavioural intention affects actual use
- H8 : Perceived usefulness affects actual use through behavioral intentions
- H9 : Perceived ease of use affects actual use through behavioral intention
- H10 : Subjective norms affect actual use through behavioral intentions
- H11 : Gender moderates perceived usefulness on behavioral intentions
- H12 : Gender moderates perceived ease of use on behavioral intentions
- H13 : Gender moderates subjective norms on behavioral intentions

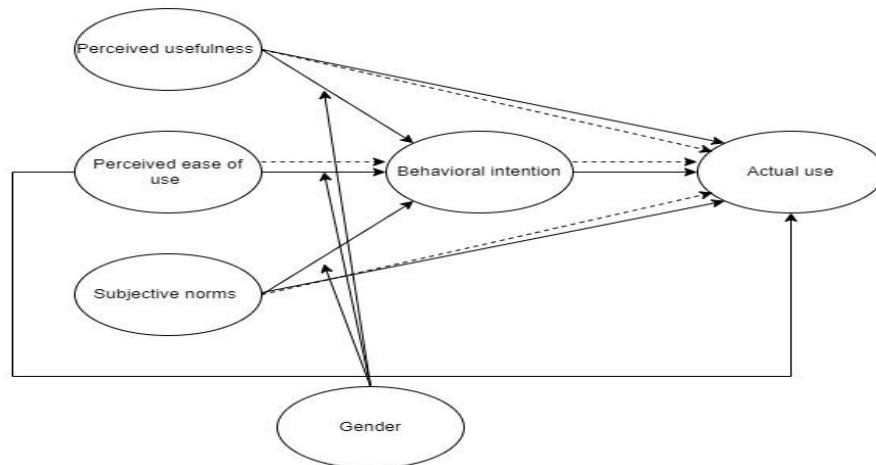


Figure 1 Research Model

III. Material And Methods

The method used in this research is quantitative. The objects in this study are all variables to be studied, including variables of perceived usefulness, perceived ease of use, subjective norms, behavioral intentions, and actual use in the adoption and use of mobile banking applications in Indonesia. This research uses descriptive and verification approaches. The sample selection in this study used non-probability sampling techniques using a purposive sampling approach with the criteria of mobile banking application users domiciled in Jabodetabek and at least once using the mobile banking application, for a total of 200 samples. The test method used in testing the hypothesis in this study uses a mediated path model, the Sobel Test, and moderated regression analysis (MRA). And the data was tested using the Statistical Package for the Social Sciences (SPSS) version 26 application.

Hasil dan Pembahasan

In this study, researchers distributed 200 electronic questionnaires via Google Form to users of mobile banking applications in the Jabodetabek area, with a total of 25 questions. In measuring respondents' perceptions, this study uses a Likert scale; the scale varies from 1: strongly disagree" to 5: strongly agree". The profile of respondents in the study is distinguished by gender, domicile, education level, status, age, and amount of pocket money (or income, if already working). The following is an analysis of the respondent's profile:

Tabel 1. Profil Responden

Respondent Identity	Category	Total	Percentage (%)
Gender	Male	69	34%
	Female	131	66%
Domicile	Jakarta	38	19%
	Bogor	42	21%
	Depok	23	11%
	Tangerang	83	42%
	Bekasi	14	7%
Education Level	Senior Highschool	41	20%
	Diploma	12	6%
	Bachelor (S1)	102	51%
	Postgraduate (S2 / S3)	45	23%
Status	Student	42	21%
	Teacher	12	6%
	Self-employed	16	8%
	civil servant	6	3%
	Housewife	7	3%
	Lecturer	24	12%
	Employee	93	47%
Age	18 - 23 years	39	19%
	24 - 29 years	96	48%
	30 - 35 years	19	10%
	More than 36 years old	46	23%
Amount of pocket money (or income, if employed)	Less than Rp. 3.000.000	65	32%
	Rp. 3.000.000 – Rp. 6.000.000	78	39%
	Rp. 6.000.000 – Rp. 9.000.000	25	13%
	Rp. 9.000.000 – Rp. 12.000.000	17	9%
	More than Rp. 12.000.000	15	7%

Validity Test Result

The validity test was carried out using Pearson Product Moment. It is said to be valid if the value of $r_{count} > r_{table}$, and it is said to be invalid if the value of $r_{count} < r_{table}$. The r_{table} value at a significant level of 5% (0.05) is 0.361, with the amount of data (n) being 30. The following are the results of the validity test.

Table 2 : Validity Test Result

Questions	r_{count}	r_{table}	Result
PU1	0,904	0,361	Valid
PU2	0,895	0,361	Valid
PU3	0,814	0,361	Valid
PU4	0,888	0,361	Valid
PU5	0,655	0,361	Valid
PEOU1	0,817	0,361	Valid
PEOU2	0,920	0,361	Valid
PEOU3	0,852	0,361	Valid
PEOU4	0,920	0,361	Valid
PEOU5	0,823	0,361	Valid
SN1	0,895	0,361	Valid
SN2	0,908	0,361	Valid
SN3	0,884	0,361	Valid
SN4	0,909	0,361	Valid
SN5	0,768	0,361	Valid
BI1	0,745	0,361	Valid
BI2	0,896	0,361	Valid
BI3	0,885	0,361	Valid
BI4	0,811	0,361	Valid
BI5	0,902	0,361	Valid
AU1	0,886	0,361	Valid
AU2	0,893	0,361	Valid
AU3	0,920	0,361	Valid
AU4	0,804	0,361	Valid
AU5	0,855	0,361	Valid

Source : Data processed by the authors using SPSS

Based on table 2, it can be seen that the r_{count} value on the question items of each variable is greater than the significant r_{table} value 5% (0,05). So it can be concluded that the statement items for each variable are valid so that they can be used as research instruments.

Reliability Test Results

Test reliability by looking at the Cronbach's alpha (α) value. If the Cronbach's alpha value is > 0.70 , the latent variable is said to be reliable.

Table 3 : Reliability Test Results

Variables	r_{table} Value	Cronbach's Alpha value	Result
Perceived Usefulness	0,70	0,892	Reliabel
Perceived Ease of Use	0,70	0,906	Reliabel
Subjective Norms	0,70	0,921	Reliabel
Behavioural Intention	0,70	0,901	Reliabel
Actual Use	0,70	0,921	Reliabel

Source : Data processed by the authors using SPSS

Based on Table 3, it can be seen that the latent variable Cronbach's alpha value is greater than 0.070. So it can be concluded that each latent variable is reliable, so each latent variable can be used as a research instrument.

Path Analysis Test Results (Mediated Path Model)

In knowing the significant value of path analysis, namely by comparing the probability value (5% / 0.05) with the sig. probability value of the calculation results, which are used as the basis for decision-making. The following are the results of the path analysis of substructure I:

Table 4 : Results of Path Analysis of Substructure I

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.617 ^a	0,381	0,371	2,148
a. Predictors: (Constant), Subjective Norms, Perceived Ease of Use, Perceived Usefulness				

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5,617	1,266		4,437	0,000
	Perceived Usefulness	0,236	0,071	0,247	3,315	0,001
	Perceived Ease of Use	0,217	0,064	0,228	3,413	0,001
	Subjective Norms	0,247	0,075	0,266	3,273	0,001

a. Dependent Variable: Behavioural Intention

Source : Data processed by the authors using SPSS

Based on table 4, the Sig. value in the coefficients table shows that in the perceived usefulness variable, the Sig value < 0.05, the perceived ease of use value Sig. < 0.05, and subjective norms Sig value. < 0.05. So it can be concluded that there is a direct effect of the variable relationship between perceived usefulness, perceived ease of use, and subjective norms on behavioral intention.

The value of the path coefficient can be seen in the Standardized Coefficients Beta column. The path coefficient value of perceived usefulness on behavioral intention is 0.247. The path coefficient value of perceived ease of use on behavioral intention is 0.228, and the path coefficient value of subjective norms on behavioral intention is 0.226. The magnitude of the R Square value contained in the model summary table is 0.381; this shows that the contribution of the influence of perceived usefulness, perceived ease of use, and subjective norms on the behavioral intention variable is 38.1%, while the rest is the contribution of other variables not included in the study of 61.9%. To obtain the value of e1, it can be found using the formula $e1 = \sqrt{1-0.381} = 0.7868$. Then the sub-structure I path analysis diagram is obtained as follows:

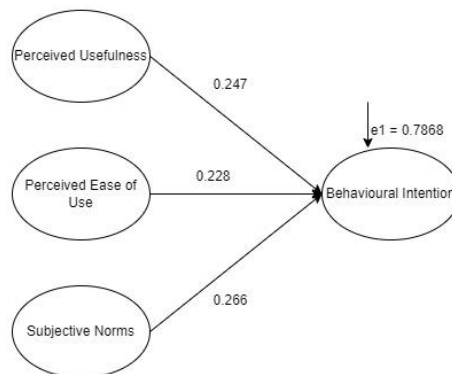


Figure 2 Empirical Relationship of Substructure I

The following are the results of the path analysis of substructure II :

Table 5 Results of Path Analysis of Substructure II

Model Summary						
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
1	.733 ^a	0,538	0,528	1,900		
a. Predictors: (Constant), Behavioural Intention, Perceived Ease of Use, Perceived Usefulness , Subjective Norms						
Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2,378	1,175		2,024	0,044
	Perceived Usefulness	0,138	0,065	0,141	2,130	0,034
	Perceived Ease of Use	0,218	0,058	0,224	3,762	0,000
	Subjective Norms	0,310	0,068	0,328	4,534	0,000
	Behavioural Intention	0,215	0,063	0,210	3,397	0,001

a. Dependent Variable: Actual Use

Source : Data processed by the authors using SPSS

Based on Table 5, the Sig. value in the Coefficients table shows that in the perceived usefulness variable, the Sig value < 0.05, perceived ease of use value is Sig. < 0.05, the subjective norm value is Sig. < 0.05, and the behavioral values are Sig. < 0.05. So it can be concluded that there is a direct influence on the variable relationship between perceived usefulness, perceived ease of use, subjective norms, and behavioral intentions on actual use.

The value of the path coefficient can be seen in the Standardized Coefficients Beta column. The path coefficient value of perceived usefulness based on actual use is 0.141. The path coefficient value of perceived ease of use on actual use is 0.224. The path coefficient value of subjective norms on actual use is 0.328, and the path coefficient value of behavioral intention on actual use is 0.210. The magnitude of the R Square value contained in the model summary table is 0.528; this shows that the contribution of the influence of the variables of perceived usefulness, perceived ease of use, subjective norms, and behavioral intentions on actual use is 52.8%, while the rest is the contribution of other variables not included in the study of 47.2%. To obtain the value of e2, it can be found using the formula $e1 = \sqrt{1-0.528} = 0.6870$. Then the sub-structure II path analysis diagram is obtained as follows:

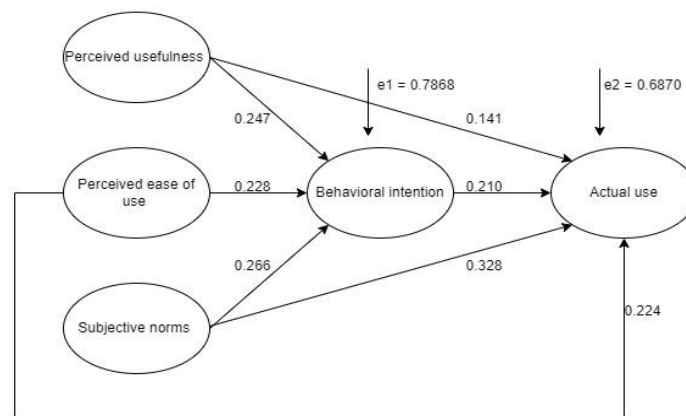


Figure 3 Empirical Relationship of Substructure II

Sobel Test Results

The Sobel test is used to determine the strength of the indirect effect of the independent variable on the dependent variable through the intervening or mediating variable. In obtaining the results of the Sobel test, an online Sobel calculator is used. If the p-value is < 0.05 significant level, it means that there is a mediating effect, and if the p-value is > 0.05 significant level, it means that there is no mediating effect. The following are the results of the Sobel test for regression model I:

Table 6 : Sobel Test Results: Regression Model I

Variables	Unstandardized Coefficients	
	B	Std. Error
Perceived usefulness on behavioral intention	0.236 (α)	0.071 ($s\alpha$)
Behavioral intention toward actual use	0.215 (b)	0.063 (sb)
Sobel Test Results (P-Value)	0.017	

α , path of the independent variable with the mediating variable; b , path of the mediating variable with the dependent variable; $s\alpha$, standar error koefisien α ; standar error koefisien b

Source: data processed by author

Based on Table 6, the P-value < 0.05, it can be concluded that the perceived usefulness variable indirectly affects actual use through behavioral intention as a mediating or intervening variable.

The following are the results of the regression model II Sobel test:

Table 7 : Sobel Test Results: Regression Model II

Variables	Unstandardized Coefficients	
	B	Std. Error
Perceived ease of use on behavioral intention	0.217 (α)	0.064 ($s\alpha$)
Behavioral intention toward actual use	0.215 (b)	0.063 (sb)
Sobel Test Results (P-Value)	0.016	

α , path of the independent variable with the mediating variable; b , path of the mediating variable with the dependent variable; $s\alpha$, standar error koefisien α ; standar error koefisien b

Source: data processed by author

Based on Table 7, the P-value < 0.05, it can be concluded that the perceived ease of use variable indirectly affects actual use through behavioral intention as a mediating or intervening variable.

The following are the results of the regression model III Sobel test:

Table 8 : Sobel Test Results: Regression Model III

Variabel	Unstandardized Coefficients	
	B	Std. Error
Subjective Norms on behavioral intention	0.247 (α)	0.075 ($s\alpha$)
Behavioral intention toward actual use	0.215 (b)	0.063 (sb)
Sobel Test Results (P-Value)	0.017	

α , path of the independent variable with the mediating variable; b , path of the mediating variable with the dependent variable; $s\alpha$, standar error koefisien α ; standar error koefisien b

Source: data processed by author

Based on Table 8, the P-value < 0.05, it can be concluded that the subjective norms variable indirectly affects actual use through behavioral intention as a mediating or intervening variable.

Moderation Regression Analysis Test Results

MRA, or Moderated Regression Analysis, is a special application of multiple linear regression that involves the interaction of regression equations with two or more free variables. Moderation occurs when the relationship between two or more variables depends on the third variable. A third variable is called a moderation variable or moderator. Moderation is a variable that can strengthen or weaken the relationship between an independent variable and a dependent variable. Here are the results of the gender moderation regression analysis:

Table 9 : Regression Equation Results Before Moderation

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.617 ^a	.381	.371	2.148
a. Predictors: (Constant), Subjective Norms, Perceived Ease of Use, Perceived Usefulness				

Source : Data processed by the authors using SPSS

Table 10 : Regression Equation After Before Moderation

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.973 ^a	.947	.945	.636
a. Predictors: (Constant), Perceived Ease of Use, Perceived Usefulness, Subjective Norms, Gender, Perceived Usefulness*Gender, Perceived Ease of Use*Gender, Subjective Norms*Gender				

Source : Data processed by the authors using SPSS

In table 9, the R square value in the first regression equation is 0.381, so it can be said that the variables of perceived usefulness, perceived ease of use, and subjective norms affect the behavioral intention variable by 38.1%. In table 10, after the interaction of the gender variable, the R square value increases by 0.947, or 94.7%. So it can be concluded that the existence of the gender variable as a moderating variable strengthens the relationship between the variables of perceived usefulness, perceived ease of use, and subjective norms on behavioral intention.

IV. Discussion

The Effect of Perceived Usefulness on Behavioral Intention

The first hypothesis shows the effect of perceived usefulness on behavioural intentions. This is shown in table 4. where the significant value is 0.001. This significant value is smaller than 0.05, so it can be concluded that there is a direct influence on the relationship between perceived usefulness and behavioural intentions. The

perceived usefulness felt by respondents or users in adopting mobile banking applications states that mobile banking applications help in the work performance of respondents or users, mobile banking applications are used for financial and banking transaction purposes, save time, transactions can be done anywhere and anytime, and save costs. This statement raises the intention of respondents or users to adopt mobile banking for financial and banking transactions. The results of this study are in line with research by Rehman, Omar, Zabri and Lohana (2019) which states that perceived usefulness affects the use of mobile banking.

The Effect of Perceived Ease of Use on Behavioral Intention

The second hypothesis shows the effect of perceived ease of use on behavioral intentions. This is shown in Table 4, where the significant value is 0.001. This significant value is smaller than 0.05, so it can be concluded that there is a direct influence on the relationship between perceived ease of use and behavioral intentions. The perceived ease of use felt by respondents or users in adopting mobile banking applications states that it is easy to download and install mobile banking applications for use, easy to learn and understand, easy to do the work required using mobile banking applications, easy to complete financial and banking transactions more quickly, and easy to be skilled in using mobile banking applications. This statement raises the intention of respondents or users to adopt mobile banking applications in financial and banking transactions. The results of this study are in line with Singh and Srivastava's research (2020), which found that perceived ease of use has a significant influence on customer behavioral intentions to use mobile banking.

The Effect of Subjective Norms on Behavioral Intention

The third hypothesis shows the effect of subjective norms on behavioral intentions. This is shown in Table 4, where the significant value is 0.001. This significant value is smaller than 0.05, so it can be concluded that there is a direct influence on the relationship between subjective norms and behavioral intentions. Subjective norms provide a view of respondents or users in adopting mobile banking applications, such as family members who suggest using mobile banking applications for financial and banking transaction purposes; my colleagues influence me because friends also use mobile banking applications; important people in the user's life encourage them to use mobile banking applications; and people whose opinions are valued by users prefer me to use mobile banking. This has an impact on users intentions to adopt mobile banking applications for financial and banking transactions. The results of this study are in line with the research of Kumar, Dhingra, Batra, and Purohit (2020), where subjective norms have a statistically significant positive effect on mobile banking adoption intentions.

The Effect of Perceived Usefulness on Actual Use

The fourth hypothesis shows the effect of perceived usefulness on actual use. This is shown in table 5, where the significant value is 0.034. This significant value is smaller than 0.05, so it can be concluded that there is a direct influence on the relationship between perceived usefulness and actual use. The perceived usefulness felt by respondents or users also has an impact on the actual use of mobile banking applications. Reinforced in statements such as using mobile banking applications saves time and effort, learning mobile banking applications is easy, using mobile banking applications in routines and helping productivity, interactions with mobile banking applications are clear and easy to understand and mobile banking applications are easy to use. The results of this study are in line with the research of Owusu, Bekoe, Addo-Yobo and Otieku (2021) where perceived usefulness has an impact on the direct use of mobile banking.

The Effect of Perceived Ease of Use on Actual Use

The fifth hypothesis shows the effect of perceived ease of use on actual use. This is shown in Table 5, where the significant value is 0.000. This significant value is smaller than 0.05, so it can be concluded that there is a direct influence on the relationship between perceived ease of use and actual use. The perceived ease of use felt by respondents or users in adopting mobile banking applications in financial and banking transactions also has an impact on actual use, such as the fact that using mobile banking applications saves time and effort, learning mobile banking applications is easy, using mobile banking applications in routines and helping productivity, interactions with mobile banking applications are quite clear and easy to understand, and mobile banking applications are easy to use. The results of this study are in line with the research of Hong, I. B. (2019), where perceived ease of use affects the direct use of mobile banking.

The Effect of Subjective Norms on Actual Use

The results of the sixth hypothesis show the effect of subjective norms on actual use. This is shown in table 5, where the significant value is 0.000. This significant value is smaller than 0.05, so it can be concluded that there is a direct influence on the relationship between subjective norms on actual use. Subjective norms influence respondents or users in the actual use of the mobile banking application. This is supported by statements such as using the mobile banking application saves time and effort, learning the mobile banking application is easy, using the mobile banking application in routine and helps productivity, interactions with the mobile banking

application are clear and easy to understand and the mobile banking application is easy to use. The results of this study are in line with the research of Elhajjar and Ouaida (2020) where there is an influence of subjective norms on the direct use of mobile banking.

The Effect of Behavioral Intention on Actual Use

The seventh hypothesis shows behavioral intention towards actual use. This is shown in Table 5, where the significant value is 0.001. This significant value is smaller than 0.05, so it can be concluded that there is a direct influence on the relationship between behavioral intention and actual use. The existence of intentions on the part of respondents or users in adopting mobile banking applications is clarified by statements of intending to use mobile banking applications if they have access, for the purposes of financial and banking transactions, intending to advise people to use mobile banking applications, and intending to reuse mobile banking applications for the purposes of future financial and banking transactions. The willingness to use mobile banking applications is quite high. The results of this study are in line with the research of Abu-Taieh, Al-Hadid, Abu-Tayeh, Masa'deh, Alkhawaldeh, Khwaldeh, and Alrowwad (2022), where behavioral intentions influence the direct use of mobile banking.

The Effect of Perceived Usefulness on Actual Use through Behavioural Intention

The second hypothesis shows perceived usefulness based on actual use through behavioral intentions. This is shown in the Sobel test results of the first regression model in Table 6. The P-value of 0.017 is smaller than the significant level of 0.05. So it can be concluded that perceived usefulness indirectly affects actual use through behavioral intentions. Behavioural intention is able to be a mediating variable for perceived usefulness and actual use. This shows that the perceived usefulness felt by users raises the intention to adopt mobile banking applications for financial and banking transactions, and this intention manifests actual or real use in using mobile banking applications for financial and banking transactions. The results of this study are in line with the research of Mutahar, Daud, Ramayah, Putit, and Isaac (2017), where intention is able to mediate the use of mobile banking.

The Effect of Perceived Ease of Use on Actual Use through Behavioural Intention

The ninth hypothesis shows the effect of perceived ease of use on actual use through behavioral intentions. This is shown in the results of the Sobel test of the first regression model in Table 7. The P-value of 0.016 is smaller than the significant level of 0.05. So it can be concluded that the perceived ease of use indirectly affects actual use through behavioral intention. Behavioural intention is able to become a mediating variable for perceived ease of use on actual use. The ease felt by respondents or users raises the intention to adopt mobile banking applications and use them in reality for financial and banking transactions. The results of this study are in line with research by Altin Gumussoy Kaya and Ozlu (2018), which states that intention provides encouragement for adopting mobile banking.

The Effect of Subjective Norms of Use on Actual Use through Behavioural Intentions

The ninth hypothesis shows subjective norms based on actual use through behavioral intentions. This is shown in the Sobel test results of the first regression model in Table 8. The P-value of 0.017 is smaller than the significant level of 0.05. So it can be concluded that subjective norms do not affect actual use through behavioral intentions. Behavioral intention is able to be a mediating variable for subjective norms on actual use. Subjective norms encourage respondents or users with principles or thoughts through family members, coworkers, friendships, and people who are important in their lives who embody the intention to adopt mobile banking applications and use them in reality for financial and banking transactions. These results are in line with the research of Ho, Wu, Lee, and Pham (2020), who found that there is an indirect influence on intention to use mobile banking applications.

Gender moderates Perceived Usefulness, Perceived Ease of Use, and Subjective Norms on Behavioural Intention.

Hypotheses eleven, twelve, and thirteen show a strong or weak moderating relationship between gender and perceived usefulness, perceived ease of use, and subjective norms on behavioral intentions. The results of the moderation test can be seen in the R square numbers in tables 9 and 10. Looking at the R squared value in Table 9, of 0.381, or 38.1%. The R square value in Table 10 is 0.947, or 94.7%. This increases the value of R Square; it can be interpreted that there is strong moderation by gender on perceived usefulness, perceived ease of use, and subjective norms on behavioral intentions, which is dominated by the female gender. These results are in line with Chawla and Joshi's (2018) research which shows gender to be a moderating variable.

V. Conclusion

Based on the study's research findings, analysis, and hypothesis testing, the following conclusions may be drawn:

1. Variables of perceived usefulness, perceived ease of use, and subjective norms have a direct effect on behavioural intention in adopting the use of mobile banking applications in Jabodetabek.
2. The variables of perceived usefulness, perceived ease of use, subjective norms, and behavioral intentions have a direct effect on actual use of mobile banking applications in Jabodetabek.
3. The behavioral intention variable becomes a mediating variable in the relationship between the variables of perceived usefulness, perceived ease of use, and subjective norms on actual use of mobile banking applications in Jabodetabek.
4. Gender is able to strongly moderate the relationship between perceived usefulness, perceived ease of use, and subjective norms on behavioral intention in adopting the use of mobile banking applications in Jabodetabek.

VI. Implication

Empirical implications indicate that the model in the study makes a major contribution to the adoption and use of mobile banking applications. The perceived usefulness variable and the perceived ease of use variable perceived by the user, as well as the subjective norm variable, affect the principles of the user so as to create an intention to adopt mobile banking applications for financial and banking transactions. From the intention possessed by the user, it is realized by actual or real use in using the mobile banking application. This shows that behavioral intentions play a role in adopting and using mobile banking applications in the Jabodetabek area. And male and female gender moderate (strengthen) the relationship to behavioral intentions in adopting mobile banking applications for financial and banking transactions.

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