Acceptance of Banking Information Technology in PT BNI of Makassar

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Abstract: Various advantages offered by the use of internet banking, but some customers are still associated with conventional ways of doing that is through ATM transactions or queue. The research aimed to analyze trust, perceived ease of use, perceived usefulness and experience to intention to use internet banking. This research was conducted in PT BNI of Makassar. The data were obtained using questionnaire given to customers. The populations were customers of BNI Bank listed as service users of Internet banking. The sample was selected using simple random sampling technique. Hypotheses tested use of Partial Least Square (PLS) method by means of AMOS program. The results of the research indicate that among the eight hypotheses, four of them are significant, while the other four not significant. Trust has significant to perceived ease of use. Trust does not have significant to perceived usefulness. Trust has significant to intention to use internet banking. Perceived ease of use has significant to perceived usefulness. Perceived ease of use does not have significant to intention to use internet banking. Perceived usefulness does not significant to intention to use internet banking. Perceived ease of use has significant relationship with intention to use internet banking modernized by experience. Perceived usefulness does not have significant relationship with intention to use internet banking modernized by experience.

Keywords: *Internet Banking, Trust, Technology acceptance model, Intention to use internet banking, Experience*

1. Introduction

The development of information technology and telecommunications led to start the emergence of Internet-based business applications. One application that gets attention is *Internet Banking.* In Internet Banking, physical separation between banks and customers as well as the absence of physical interaction between the consumer and the bank employees led to a unique situation. Various advantages have been offered through the use of *internet banking,* but some customers are still bound by the conventional ways of doing that is through an ATM transaction or in line at the bank. The level of acceptance of *internet banking* services by customers can be influenced by several factors. Studies show that the cause of the lack of interest of the customer is more on the *behavioral.* Changing behavior cannot be made directly to behavior, but it should be known causes of such behavior. To understand the determinants of behavior, behavioral theory *(behavioral theory)* should be used. Davis et al. (1989) found TAM better explained want to receive technology compared with the TRA. Mathieson (1991) in his research concluded that TAM and TPB explain behavioral intentions well, but TAM explains the *attitude* (attitude) is better than TPB and TAM model is simpler than the TPB. Generally cannot be summed up one model is better than the other.

Some study comparing behavior theory, it was found that TAM is better explained want to receive the technology. *Technology Acceptance Model* first introduced by Davis (1986). This theory developed from *theory of Reasoned Action* or TRA by Ajzen & Fishbein (1980). TAM adds two main constructs into TRA models that perceived usefulness and perceived ease of use. Both these factors influence intention to use technology before finally created actual usage in everyday life *(actual Usage).* This study develops a model of TAM to include trusts as an external variable and *experience* as a moderating variable. This is why the experience taken into account in the formation of intentions (Ajzen & Fishbein, 1980). It is important to understand the behavior of experienced users. Based on the above, Do *trust* effect on the technology acceptance model moderated by *experience?* The purpose of this study was to examine and analyze the influence *trust* of the technology acceptance model moderated by *experience.*

2. Theoretical Framework

Accounting and Information Systems: Accounting as a medium for the company's financial information has a very large role. Such information will increasingly large role and benefits where such information can be generated in a fast and precise, and accurate. Accounting and information systems have a very close relationship. Vice versa, that the information systems that support the accounting function has always played a major role in the organization. The relationship expressed also by *the American Accounting Association* (1966) as follows: "In essence, the accounting information system. Clearly accounting is the application of the general theory of information on the problem of efficient economic operation. Accounting also helps the bulk of public information expressed quantitatively. In this context, accounting becomes part of the public information system of an entity that operates and also become part and a basic field that is limited by the concept of information. Individual behavioral factors involved in the use of information systems always require special attention in order to obtain an efficient system development. Many system design and equipment systems sold is not running and is not useful for not paying attention and taking account of human behavior. Good psychological factors that implement data processing in the system, as well as those who receive *the output* need to be considered. Psychological factors are important because if there is dissatisfaction in the work, then this dissatisfaction will be poured in the form impede the course of the information system.

Internet Banking: I*nternet banking* as one of the bank services that enable customers to obtain information, to communicate, and perform banking transactions through the Internet and not a bank that only organized banking services over the internet. In other words, a bank that has a website but cannot be used for transactions not included in *internet banking.* The new era of banking transactions enables customers to conduct transactions *online* any time. By using *internet banking* customers can expect at least do some activities such as check the account balance, transaction details, transfer between accounts or other activities.

***Theory of Reasoned Action* (TRA)**: TRA was proposed by Fishbein & Ajzen (1975, 1980). They argued that the intention to do or not do certain behavior is influenced by two basic determinants, the first dealing with an *attitude* (attitude *towards behavior)* and the other related to social influences that subjective norms *(norms subjective).* In an effort to reveal the influence of attitudes and subjective norms on intention to do or not behavior, TRA complement this with confidence *(beliefs).* He explained that the attitude comes from the belief of behavior *(behavioral beliefs),* while subjective norms derived from normative beliefs *(normative beliefs).*

**Figure 1: Theory of Reasoned Action (TRA)**
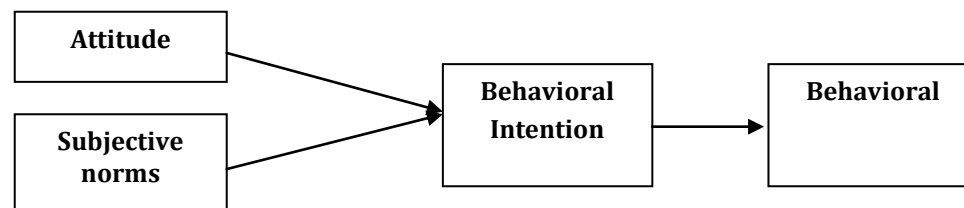
Source: Ajzen and Fishbein (1980). *Understanding Attitudes and Predicting Social Behavior.* Prentice-Hall. Englewood Cliffs. NJ.

Theory of Planned Behavior (TPB): TPB was proposed by Ajzen (1991) to improve on the predictive power of the theory of reasoned action by including perceived behavioral control. It has been applied to studies of the relations among beliefs, attitudes, behavioral intention. In the scheme is complete, the TPB can be described as follows:
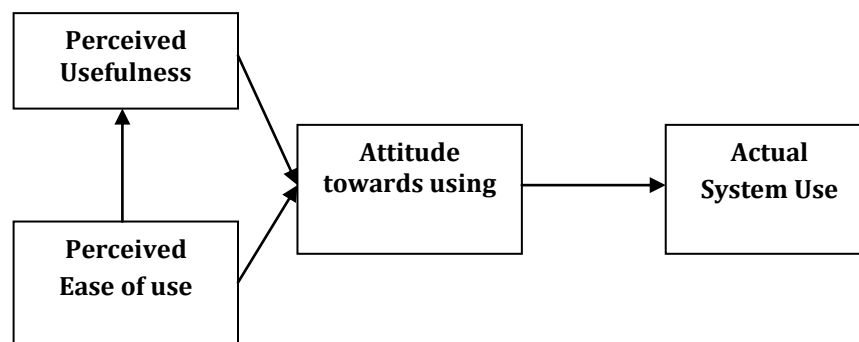
***Technology Acceptance Model* (TAM)**: TAM was proposed by Davis (1989) that models how users come to accept and use a technology. TAM is one the most influential extensions of Ajzen and Fisbein's theory of TRA in the literature. Davis only used the components of trust and attitude alone. TAM is presented in Figure 3.

Figure 2: Theory of Planned Behavior (TPB)

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┌─────────────┐
│  Attitudes  │
│ Toward the  │
│  Behavior   │
└─────────────┘
┌─────────────┐      ┌─────────────┐      ┌─────────────┐
│  Subjective │ ───► │  Intention  │ ───► │  Behavior   │
│    Norm     │      └─────────────┘      └─────────────┘
└─────────────┘
┌─────────────┐
│  Perceived  │
│  Behavioral │ - - - - - - - - - - - - ►
│   Control   │
└─────────────┘
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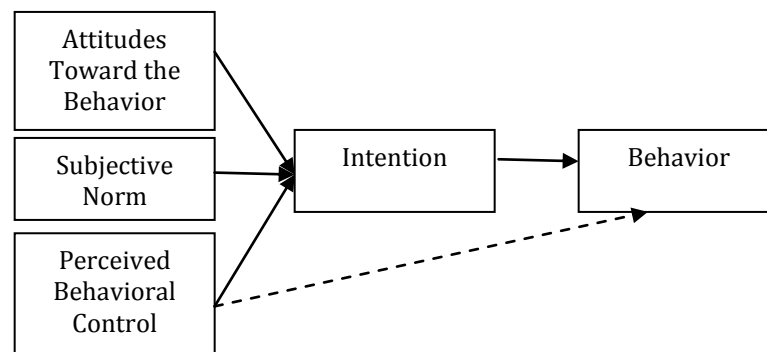
Source: Ajzen (1991). The theory of planned behavior. Organizational Behavior and Human Decision Processes

Figure 3: Technology Acceptance Model (TAM)

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┌─────────────┐
│ Perceived   │
│ Usefulness  │
└─────────────┘
                    ┌─────────────┐      ┌─────────────┐
                    │  Attitude   │ ───► │   Actual    │
                    │towards using│      │ System Use  │
                    └─────────────┘      └─────────────┘
┌─────────────┐
│ Perceived   │
│ Ease of use │
└─────────────┘
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Source: Davis (1986). "Technology Acceptance Model for Empirically Testing New End-user Information Systems Theory and Results"

TAM replaces many TRA's attitude measures with the two technology acceptance measures-ease of use and usefulness. TRA and TAM, both of which have strong behavioral elements, assume that when someone forms an intention to act, that they will be free to act without limitation.

Hypothesis Development: With respect to some previous studies and results, then proposed the following research hypothesis:

Hypothesis 1: Form a positive attitude and consequently internet banking acceptance, banks need to develop strategies that could improve the customer's trust in the underlying technology (Md-Noor & Pearson, 2007). Previous research shows that trust significant to technology acceptance. Reid, Michael and Yair (2008) in his research show that *trust* significant to *perceived usefulness* and *Perceived ease of use.* Al-Somali, Gholami & Clegg (2008) also conducted a study that showed that *trusts* positive and significant to intention to use *internet banking.*
H1a: *Trust* significant to *perceived ease of use*
H1b: Trust significant to *perceived usefulness*
H1 *c: Trust* significant to *Intention to use internet banking*

Hypothesis 2: *Perceived ease of use* is the degree to which a person believes that using a particular system does not require any effort *(free of effort)* (Davis et al., 1989).Someone customers will feel that the use of *internet banking* can be useful when such use is also easy for them (Wang et al., 2003). The easier the operation of i*nternet banking,* this will attract customers to continue using *internet banking.* With the

continuous use makes customers more could feel the usefulness of *internet banking* (al-Somali et al. (2008). Based on the above hypothesis is proposed as follows:

H 2a: *Perceived ease of use* significantly influence *perceived usefulness*

H2b: *Perceived ease of use* significantly influence *Intention to use internet banking*

Hypothesis 3: *Perceived usefulness* (PU) or the perception of the benefits defined as the degree to which a person believes that using a particular system would enhance its performance (Davis et al., 1989). Someone users will have a positive attitude towards *internet banking* in the form of acceptance when the user feels that the use of *internet banking* to benefit them (al-Somali et al., 2008).

H3: P*erceived usefulness* significant effect on *Intention to use internet banking*

Hypothesis 4: *Variables* used in the research *experience* and Gardner (2004). Research Taylor (1995) also showed between the users of the system experienced and they are inexperienced in determining whether to use the system. The results this study also found that *perceived usefulness* is the most powerful determinants influencing behavioral intention for less experienced group. The results of the study Igbaria (1995) showed that the experience of using computers will affect directly to the reception system. Mathieson (1991) found a relationship between experience expressed as a skill or expertise with the use of technology.

H4a: *Perceived ease of use* significantly influence *Intention to use* internet banking moderated by *Experience*

H4b: *Perceived usefulness* significantly influence *Intention to use* internet banking moderated by *Experience*

3. Data Analysis

Location of research conducted at PT BNI Makassar by distributing questionnaires to customers. The population of this study is a customer of Bank BNI registered as users of *internet banking* services. The sample selection is done by using *simple random sampling method.* The sample using Slovin formula, the results of 100 people, but the questionnaires were returned by 95 people. Hypotheses tested use of Partial Least Square (PLS) method by means of AMOS program

Figure 4: Model Research
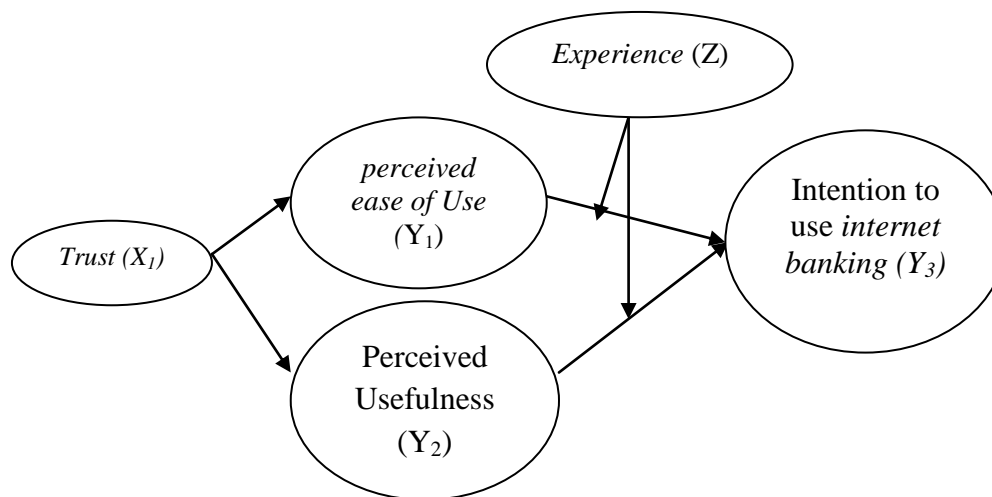
The regression equation is as follows:

$$Y_1 = a_0 + a_1 X_1 + e_1$$
$$Y_2 = \beta_0 + \beta_1 Y_1 + \beta_2 X_1 + e_2$$
$$Y_3 = \chi_0 + \chi_1 Y_1 + \chi_2 Y_2 + \chi_3 Z + \chi_4 X_1 + e_3$$

Where:

Y_1 = Perceived *ease of use*

Y_2 = *Perceived usefulness*

Y_3 = *Intention to use* internet banking

X_1 = *Trust*

Z = *Experience*

X_0, β_1, a_2 = Constants

$X_0, X_1, X_2, X_3, X_4, X_5, \beta_1, \beta_2, a_1,$ = Parameters to be estimated

Test Reliability: Reliability of the items tested by looking at doing Reliability Coefficient Alpha Analysis. If the alpha value> 0.7 for overall reliability of items in one variable is said to be reliable means to construct. Display SPSS output showed construct provides alpha value of 96.3% according to the criteria that can be said to be reliable.

Validity: Significance test is done by comparing the value of r count with r table for degree of freedom (df) = n -2, in this case is the number of samples. In this study number of sample (n) = 95 and the amount can be calculated 95-2= 93 and alpha = 0:05 obtained r table = 0201. The results showed all items positive value and r count larger than r table, then the item or question or indicators in this study is valid.

Criteria goodness Fit

Table 1: Results Goodness of Fit Structural

Index	Results
Chi Square	225.661
RMSEA	0.063
GFI	0.828
CMIN/DF	1.367
TLI	0.957
CFI	0.969

Recommended acceptance values <0.08, RMSEA value of 0.063 models showed a good level of fitness. GFI value close to 1 implies models tested have a good agreement. GFI value in this model is equal to 0828. Value CMIN / DF on this model is equal to 1.367 is a good indication as having a value of less than 2. *Tucker Lewis index* (TLI) is recommended> 0.9. The model proposed in this research showed a good level of conformity with TLI value of 0.957. CFI recommended value> 0.9, this research CFI value of 0.969 indicates that this model has a good agreement.

Hypothesis Testing: *Trust* (X_1) significant on *Perceived Ease of Use* (Y_1) with *t-statistic* greater than 1.99 is 4.462 with probability <0.05, and the coefficient of 1.121. *Trust* (X_1) not significant on *Perceived Usefulness* (Y_2), *t-statistic* values smaller than 1.99 is 1.580 with probability values> 0.05 and the coefficient of 0.430. *Trust* (X_1) significant on *Intention to Use internet banking* (Y_3) with *t-statistic* values greater than 1.99 is 2.908 with probability value <0.05 and the coefficient of 1.123. *Perceived Ease of Use* (Y_1) significant on *Perceived Usefulness* (Y_2), with *t-statistic* greater than 1.99 is 3,070 with probability <0.05 and the coefficient of 0.596. *Perceived ease of use* (Y_1) not significant on *Intention to use internet banking* (Y_3), *t-statistic* values smaller than 1.99 is 1.827 with probability values> 0.05 and the coefficient of 0.495. It proves that even though customers feel ease of service *Internet banking* customers do not necessarily have intention to use *internet banking* service. *Perceived usefulness* (Y_2) not significant on *Intention to use internet banking* (Y_3) with *t-statistic* values smaller than 1.99 is -0.039 with a probability value> 0.05 and the coefficient of -0.008. *Perceived ease of use* (Y_1) significant on *Intention to use internet banking* (Y_3) are moderated by *Experience (Z)* with a value of *t-statistic* greater than 1.99 is 6.618 with probability value <0.05 and the coefficient of 0.429. *Perceived usefulness* (Y_2) not significant on *Intention to use internet banking* (Y_3) are moderated by *Experience (Z)* with a *t-statistic* that is smaller than 1.99 is 0,972 with probability values> 0.05 and the coefficient of 0.035.

Table 2: Hypothesis Testing

Hypothesis	Influence direction variables	the between	path coefficient	t-Statistic	Probability	information
1a	$X_1 \Rightarrow Y_1$		1.121	4.462	0.000	Be accepted
1b	$X_1 \Rightarrow Y_2$		0.430	1.580	0.114	Rejected
1c	$X_1 \Rightarrow Y_3$		1.123	2.908	0.04	Be accepted
3a	$Y_1 \Rightarrow Y_2$		0.596	3.070	0.002	Be accepted
3b	$Y_1 \Rightarrow Y_3$		0.495	1.827	0.068	Rejected
4	$Y_2 \Rightarrow Y_3$		-0.008	-0.039	0.969	Rejected
5a	$Y_1Z \Rightarrow Y_3$		0.429	6.618	0.000	Be accepted
5b	$Y_2Z \Rightarrow Y_3$		0.035	0.972	0.331	Rejected
*)significant α = 5%; N=95						

Source: Results of Testing using AMOS program

Discussion: The results showed that the *trust* (X_1) significant on *perceived ease of use* (Y_1) This means that the perception of ease of use is obtained from *the Internet Banking* influenced by trust someone to *Internet Banking.* These results are consistent with the initial hypothesis which states that there is significant between *trust* and *perceived ease of use.* This result is consistent with research conducted Reid, Michael and Yair (2008). *Trust* (X_1) not significant on *perceived usefulness* (Y_2) It is proved that the benefits of *the Internet Banking* is not influenced by trust someone to *Internet Banking.* In other words, not necessarily someone would deem useful *Internet Banking* despite having confidence in the *Internet Banking.* These results contrast with the results of research conducted by , Michael and Yair (2008). *Trust* (X_1) significant on *intention to use internet banking* (Y_2) This proves the intention to use internet banking customers because confidence felt by customer. These results are consistent with the initial hypothesis which states that there is a positive relationship between t*rust* and *intention to use internet banking.* These results are consistent with research conducted Al-Somali et al. (2008). *Perceived ease of use* (Y_1) significant on *perceived usefulness* (Y_2) This means that when customers feel the ease of the *Internet Banking,* customers will also benefit in the use of *Internet Banking.* These results are consistent with the initial hypothesis which states that there is a significant relationship between *perceived ease of use.* On *perceived usefulness t*he results of this study support the results of research conducted by Wang et al. (2003), Al-Shomali, Gholami & Clegg (2008), and Davis et al. (1989).

Perceived ease of use (Y_1) is not significant on *Intention to use internet banking* (Y_3). This means that one's intention to use Internet banking is not related to the perceived ease, or in other words, even if the customers feel the ease of *internet banking* customers will not necessarily use the *internet banking* service. These results are not in accordance with the initial hypothesis which states that there is a significant relationship between *perceived ease of use* on *intention to use internet banking.* The results of this study do not support the research (Pikkaranien, Pijjarainen, Karjaluoto & Pahnila, 2004). *Perceived Usefulness* (Y_2)) not significant relationship to the *intention to use* internet banking(Y_3). This means that although customers benefit in *internet banking* service customers will not necessarily use the *internet banking* service. These results are not in accordance with the initial hypothesis which states that there is a significant relationship between *Perceived Usefulness* of the *intention to use* internet banking. The results of this study say yes if Davis (1989). *Perceived ease of use is* significant on *Intention to use* internet banking moderated by *Experience.* This means that the perceived ease of using *internet banking* customers will influence the intention to use *internet banking* when the customer has had experience with information technology. These results support the research Igbaria et al. (1995). *Perceived usefulness* not significant on *Intention to use* internet banking moderated by *Experience.* This means that the perceived benefits of using *internet banking* customers will not affect the intention to use *Internet banking* though customers have had experience with information technology.

4. Conclusion and Recommendations

Trust is significant on perceived ease of use. Trust is not significant on Perceived Usefulness. Trust is significant on Intention to Use internet banking. Perceived ease of use is significant on

usefulness Perceived. Perceived ease of use is not significant on Intention to use internet banking. Perceived usefulness is not significant on Intention to use internet banking. Perceived ease of use significant on Intention to use internet banking moderated by Experience. Perceived usefulness not significant on Intention to use internet banking moderated by experience. For the improvement of research, it is advisable in future studies to obtain a model research that is supported by strong empirical theory it is advisable to further augment other studies in the field of reference of internet banking. To obtain better generalization results it is suggested for further research to take the number of respondents who more.

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