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Implementation of TRA and TPB on Indonesian Banking Industry

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Abstract:

The development of the banking and technology industries into one part that cannot be separated, one of which is the rise of internet banking. It is not yet familiar internet banking among the community should make bankers create strategies to make better known internet banking. In this study, several factors are thought to have an influence on the intention to use Internet banking is the attitude, subjective norm, behavior control, ease of use, usefulness and risks. But just the attitude of these factors does not affect the intention to use internet banking customers. The results of this study are expected to be a reference for the banking industries in the development of internet banking application that is owned and development is done in order to attract customers to use these applications.

Keywords: TRA, TPB, attitude, subjective norm, perceived behavior control, perceived ease of use, usefulness, perceived risk, internet banking

1. Introduction

The development of technology is very rapidly marked by the emergence of the Internet as one source of data that is very easy to obtain. The presence of the internet is increasingly rapidly marked by the number of Internet users in Indonesia who ranked number six with users reached 102.8 million users in 2016 (keminfo.go.id). But the development of internet users is contrary to the number of internet banking users. According to Sari (2011) the rapid growth of internet is not accompanied by the increasing number of internet banking users. It is then considered to be a problem for the banking industry because internet banking is actually helpful to facilitate customers and improve service efficiency for banks (Riswandi, 2005). It is also disclosed in a circular letter from Bank Indonesia concerning the activity of bank service through internet (internet banking).

According Riswandi (2005) internet banking is the use of internet media by banks to promote and simultaneously transact online in research conducted by Maharsi and Mulyadi (2006) internet banking provides convenience in conducting banking transactions. Irmadhani and Nugroho (2011) stated that internet banking services implemented in the banking industry through bank sites can be accessed by customers anytime and anywhere without having to come kebank. In addition, the features contained in the bank's website, among others, the account mutation, check balances, transfers, and bill payments can be done if you have a connection on the internet. According to the research of Pertiwi and Adhivinna in 2014 the existence of internet banking will be able to save the cost to be issued by banks such as opening ATMs, branch offices and others. Based on data from vision sharing in 2015, the largest number of internet banking users is internet banking from Bank Central Asia of 3.6 million people. BCA became the internet banking market leader in Indonesia with its internet banking service called "klikbca" with website address www.klikbca.com. Even based on BCA data in 2010, BCA received two awards in the form of BCA banking quality and internet service performance in the event (Banking Service Excellence Award, 2010). Then the second largest customer of internet banking users is Bank Mandiri of 1.5 million people. Internet Banking service in standalone bank named (Internet Bank Mandiri) with website address <http://ib.bankmandiri.co.id>.

Looking at the benefits of internet banking is very profitable for the banking industry to be able to increase the number of internet banking users, while for customers will provide easy access to banking services without having to interact directly with the providers of banking services. Therefore, companies need to socialize the use of internet banking among customers so that the desire to use internet banking increases. Based on the results of previous research there are various factors that influence the intention to use internet banking such as attitude, subjective norm, behavior control, perception of usability, risk, ease of use (Nasri and Charfeddine, 2012; Danashgadah & Yildirim, 2014). The results of research conducted by Nasrie and Cherfeddine on factors that affect the intention to use internet banking in Tunisia stated that the intention to use internet banking is influenced by attitude, subjective norms and behavior control. Attitude is a tendency of someone to like or dislike something that will then affect the desire to perform certain actions. The results of this study are similar to the results of research conducted by Angelina & Japarianto (2014) although the object of research is different.

Other research results stated that there are other factors that influence the desire of customers to use internet banking that is perception of usability, ease of use and internet banking credibility (Maharsi and Mulyadi, 2007). The benefit perception factor has a significant positive effect on the intention of using internet banking, if one feels that using internet banking provides benefits it will arise the desire to use internet banking (Sulastini and Warmika, 2014). The results of Pertiwi and Adhivinna research in 2014 stated that the

perceptive risk dominates the influence on the intention of using internet banking compared to trust. This is because the risk that will be experienced by the smaller the customer the greater the confidence of customers to use internet banking.

2. Theoretical Basis

2.1. Theory of Reason Action (TRA) and Theory of Planned Behavior

Hypothesis mining in this research is based on Theory of Reason Action (TRA) which later developed into Theory of Planned Behavior (TPB). Both theories are theories that learn about attitude (attitude) and behavior (behavior). Ajzen & Fishbein (1975) in Jogiyanto (2008: 26) states the intention is influenced from two factors, namely personal factors and social factors. Social factors one of them is the subjective norm and attitude

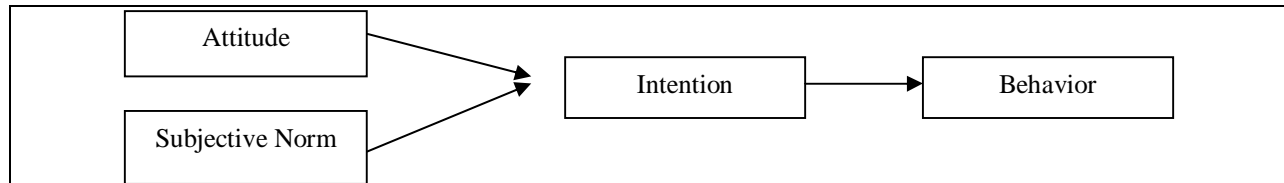


Figure 1: Theory of Reasoned Action (TRA)

Based on the theory of planned behavior (TPB) there are several factors that affect the intention and behavior are:

a) Behavioral Beliefs

Beliefs about possible behavior. In TRA, this component is called attitude toward behavior.

b) Normative Beliefs

Beliefs about the normative expectations of others and the motivation to agree on those expectations. In TRA, this component is called the subjective norm of behavior.

c) Control Beliefs

Belief in the existence of factors that will facilitate or hinder the performance of the behavior and the perceived power of these factors. In TRA, this construct does not exist and is added to TPB as a behavioral control of perceptions.

The relationship between TPB constructs can be described as follows:

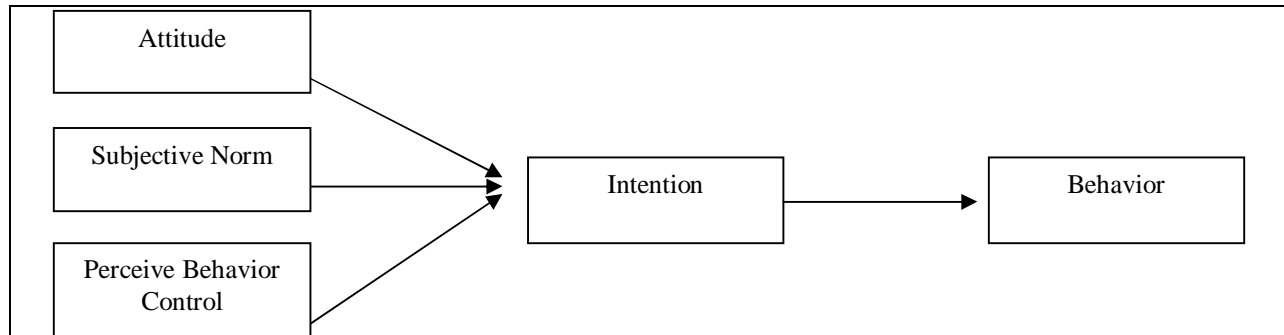


Figure 2: Theory of Planned Behavior

Source: Jogiyanto, 2008

In this research attitude is a tendency in behaving in a way fun or not to a particular object (Schiffman and Kanuk, 2008: 222). Sedang Ajzen & Fishbein (1975) in Jogiyanto (2008: 36) defines attitudes as feelings that a person feels to accept or reject a particular object. The subjective norm is a person's perception of the opinion of others that influence the intention to do something Is being considered (Dreana, 2012). Ajzen & Fishbein (1975) in Jogiyanto (2008: 43) attitude and subjective norm affect the intention. Intention is the main determinant of behavior. Although Ajzen & Fishbein (1975) in Jogiyanto (2008: 46) claims that attitudes (attitude), subjective norms and intention are the main determinants of behavior, they do not rule out the possible variables Can also affect. However, this variable is called an external variable and indirectly influences. Examples of external variables are demographic variables, beliefs and attitudes toward objects.

The intensity of use and interaction between users and the system can also indicate the ease of use that Wibowo (2006) finds, the perception of the ease of use of a technology, is defined as a measure by which one believes that the technology can be easily understood and used. Perception of ease of use can reduce one's effort both time and energy to learn the system or technology because individuals believe that the system or technology is easy to understand (Irmadhani and Nugroho, 2011).

According to Venkatesh and Davis (2000) divide the perceived dimensions of ease of use as follows:

1. Individual interactions with the system clear and easy to understand (clear and understandable).
2. It does not take much effort to interact with the system (does not require a lot of mental effort).

3. Easy to use system (easy to use).
4. Easy to operate the system in accordance with what individuals want to do (easy to Get the system to do what he / she wants to do).

According to Featherman et al., (2010), in particular the risk perception is the subjective evaluative judgment of a consumer from the potential loss of private confidential privacy information, including the assessment of potential misuse of information that may lead to identity theft. There are some risks to worry about such as performance disruption, time spent, current state of the security system, and security guarantees (Cunningham et al., 2005). According to Irmadhani and Nugroho (2011) the use of internet banking customers in a bank, the perceptions of usefulness are related to productivity and the effectiveness of the system of usefulness or perceived benefits thoroughly to improve the user performance of the system. Defining Perceptions of utility as a construct of one's belief that the use of a particular technology will be able to improve their performance or work performance (Adamson and Shine, 2003). This research model is developed based on research conducted by Nasri and Cherffedine (2012), Danashgadeh and Yildirim (2014).

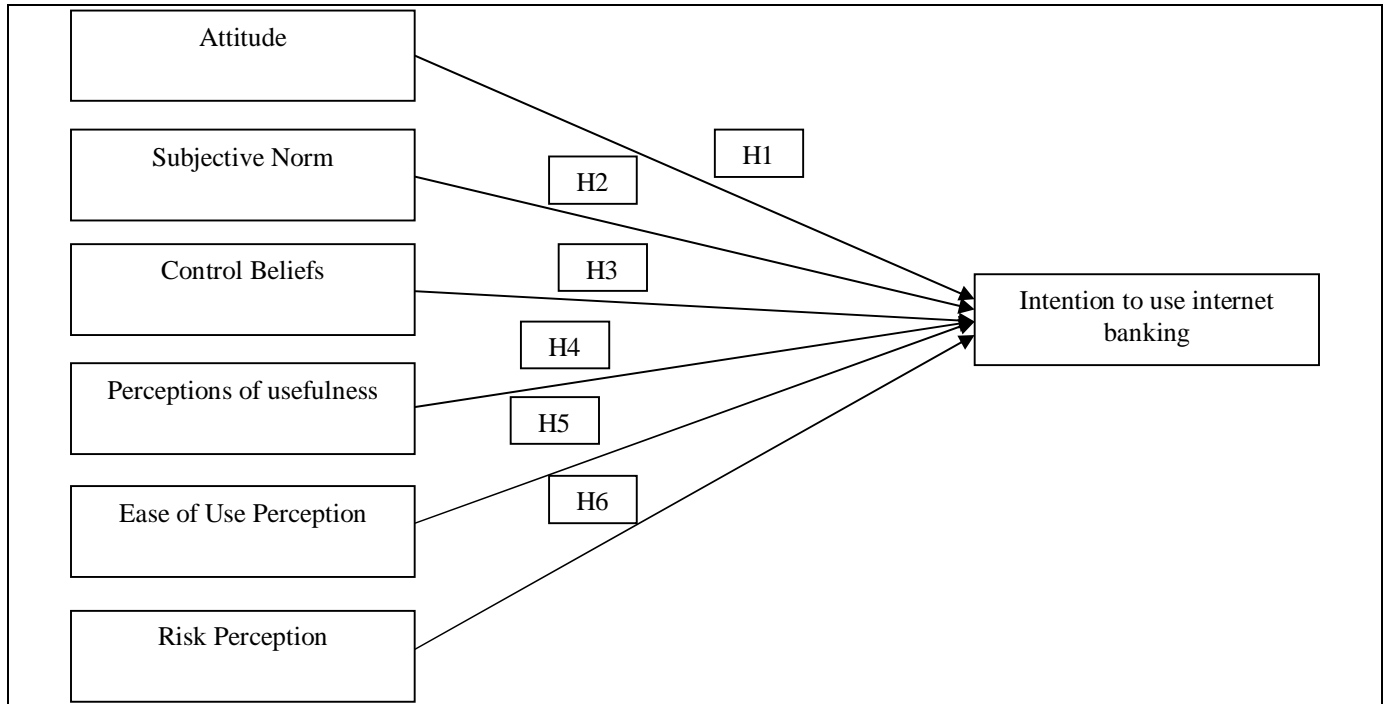


Figure 3: Conceptual Framework

3. Data Analysis

This research is a quantitative research with multiple linear regression with SPSS version 20.0. The population in this study are all Bank Central Asia (BCA) and Bank Mandiri customers in DKI Jakarta. The sampling technique was conducted with non-probability samples by purposive sampling. Purposive sampling is sampling with certain criteria that is customer from Bank Central Asia (BCA) or Bank Mandiri and live or domiciled in DKI Jakarta. The number of samples used in this study is 240 respondents. Here is a description of the demographic data of the respondents who successfully encountered:

Demographic Characteristics		Number of Respondents
A. Gender	Man	104
	Women	133
B. Age	Under 30 years	193
	31-40 years old	25
	Upper 40	12
c. Level Education	Senior High School	98
	Diploma	24
	Undergraduate	114
	Post Graduate	4
d. Bank	Bank Central Asia (BCA)	104
	Bank Mandiri	127
	Others	9

Table 1: Demographic Characteristics

Based on data above respondents are more commonly encountered are women with the number of 133 respondents. Meanwhile, respondents under the age of 30 dominated the internet banking users in Jakarta. This is in line with the number of respondents from the education level dominated by the level of undergraduate education with under 30 years of age. These data provide a picture that most internet banking users are young people and have a good educational background. The data can be an input for banks that want to popularize internet banking applications can make young people in productive age as the target market so that marketing planning can be more effective to touch the target market. The most frequent internet banking user is the user of Bank Mandiri, this provides an opportunity for Bank Mandiri to further improve the quality of service from Bank Mandiri's internet banking so that it can make the service as a superior service.

Before the data processed first tested the validity and reliability of all instruments used as a measuring tool for each variable. Validity test is done with factor analysis which makes factor loading value with value above 0.5 as the limit of the lowest validity value (Hair et al., 2010). The test results stated that all of the statements used to measure the variables that exist in this study have been valid because the value because the value of the resulting loading factor is above 0.5. Meanwhile, the test of reliability refers to the value of Cronbachalpha with a value above 0.6 and the test results state that all indicators used to measure the variable have been reliable because the value is above 0.6 (Hair et al., 2010).

Classic assumption test is done by four methods, namely normality test, multicollinearity, autocorrelation and heteroscedasticity. Normality test is done by referring to the result of p-plot diagram. Here is the result of p-plot that describes the normality of data in this study:

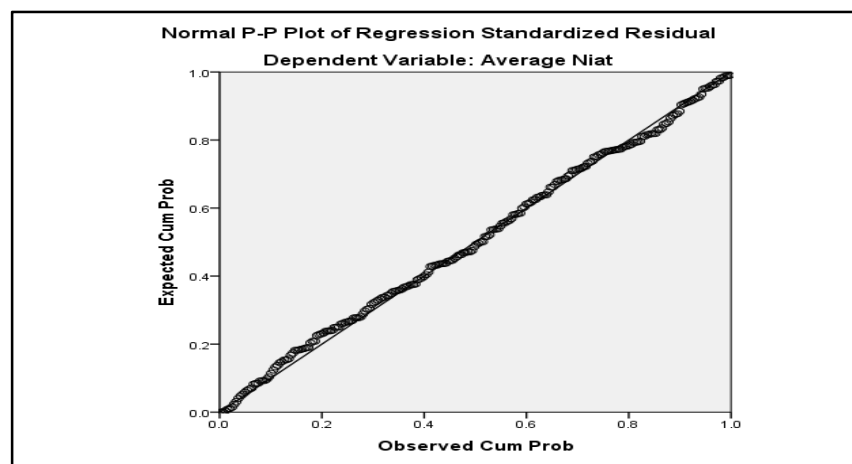


Figure 4: P-Plot

From the p-plot diagram it is seen that the lines are spread along the diagonal line so it can be said that the data in this study is normally distributed. The multicollinearity test refers to the Variance Inflation Factor (VIF) and Tolerance (TOL) values. The value of the TOL must be below 1 while the VIF value must be above 1. The VIF value of all independent variables is below 1 and the TOL value is more than 1, so it can be concluded that the data obtained in this study is free from multicollinearity (see table 2). While for heteroskedastis test seen with reference to scatter plot diagram, on scatterplot all point spread and do not form certain pattern so that can be concluded data of homoskedastisitas. The autocorrelation test is done by Durbin Watson value indicator where if the value is between -2 to +2 then it is said that the data does not have autocorrelation problem. Based on test results conducted Durbin Watson value of 1.8333 so it can be said the data in this study free autocorrelation.

4. Hypothesis Testing and Discussion

Based on the results of the t-test it is seen that the five proposed hypotheses proved that only the first hypothesis was rejected. Here are the results of partial tests that have been done:

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-.237	.395		-.600	.549		
	Attitudes	.038	.072	.031	.535	.593	.771	1.297
	Subjective Norm	.169	.051	.177	3.291	.001	.884	1.131
	Behavior Control	.306	.065	.286	4.673	.000	.680	1.472
	Benefit Perception	.250	.083	.192	3.023	.003	.631	1.586
	Ease of Use	.207	.048	.243	4.337	.000	.813	1.230
	Risk	.113	.045	.132	2.527	.012	.941	1.063

a. Dependent Variable: Intention

Table 2: Partial Test Result

4.1. The Influence of Attitudes against Intention to Use Internet Banking

The first hypothesis that the influence of attitudes on the intention to use internet banking proved to be rejected. This is seen from the level of significance that is above the value of 0.05 is 0.593 and the value of t_{count} is smaller than the t_{table} that is worth 0.593. The results of this study contradict the results of previous research conducted by Nasri and Cherffedine (2012). This means a person's attitude either positive or negative does not encourage people to use internet banking.

4.2. The Influence of Subjective Norms against Intention to Use Internet Banking.

Hypothesis two is the influence of subjective norms on the intention to use internet banking. Partial test results state that the t_{count} value is 3.291 is greater than the value of t_{table} with significance level 0.001. Based on the niali can be concluded that the second hypothesis accepted. The results of this study support the results of research conducted by Nasri and Cherffedine, 2012.

4.3. The Influence of Behavior Control against Intention to Use Internet Banking

The third hypothesis is the effect of the perception of benefits on the intention to use internet banking. The partial test results state that the t_{count} is 4.637 larger than the t_{table} value with the significance level of 0,000 so that the hypothesis can be accepted. Based on the t_{count} value of the third hypotheses that have been formulated, which has the most influence on the intention to use internet banking is a behavior control variable. These results support the application of planned behavior theory in predicting the interest to use internet banking while supporting previous studies on the effect of behavioral control on the intention to use internet banking.

4.4. The Effect of Perception on the Benefits of Using Internet Banking

The fourth hypothesis is the effect of beneficial perception on the intention to use internet banking. The partial test results state that the t_{count} is 3.027 greater than the t_{table} value with the 0.03 significance level so that the fourth hypothesis is acceptable. From these results it can be concluded the benefits are very important for customers, when customers feel that internet banking has benefits then it will further increase the desire to use internet banking. Perceptions of benefit relate to the productivity and effectiveness of the system of overall usefulness or benefits to improve the users' performance of the system (Irmadhani and Nugroho, 2011). The results of this study support research conducted by Maharsi and Mulyadi in 2007.

4.5. The Effect of Ease of Use on Intent to Use Internet Banking

The fifth hypothesis is the effect of perception of ease of use on the intention to use internet banking. Partial test results state that the t_{count} value is 4.337 is greater than the value of t_{table} with a significance level of 0.000. Based on the value can be concluded that the fifth hypothesis accepted. This significant relationship indicates that ease of use is very important for customers in influencing the intention of using the internet banking application. This is in accordance with Sulastini and Warmika (2014) which states that the perceived ease of use factor has a significant positive effect on the intention of using internet banking, people can feel inclined to use internet banking because it feels internet banking is easy to use. And according to research Wibowo (2006), which states that perceptions about the ease of use of a technology, is defined as a measure where one believes that the technology can be easily understood and used.

4.6. The Effects of Risk Perceptions on Intent to Use Internet Banking

The sixth hypothesis is the effect of risk perception on the intention to use internet banking. The partial test results state that the t_{count} value is 2.527 greater than the t_{table} value with the 0.012 significance level so that the sixth hypothesis is acceptable. Perceptions of risk to the intention of using internet banking increases if one feels the risk of internet banking usage can be minimized. The lower the risk, the more one's intention to use internet banking applications. Based on Cunningham et al., In 2005 there are some risks worried by customers such as performance disruption, time spent, current state of the security system, and security guarantees. Therefore, it is important that the internet banking service provider should pay attention to the security of the application in order to help increase the interest to use internet banking.

4.7. Anova Result

ANOVA ^a						
	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	39.765	6	6.628	27.466	.000 ^b
	Residual	54.775	227	.241		
	Total	94.540	233			

Table 3: ANOVA Result

Based on table 3 it can be seen that the result of anova stated that attitude variable, subjective norm, ease of use, behavior control, perception of benefit and risk perception have influence to intention to use internet banking. The significance value used as a reference is 0.05 compared to f arithmetic of 0.00 with a value of 27.466. In addition, also conducted a determination test conducted to determine the effect of all independent variables on the dependent variable. The value of determination is determined by the value of adjusted R square which in this study is worth 0.405 or 40.5%. These values explain the influence of all independent variables, namely

attitude, subjective norm, ease of use, behavior control, perception of benefits and perceptions of risk to the intention to use internet banking 40.5% of the rest of 59.5% influenced by other factors.

5. Conclusion and Suggestion

Based on the research result, it can be concluded that the intention to use internet banking is influenced by subjective norm, behavior control, benefit perception, perception of ease of use and risk perception, while attitude has no significant effect. The increase in internet banking users is expected to be one way to make efficiency. Efficiency can be one source of competitive advantage and excellence. The results of this study is expected to be one of the considerations for the banking industry in Indonesia in order to achieve competitive advantage that makes the bank to survive from the competition one of them must develop internet banking facilities well. If the bank wants to increase the number of internet banking users then it should pay attention to subjective norms, behavior control, perception of benefits, perceived ease of use and perceived risk perceived by the customer.

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