

PERCEIVED USEFULNESS, PERCEIVED EASE OF USE, PERCEIVED RISK IMPACT TO LECTURERS' INTERNET BANKING ADOPTION

by:

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ABSTRACT

The development of Information Technology that are now spreading on banking sector, indirectly has met some of customers' lifestyle who are more inclined want everything was instant and efficient, it is because of demands of times and work which makes them have to be able to do other things, but can still do their work simultaneously. But in terms deciding to buy product/service that relate to information technology, people have consideration, whether about the usefulness, ease of use and risk. The purpose of this study was to find out the relationship between perceived usefulness, perceived ease of use, perceived risk on internet banking adoption especially to customer that are lecturers of faculty of economics and business. This research is a quantitative research that use casual type of research. The data was collected through questionnaire with sample size is about 40 lecturers who are selected using sampling incidental method and analyzed by multiple linear regression analysis method. The conclusion is there is significant positive effect between perceived usefulness, perceived ease of use and perceived risk towards Internet banking adoption. It means banks should improve the performance of internet banking services in order to more provide meaningful benefits for users and improve the security of transactions through Internet banking services to increase the adoption of Internet banking service. Therefore the researcher recommended to the bank to better understand the needs of their customers in order to deliver services more effective.

Keywords: *perceived usefulness, perceived ease of use, perceived risk, internet banking adoption.*

INTRODUCTION

Research Background

The development of information technology very rapidly from year to year, and it is one of the main causes of globalization era as it is today. Information technology came with various conveniences to humans as users. Sophisticated system of IT facilitated human to access the variety of information, and one of them is financial information. Consciously or not, consumer as human beings cannot be further separated from the information technology. Now technology has become a necessity for humans, because almost all human activities will be related to information technology. The role of information technology in everyday human activity is very large. For example, now people can easily get news and knowledge, if people have to buy the book before to the book stores, but now sufficiently connected to the internet, they've been able to browse the books that they need without having to leave the house and go to the bookstores.

Information Technology developments much give influence on various sectors. The most touching sector or the most widely associated with Information Technology is the banking sector. Where almost every banking activity, like almost every form of transaction related to information technology. This reality shows that information technology has been widespread applied by most service companies, in this case the banking sector. Nowadays almost all banks especially in Manado is applying Internet banking, it is because bank want attract customers who are getting selective in making decision. Daniela et al., (2010) Internet banking is used for the following operations: checking bank statements (remainder, history, transactions for all the accounts); issuing payment authorizations in any foreign currency (between banks or within the same bank); remainder transfers from the current account to the card accounts of the same individual; creating and annulling deposits; daily

information about currency exchanges and interest rates; currency exchange and currency exchange negotiations securing transaction by an encryption key; modularity: use of various customer profiles and limitation of the operation in compliance with the bank policy; possibility to pay local taxes and duties (at banks which have implemented the e-Tax service) and allow customers to access the bank 24 hours a days, 7 days a week, without depending on the bank's schedule.

The development of Information Technology that are now spreading on banking sector, indirectly has met some of customers' lifestyle who are more inclined want everything was instant and efficient, it is because of demands of times and work which makes them have to be able to do other things, but can still do their work simultaneously. But in make decision every person must have a lot of consideration. Especially in terms of deciding to buy the product / service related to technology and the Internet. There are many facts that reveal about the crime that happened over the Internet, or commonly called cyber crime or Phishing. This triggers the anxiety to users in deciding to continue using the Internet banking service, and many more risks that are often considered in deciding to use Internet banking service. Because it could happen in the use of Internet banking services, users who feel uncomfortable and feel threatened to use the technologies may abandon or discontinue use the service. Moreover with the way to operating the Internet Banking service, some users are still classified as a beginner, so it take time to become proficient and used to perform various banking activities through Internet banking, backed up by previous habits that require customers to come to the bank to transact or conduct other banking activities. So, to avoid little return from investments in technology caused by the consumer fails to accept or fully Utilize its capabilities, the bank must first know and understand consumer behavior are likely to vary and the factors that influence consumer decisions to adopt internet banking. Because a business was called successful if they are able to understanding their consumer behaviors.

In this paper researcher chose economics faculty lecturers to be used as samples in this study, because some of them are Internet Banking User. And also researchers wanted to analyze what factors that most influence them to use and continue use the Internet banking service.

Research Objectives

The objective of this research is to analyze the influence of :

1. Perceived Usefulness on Lecturers' Internet Banking Adoption.
2. Perceived Ease of Use on Lecturers' Internet Banking Adoption.
3. Perceived Risk on Lecturers' Internet Banking Adoption.
4. Perceived Usefulness, Perceived Ease of Use, Perceived Risk on Lecturers' Internet Banking Adoption simultaneously.

THEORITICAL FRAMEWORK

DAN BISNIS

Theories

Customer behavior

Customer behavior is the study of the process involved when individuals or group select, purchase, use, or dispose of products, service, ideas, or experiences to satisfy needs and desires (Solomon 2011:33). In this study analyze what factors influence individual to use service that is Internet banking and it is relate to decision-making. In decision-making, someone does not instantly choose a product or service. There are stages in the customer decision-making: (1) Problem Recognition; (2) Information Search; (3) Evaluation of alternatives; (4) Product choice; (5) Outcomes.

Internet Banking

Internet Banking is the offering of information and selected service trough the World Wide Web by banks and other financial-service firms (Rose & Hudgins 2010:701). Chou and Chou (2000) defined internet banking as the automated delivery of new and traditional banking products and services directly to customers through electronic, interactive communication channels. Internet banking includes the systems that enable financial institution customers, individuals or businesses, to access accounts, transact business, or obtain information on financial products and services through the Internet. Customers access e-banking services using an intelligent electronic device, such as a personal computer, personal digital assistant, automated teller machine (ATM), Kiosk, or Touch Tone telephone.

Adoption

Baraghani (2007) defined adoption as the acceptance and continued use of a product, service or idea. Rogers and Shoemaker (1971) stated that consumers go through “a process of knowledge, persuasion, decision and confirmation” before they are ready to adopt a product or service.

Perceived Ease of Use

Davis (1989) stated that perceived ease of use, in contrast refers to “the degree to which a person believes that using a particular system would be free of effort.” This follows from the definition of “ease”: “freedom from difficulty or great effort.” Effort is a finite resource that person may allocate to the various activities for which he or she is responsible (Radner and Rothschild, 1975). All else being equal, we claim, an application perceived to be easier to use than another is more likely to be accepted by user.

Perceived Usefulness

Davis (1989) stated that perceived usefulness is defined here, as the degree to which a person believes that using a particular system would enhance his or her job performance. A system high in perceived usefulness, in turn, is one for which a user believes in the existence of a positive use-performance relationship.

Perceived Risk

Perceived risk is defined as the uncertainty that consumers face when they cannot foresee the consequences of their purchase decisions. This definition highlights two relevant dimensions of perceived risk: uncertainty and consequences. (Schiffman and Kanuk, 2004:196)

Relationship between Perceived Usefulness, Perceived Ease of Use, Perceived Risk and customer adopt of Internet banking

Before taking decisions a person has a lot of considerations, one of which is to consider the benefits of a product or service to be taken or used, someone will use the product or service that can provide advantages and benefits in order to support their job performance become more effective and also in other matters. Was supported by Empirical studies on the adaptation of technologies have found consistently positive relationships between usefulness and the adaptation of a variety of specific technologies, ranging from computer software to e-mail (Chau & Hu, 2001) TAM also supports this link (Davis et al., 1989). Similarly with Ease of use, a person who would choose or take a product or service if he felt the product or services to be used or taken provide guidance and clear information that is easy to understand and use. Bhattacharjee (2002) found that one's willingness to adopt with an electronic firm might be predicted by additional variables such as perceived ease of use. Perceived risk also can cause customer to discontinue use the Internet banking service. Customers can be worried that technology based service delivery systems will not work as expected, and lack confidence that problems can be solved quickly (Walker et al., 2002). Westland (2002) found that transaction risk occurs when online markets fail to assure that service will be delivered with adequate quality.

Previous Research

Yousafzai & Yani-de-Soriano (2012) found that the relationship between usefulness and behavior was stronger for younger males with high levels of optimism and innovativeness (explorers and pioneers); whilst the relationship between ease of use and behavior was stronger for older females with high level of discomfort (paranoids and laggards). Raza & Hanif (2011) investigates the determinants which attract the customers to adopt internet banking in Pakistan by employing internal and external customers, the result of regression analysis shows that Perceived Usefulness (PU), Information of Internet Banking (INF), Perceived Risk (PR), Security and Privacy (SP) shows more influence to increase the intention of external customers to adopt internet banking services while Government Support (GS) provide more influence for the internal customers in adoption of internet banking services. This study proves that external customers can be more emphasize, if they believe convenient in adopting the services. Eze et al., (2011) investigated the factors that influence the use of Internet banking services among young Malaysian adults. Results indicate that perceived ease of use, perceived usefulness, relative advantage, self-efficacy, perceived credibility and trialability tend to influence consumers to adopt Internet banking.

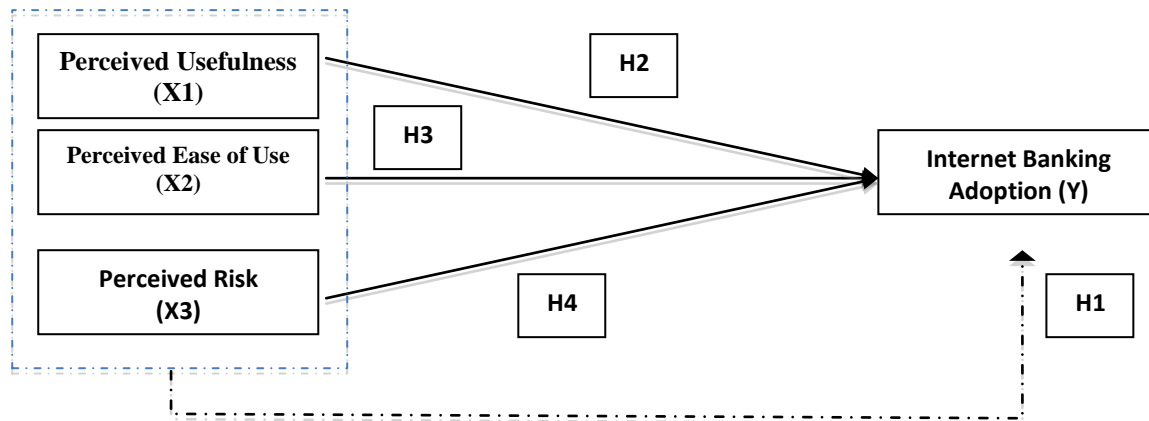


Figure 1. Conceptual Framework

Source: Theoretical Review

Research Hypothesis

- H1 : Perceived Usefulness, Perceived Ease of Use, Perceived Risk influence Lecturers' Internet Banking Adoption simultaneously
- H2 : Perceived Usefulness influence Lecturers' Internet Banking Adoption
- H3 : Perceived Ease of Use influence Lecturers' Internet Banking Adoption
- H4 : Perceived Risk influence Lecturers' Internet Banking Adoption

RESEARCH METHOD

Types of Research

This research use causal research where the research objectives is to analyze the related variable between independent Variables that is Perceived Usefulness, Perceived Ease of use, Perceived Risk and dependent variable that is Internet Banking adoption. "Causal research is collect data that enables decision makers to determine cause-and-effect relationship between two or more variables. Causal research is most appropriate when the research objectives include the need to understand which variables (for example, advertising, number of salesperson, price) cause a dependent variables (for example, sales, customer satisfaction) to move." (Hair and Wolfinbarger 2010:36)

Place and Time Research

This research is conducted in Faculty of Economics and Business on Sam Ratulangi University during August - September 2013.

Population and Sample

Hair & Wolfinbarger (2010:133) defined a population is an identifiable group of elements (for example, people, products, organization) of interest to the researcher and pertinent to the information problem. Populations of this research that determined by the author are lecturers in Economics Faculty. Hair & Wolfinbarger (2010:368) defined Sample is a randomly selected group of people or objects from the overall membership pool of a target population. Determination of the number of samples in this study based on roscoe (1982: 253) in Taniredja & Mustafidah (2012: 38) that is if the research will be done by using multivariate analysis (e.g. correlation or multiple regression). The number of sample members at least 10 times the number of variables studied. Number of variables in this study there were 4 (independent + dependent), so the number of members of the sample is $10 \times 4 = 40$.

Data Collection Method

This study took data from the distribution of questionnaires that will be the primary data of this research In this study the respondents are lecturers of Economics and Business Faculties in Sam Ratulangi University,

and secondary data will be retrieved from other sources such as journal, books, libraries and the Internet to understand and discuss other issues also as basic and theoretical support for this research.

Operational Definitions and Measurement of Research Variables

The general explanations about variables in this current research that will be analyzed are stated as follows:

1. Perceived Usefulness (X1) is feelings that a person believes that the goods or services he uses, in this case Internet banking brings benefits and provide ease in completing their daily work.
2. Perceived easy of use (X2) is feelings which a person believes that the goods or services they use are very easy to use, in this case the use of internet banking does not require much effort to operate it and also the user does not need to think too hard to understand information and instructions for using the internet banking service.
3. Perceived Risk (X3) is feelings which users believe that the use of Internet banking service is very safe and low risk, also using Internet banking services can minimize the potential financial losses.
4. Internet Banking adoption (Y) is decision that made by Internet banking user to accept the service and continued to use it.

The variables this research will be measured using a Likert scale, as the widely used of the rating scale that requires respondents to indicate the level of agreement or disagreement with each of a series of statements. Likert scale is designed to examine how strongly subjects agree or disagree with statements on a five-point scale (Sekaran & Bougie, 2009:152).

Data Analysis Method

Validity and Reliability Test

Validity test is a tool that used to measure the questionnaire is valid or not. the result that can be say valid, if the data collecting have a same data with the real data in the research object. In this research the measurement of reliability doing with the SPSS program with used method Cronbach's Alpha, where the questionnaire is reliable if the value of Cronbach's Alpha more than 0.6.

Multiple Regressions Analysis Method

Multiple regression analysis is a statistical technique which analyzes the linear relationship between a dependent variable and multiple independent variable by estimating coefficients for the equation for a straight line (Hair & Wolfinger 2010:318). The basic model used in this study can be specified as follows:

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + e$$

Descriptions:

Y	=	Internet Banking adoption
a	=	Constants number
X ₁	=	Perceived Usefulness
X ₂	=	Perceived Ease of Use
X ₃	=	Perceived Risk
b ₁₋₃	=	Coefficients partial regression of each variable. X ₁₋₃
e	=	Factors intruder or an error

RESULT AND DISCUSSION

Result

Validity and Reliability

Validity and reliability are tests that conducted in a study, where the results are said to be valid if the $r_{count} > r_{table}$ Value. In contrast to reliability, the results are said to be reliable, if there is value in Cronbach's Alpha is more than 0.6. The following are the results of test validity and Reliability:

Table 1. Validity and Reliability Test of Perceived Usefulness (X₁)

	Correlation Coefficient (r_{count})	Critical Value (r_{table})	Result
PU1	.944	.312	Valid
PU2	.934	.312	Valid
PU3	.885	.312	Valid
PU4	.913	.312	Valid
Cronbach's Alpha = .844			Reliable
Critical Value = 0.6			

Source: Data Processed, 2013

Table 1 shows that the validity test on each item on the Perceived Usefulness (X₁) is valid, with r_{count} value on each item is more than value of $r_{table} = 0.312$. Thus, each item can be used to measure the variable X₁. While Reliable test on this variable indicates that the value of Cronbach's Alpha = .844 or greater than the critical value = 0.6, so that the X₁ variable is declared reliable.

Table 2. Validity and Reliability Test of Perceived Ease of Use (X₂)

	Correlation Coefficient (r_{count})	Critical Value (r_{table})	Result
PEU1	.950	.312	Valid
PEU2	.933	.312	Valid
PEU3	.951	.312	Valid
PEU4	.858	.312	Valid
Cronbach's Alpha = .846			Reliable
Critical Value = 0.6			

Source: Data Processed, 2013

Table 2 shows that the validity test on each item on the Perceived Ease of Use (X₂) is valid, with r_{count} value on each item is more than value of $r_{table} = 0.312$. Thus, each item can be used to measure the variable of Perceived Ease of Use (X₂). While Reliable test on this variable indicates that the value of Cronbach's Alpha = .846 or greater than the critical value = 0.6, so that the X₂ variable is declared reliable.

Table 3. Validity and Reliability Test of Perceived Risk (X₃)

	Correlation Coefficient (r_{count})	Critical Value (r_{table})	Result
PR1	.894	.312	Valid
PR2	.885	.312	Valid
PR3	.662	.312	Valid
PR4	.789	.312	Valid
Cronbach's Alpha = .819			Reliable
Critical Value = 0.6			

Source: Data Processed, 2013

Table 3 shows that the validity test on each item on the Perceived Ease of Use (X₂) is valid, with r_{count} value on each item is more than value of $r_{table} = 0.312$. Thus, each item can be used to measure the variable of Perceived Risk (X₃). While Reliable test on this variable indicates that the value of Cronbach's Alpha = .819 or greater than the critical value = 0.6, so that the X₃ variable is declared reliable.

Table 4. Validity and Reliability Test of Internet Banking Adoption (Y)

	Correlation Coefficient (r_{count})	Critical Value (r_{table})	Result
IBA1	.888	.312	Valid
IBA2	.926	.312	Valid
IBA3	.837	.312	Valid
Cronbach's Alpha = .858 Critical Value = 0.6			Reliable

Source: Data Processed, 2013

Table 4 shows that the validity test on each item on the Internet Banking Adoption (Y) is valid, with r_{count} value on each item is more than value of $r_{table} = 0.312$. Thus, each item can be used to measure the variable of Internet Banking Adoption (Y). While Reliability test on this variable indicates that the value of Cronbach's Alpha = .858 or greater than the critical value = 0.6, so that the Y variable is declared reliable.

Multiple Linear Regression Analysis

Table 5. The Results of Multiple Linear Regression

Model		Coefficients ^a				
		Unstandardized		Standardized		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.080	.328		.244	.809
	Perceived Usefulness	.238	.100	.283	2.377	.023
	Perceived Ease of Use	.410	.101	.464	4.069	.000
	Perceived Risk	.347	.090	.322	3.869	.000

a. Dependent Variable: Internet Banking Adoption

Source: Data Processed, 2013

Table 5 above explain the regression equation in this study are:

$$Y = 0.080 + 0.238X_1 + 0.410X_2 + 0.347X_3 + e$$

The interpretations of the equation are: (1) From the equation above stating that the value of the constant amounted to 0.080, gives meaning that if the Perceived Usefulness, Perceived Ease of Use, Perceived Risk remains or equal to 0 (zero), then the amount of Internet Banking Adoption amounted to 0.080. Furthermore the value of b_1 is the regression coefficient of the variable X_1 (Perceived Usefulness) is 0.238, assuming that if Perceived Usefulness increases, then Internet Banking Adoption will also increase by 0.238, assuming other variables remain or constant; (2) Table above also shows that the value of b_2 is the regression coefficient of the variable X_2 (Perceived Ease of Use) is 0.410, this means that if Perceived Ease of use increases, then Internet Banking Adoption also will increase by 0.410 with assuming that other variables remain or constant; (3) Furthermore value of b_3 which is the regression coefficient of variable X_3 (Perceived Risk) amounted to 0.347 gives meaning that if Perceived Risk increases, then Internet Banking will also increase by 0.347. Assuming other variables remain or constant; (4) Thus it can be seen that if the Perceived Usefulness, Perceived Ease of Use and Perceived Risk has increased or become better than before, the Internet Banking Adoption will also Following to increased. So it can be concluded that there is a relationship between the Independent variables (Perceived Usefulness, Perceived Ease of Use, Perceived Risk) with Dependent Variable (Internet Banking Adoption), where all the regression coefficients numbers that obtained showed a positive (+) number.

Discussion

To decide to use a product / service someone needs a lot of consideration. Similar to bank customers who will take the decision to adopt banking services in this case Internet Banking service to completing any banking activity of these customers, they have several considerations to receive and continually use this service include. In the world of banking, Internet Banking users are very diverse and have different characteristics in terms of age, sex, education and even lifestyle. So their views on the benefits and risks of Internet banking services are also diverse.

This study found that most Internet banking users in these case lecturers of faculty of economics and business, are those who are have high intensity in access Internet. They access Internet everyday whether by PC or mobile. But for access the Internet Banking, lecturers not have experienced in a long time using this service, Because the lecturers are still considering about whether to use this service they can experience the benefits for day-to-day activities / work activities, lecturers also consider whether to operate this service on their gadgets will not require much effort, or the they does not have to think hard to understand information and instructions for using the Internet Banking service, even lecturers also consider the risks that may occur if they use and continued use of the Internet Banking service. Because in this research found some of those lecturers do not use Internet banking services think that the operation of these services requires an efforts. And there are few of them are still accustomed to completing some banking activities traditionally, that is directly going to the nearest bank.

On the results of linear regression analysis in previous section stated that:

Perceived Usefulness have a significant positive effect on customers to adopt Internet Banking service. That means if the Internet banking service brings great benefits to the lecturers' work activities, the use of Internet banking services will also increase. These findings are supported by Davis's (1989) stated that people tend to use or not use an application to the extent they believe it will help them perform their job better. And also by Davis's (1989) findings that users are driven to adopt an application primarily because of the functions it performs for them.

Similar to Perceived Ease of Use in which the results of linear regression analysis showed a significant positive effect against Internet Banking Adoption. That means if the workings or how to operate the Internet Banking service is easy and information about the instructions for use is clear and easily to understand by lecturers, the use of Internet Banking services will also increase. These findings are supported by Davis's (1989) that stated even if potential users believe that given application is useful, they may, at the same time believe that the system is too hard to use and that the performance benefits of usage are out-weighed by the effort of using the application. That is, in addition to usefulness, user acceptance of Information technology is theorized to be influenced by perceived Ease of Use.

Similar to Perceived Risk, the results of linear regression analysis showed a significant positive effect against Internet Banking Adoption. More than that, the results of the linear regression analysis also showed that perceived risk has the most powerful influence compared to the others variables against customer to adopt Internet banking service. It can be concluded that if the Internet banking services is safe and low risk, the use of Internet banking service will also increase. Conversely, if the customer feels that the Internet banking services are potentially for financial losses, then the user will stop using the Internet Banking service. These findings are supported by Walker et al., (2002) stated that customers can be worried that technology based service delivery systems will not work as expected, and lack confidence that problems can be solved quickly.

CONCLUSION AND RECOMMENDATION

Conclusion

The conclusion are: (1) Perceived Usefulness has a positive significant effect to Internet banking adoption. Therefore it is concluded the improvement of Perceived Usefulness on the Internet Banking service can increase the number of users, as well as the hypothesis which states that Perceived Usefulness influence customers to adopt Internet is proven and acceptable; (2) Perceived Ease of Use has a positive significant effect to Internet banking adoption. Therefore it is concluded improvement of perceived Ease of Use in the Internet Banking service can increase the number of users, as well as the hypothesis which states that Perceived Ease of Use influence customers to adopt Internet is proven and acceptable; (3) Perceived Risk also has a positive significant effect to Internet banking adoption. Therefore it is concluded improvement of perceived risk in Internet Banking service can increase the number of users, as well as the hypothesis which states that Perceived Risk influence customers to adopt Internet is proven and acceptable.

Recommendation

This research give some suggestions, there are: (1) The test results showed that the dominant influence on Internet Banking Adoption is Perceived Ease of Use and Perceived Risk. So it is advised to the banks providing Internet banking service to improve the security of the service, so as to minimize feelings of anxiety of financial loss or other damages for the user to continue to use the Internet Banking service. So is with the case of Perceived Ease of Use, this study suggested to the bank to increase the ways of distributing information about the instructions for use to the user so that the user will be easier to understand and do not feel difficult to operate the Internet Banking service; (2) The results also give suggestion to the bank to better understand the needs of their customers and improved the Internet banking services performance, and increase the benefits of the service to user because it will affect their continued use of the services that provided by the bank in this case Internet Banking; (3) Based on result in previous section this study give suggestion to lecturers to better use Internet banking service, besides providing many benefits this service also allows lecturers to complete the work more effectively. But lecturers also need to understand first and more critical in choosing a bank that provide this kind of services to avoid the risk of loss.

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