

Adoption of Innovation Internet Banking

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Abstract: This study aims to determine the positive effect of the perception of banking innovation attributes on internet banking adoption. Several indicators measure the perception of banking innovation attributes, namely perceived ease, risk perception, conformity perception, perceived usefulness. Internet banking adoption variable is measured by several indicators, namely customer awareness of the presence of internet banking, customer interest in finding information about internet banking, customer assessment of internet banking, experiments conducted to find out the benefits and uses of internet banking, adoption of internet banking services. Data collection is done by distributing questionnaires. The research analysis unit is students in the Management Department of the Yogyakarta "Veterans" National Development University. Respondents were sampled as many as 95 respondents. The analytical method used in testing hypotheses is multiple regression. The results of this study indicate that there is a significant influence between the perception of the attributes of banking innovation together on internet banking adoption, and there is a significant positive effect between risk perception, conformity perception, perceived benefits towards internet banking adoption.

1 INTRODUCTION

Innovation is an idea, practice, or object that is understood as something new by each individual or other user units. The innovation-decision process is, in principle, an information search and processing activity where individuals are motivated to reduce uncertainty about the advantages and disadvantages of innovation. The characteristics of innovation consist of: relative advantages in the economic field, (factors *prestige* social, comfort and satisfaction), resilience/strength (the degree to which innovation is perceived as being consistent with existing values, past experiences, and the need for potential users), complexity (the level at which innovation is perceived as challenging to understand and use), testing power (the level at which innovation within certain limits can be tested), *observability* (the level at which others can see the results of innovation, Sugandini, 2014).

According to (Rogers, 1983), innovation is an idea, idea, practice, or object that is realized and accepted as something new by a person or group to be adopted. Innovation is essential for the survival of every business sector, including in financial services such as banks. Technology is inseparable from the

supporting factors of innovation, current technology has developed so rapidly, and the development of information technology is felt to provide a variety of benefits in the banking business world to be able to develop faster. Banks that used to be only a place to provide money exchange services have now developed into a place to deposit money, or what we often know as a safe place to save, then banks have also developed again as a place to lend money. Until now the bank continues to grow by utilizing technology to facilitate and satisfy services to its customers, such as the use of internet banking.

The presence of internet technology provides the benefits of unlimited communication and time. Indonesia is the fourth country in the world, with the most population using internet services. The use of the internet is not only for information but also for economic transactions called e-commerce. In the banking world utilizing technological developments by presenting banking services in the form of internet banking (Fita and Vidya, 2013). According to Maharsi and Fenny (2006), internet banking provides benefits for customers and banks. For internet banking customers, it offers convenience and speed in conducting banking transactions. The advantage for banks is that internet banking can be an

inexpensive solution for infrastructure development compared to opening outlets ATM.

Gigih, (2015) adoption is the process through which a person responds to a new product or technology until the decision making a stage with the aim that the technology can be adopted or used. Internet banking is a new technology that is introduced to customers with the aim that customers can use the technology and can help or facilitate customers in conducting banking transactions.

2 LITERATURE REVIEW

2.1 Behavior Adoption of Innovations

Understanding consumer behavior is an action that is directly involved in obtaining, consuming, and depleting products and services, including processes that precede and follow up from this action. The main problems found in marketing and consumer behavior, namely consumer response to new services or products. The basis for observing consumer responses to new products is part of a study called innovation diffusion (Sugandini, 2014).

Consumer researchers examine the diffusion of innovation, which is divided into the diffusion process and the adoption process. The diffusion process is a macro process in which the process focuses on the development and innovation of new products or services carried out by a company aimed at the market, how companies can see market needs, and then determine an innovation for these markets (Schifman and Kanuk, 2010).

2.2 Understanding Internet Banking

Internet banking is one of the banking services that allow customers to obtain information, communicate and conduct banking transactions through the internet network, and is not a bank that only provides banking services via the internet (Bank Indonesia, 2004). Internet banking opens a new paradigm, new structures, and new strategies for retail banks, where banks face new opportunities and challenges (Mukherjee and Nath, 2003).

2.3 Innovation Characteristics

Factors considered by adopters in making decisions to accept or reject a product if it is associated with Rogers (1995) are influenced by 5 (five) characteristics of innovation namely, (1) perception of relative superiority, (2) perception of suitability, (

3) perception of complexity or complexity, (4) perception of probation, and (5) perception of visibility. Each aspect is used as a benchmark in the acceptance of innovative products because they are considered to be able to represent all aspects of the ability of individuals to receive innovative products. The perceived characteristics of innovation have an essential role in the stage of persuasion because at the stage of persuasion, an individual or other decision-making unit forms a liking or dislike of innovation and seeks to reduce dissatisfaction and risk of the innovation by finding relevant information. However, only complexity or complexity negatively influences the adoption of innovation because the more complicated or complicated an innovation is, the less likely it is to be adopted.

a. Advantage Relative

Relative superiority is an innovation considered more or superior than ever before. This can be measured from several aspects, such as economic aspects, social prestige, comfort, satisfaction, and others. The higher the relative superiority felt by adopters, the faster the innovation can be adopted. The concept of relative excellence indicates that the rate of adoption of innovative products will be high if individuals feel the benefits or benefits offered by innovative products. Relative advantage is innovation perceived better than replaced. The relative advantage of adopting innovation is perceived as the availability of more significant benefits for adopting innovation than maintaining the status quo (Kwon and Zmud, 1987).

b. Suitability(Compatibility)

This concept shows that the rate of adoption of innovative products will be high if the individual perceives the similarity of values or beliefs offered by innovative products (Gahtani, 2003). This definition implies two types of conformity, namely normative or cognitive conformity that refers to conformity with what is felt or thought about innovation, and practical or operational suitability that refers to conformity to what is done by the user.

c. Complexity

This concept shows the extent to which an innovation is prepared that is difficult to understand and use. The rate of adoption of innovative products will be high if individuals feel the ease of use of the products offered by innovative products (Marshall, Rainer, and Morris, 2003). There are specific innovations that can be easily understood and used by adopters, and some are the opposite. The more easily understood and understood by adopters, the faster an innovation can be adopted.

d. Trialability

This concept shows that the rate of adoption of innovative products will be high if individuals feel the ease of trying the innovative products offered first (Reiss and Wacker, 2000). The ability to be tested is a degree where innovation can be tested to a certain extent. An innovation that can be tested in actual settings will generally be adopted more quickly.

e. Visibility or observability

This concept shows that the rate of adoption of innovative products will be high if individuals feel the ease of seeing the benefits of the innovative product attributes offered (Rogers, 1995: Karahanna, Straub and Chervany, 1999).

3 HYPOTHESIS

Based on the formulation of the problem is there, then researchers formulate following hypotheses:

H1: Perceived ease, risk perception, perception of suitability, benefits perception effect together towards adoption of Internet banking.

H2a: Perceived convenience has a positive effect on Internet banking.

H2b: Risk perception has a positive effect on the adoption of Internet banking.

H2c: Conformity perception has a positive effect on the adoption of Internet banking.

H2d: Perceived benefits have a positive effect on the adoption of Internet banking.

4 RESEARCH METHOD

4.1 Samples and Sampling Techniques

Samples in this study are some of the Management Department Students of the "Veteran" National Development University of Yogyakarta. The sampling used is Non-probability technique sampling that is purposive sampling and convenience sampling. As for the criteria for selecting samples, are students majoring in University Management The "Veteran" Yogyakarta National Development that uses internet banking While convenience sampling is a method of selecting samples based on convenience, in this method the sample members are chosen based on the ease of getting the data needed by researchers

4.2 Data Analysis Techniques

The model used in this study is quantitative analysis. The method used is multiple linear regression analysis that functions to measure the effect between more than one predictor variable (the independent variable) to the dependent variable.

5 RESULTS

5.1 Results of the Regression Equation Analysis

Analysis of the effect of perception variables on attributes of banking innovation which include perceptions of ease, perceptions of risk, perceptions of conformity, and perceptions of benefits to internet banking adoption are presented as follows:

Independent variables	Regression Coefficients	t arithmetic	Sig.	Decree
Constant	5,205	3,827	.000	-
Perceived Ease (X1)	.274	2,821	.005	Significant
Risk Perception (X2)	.293	3229	.001	Significant
Perception Conformity (X3)	.322	3,968	.000	Significant
Perception Benefit (X4)	.308	3739	.000	Significant
Dependent Variable: Adoption of Internet Banking R ² adj = 0.582 F _{calculate} = 33.708 Sig, F = 0.000a				

5.2 Results of Research

5.2.1 Testing the F Test

Hypothesis The first hypothesis was tested using the F test to test the significance of the regression coefficients of all the predictors (variables independent) in the model simultaneously or together. The effect of perceived ease, risk perception, conformity perception, and perceived benefits towards adoption internet banking. Testing through

the F test is to compare the probability of error $F_{\text{calculated}}$ with significance that can be tolerated ($\alpha = 5\%$). Based on Table 1 can be seen the calculation results obtained F_{count} of 33,708 with a significance level of 0,000 which is smaller than α ($0,000 < 0.050$) means Perceived ease, risk perception, conformity perception, perceived benefit have a significant effect jointly on the adoption of internet banking, thus the first hypothesis stating that ease perception, risk perception, conformity perception, and perceived benefit have a joint effect on adoption of supported internet banking. .

5.2.2 Test Coefficient of Determination

The results of data analysis showed that the coefficient of determination (R^2_{adj}) of 0.582, which means that about 58.20% of the variation in the variable adoption bank-in internet capable of is explained by variables perceived ease, risk perception, perception of suitability, the perception of benefits while the rest viz of 41.80% explained by variations of variables outside the model.

5.2.3 Testing the t-Test

The test is used to test the significance of the regression coefficient of the effect of perception of ease, risk perception, perception of suitability, and perception of benefits, partially affecting the adoption of internet banking. Testing via the t-test is to compare the error probability t with a significance that can be tolerated ($\alpha = 5\%$). The calculation results obtained for:

- 1) Variable perception of ease (X1) has a tcount of 2,821 with a significance level of 0.005, which is smaller than α ($0.005 < 0.050$). This means that perceived convenience has a significant effect on internet banking adoption. Thus H2a states that the perception of ease partially influences the adoption of supported internet banking.
- 2) The risk perception variable (X2) has a count of 3222 with a significance level of 0.001, which is smaller than α ($0.001 > 0.050$). This means that risk perception has a significant effect on internet banking adoption. Thus H2b, which states that risk perception partially influences the adoption of internet tires supported.
- 3) The conformity perception variable (X3) has a tcount of 3,968 with a significance level of 0,000, which is smaller than α ($0,000 > 0.050$). This means that the perception of suitability has a significant influence on internet banking

adoption. Thus H2c, which states that the perception of conformity partially influences the adoption of internet banking supported.

- 4) Variable perceptions of benefits (X4) have a tcount equal to 3,739 with a significance level of 0.000, which is smaller than α ($0,000 > 0,050$). This means that the perception of benefits has a significant effect on internet banking adoption. Thus H2d, which states that perceived benefits partially affect the adoption of internet banking, is supported.

6 DISCUSSION

The results of research using Multiple Regression Analysis show that ease of perception, risk perception, conformity perception, and perceived benefit have a significant effect jointly on internet banking adoption. The results of this study are in line with research conducted by Pertiwi, Adhivinna (2013) showing that perception risk, perceived benefits, and perceived ease of use simultaneously (together) to the dependent variable, namely the trust of customers of Bank Mandiri internet banking users. The hypothesis is proven and can be accepted.

The results of the study using Multiple Regression Analysis show that ease of perception has a positive and significant effect on internet banking adoption. This means that what if ease of perception increases then will increase internet banking adoption and vice versa. The results of this study are in line with research conducted by Fita Pertiwi, Vidya Vitta Adhivinna (2013), which shows that the ease of use of internet banking has a positive relationship with customers' trust in using internet banking. This hypothesis is proven and can be accepted. The results of this study imply that the ease of use is the second construct that gives a positive influence on a person's interest in adopting technology (Jogiyanto, 2007). The ease of innovative internet banking products means the ease of understanding when transacting through internet banking media. A technology that is often used shows that the technology is readily known and easily understood in its use. When the application is easier to use than others, it will be more likely to be accepted by its users so that the level of adoption of internet banking adoption will increase.

The results of research using Multiple Regression Analysis show that risk perception has a positive and significant effect on internet banking adoption. This means that what if risk perception increases then will increase internet banking adoption and vice versa. The results of this study are in line with research

conducted by Pertiwi et al., (2013), showing that the risk perception variable influences customer confidence in using internet banking. The hypothesis is proven and can be accepted. Implications of the results of this study that shows that the elements of risk such as financial loss, loss of time, and so on have been proven to affect risk perception. So, in this case, the level of customer confidence in using innovative banking products internet banking will increase if, with the anticipation in managing high risks, transaction security, timeliness, transaction convenience, and facility security can provide benefits in meeting customer needs.

The results of the study using Multiple Regression Analysis show that conformity perception has a positive and significant effect on internet banking adoption. This means that what if conformity perception increases then will increase internet banking adoption and vice versa. The results of this study are in line with research conducted by Domeher et al. (2014), showing that the ease of use of internet banking has a positive relationship to the customer's trust in using internet banking. The hypothesis is proven and can be accepted. The results of this study imply that the perception of suitability is the perceived suitability of internet banking users to be able to adjust customer needs, adjust service desires to customers, and as an evaluation to make changes to development. So that in this case, the use of innovative internet banking products has conformity to the expectations and needs of customers, it will create the trust and interest of customers in using internet banking as a banking service that they adopt in meeting their needs.

The results of the study using Multiple Regression Analysis show that the perception of benefits has a positive and significant effect on internet banking adoption. This means that if the perception of benefits increases, then it will increase internet banking adoption and vice versa. The results of this study are in line with research conducted by Fita Pertiwi, Vidya Vitta Adhivinna (2013), showing that perceived benefits are positively related to customers' trust in using internet banking. The hypothesis is proven and can be accepted. The results of this study imply that the usefulness of innovative internet banking products such as services, effectiveness, and so on has been proven to influence the perception of benefits to customer trust that is the expectation of each customer in conducting transactions. The benefits and ease of use influence on customers' interest in adopting new technology, in this case, internet banking adoption. The more customers can feel the

benefits of internet banking adoption, and it will make customers continue to use the service.

7 CONCLUSIONS

Based on the results of research and analysis carried out, the following conclusions can be drawn: Perception of ease, perception of risk, perception of suitability, perceived usefulness together have a significant effect on the adoption of internet banking. Perception of convenience, risk perception, perception of conformity, perception of benefit positive and significant effect partially on internet banking adoption. The perception of convenience has a positive and significant effect on internet banking adoption. Risk perception has a positive and significant effect on internet banking adoption. The perception of suitability has a positive and significant effect on internet banking adoption. Perceived benefits have a positive and significant effect on internet banking adoption.

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