Diffusion of Innovation, Consumer Attitudes and Intentions to use Mobile Banking

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Abstract
This study discusses the effect of diffusion of innovation (relative advantage, compatibility and trial-ability) toward intention to use mobile banking through the consumer attitudes. The purpose of this study was to determine whether there is influence between Diffusion of Innovations (relative advantage, compatibility and trial-ability) toward the intention to use mobile banking through the consumer attitudes. The respondents of this study are the Bank Mobile Banking users in Banda Aceh. The sampling method used in this study is purposive sampling and the data were analyzed using path analysis technique. The results found that relative advantage, compatibility and trial-ability directly had significant effect on consumer attitudes in a positive way; relative advantage and trial-ability significant toward intention to use; compatibility effect not significant toward the intention to use in a positive way; consumer attitudes is significant towards intention to use positively; and relative advantage, compatibility and trial-ability significant toward intention to use through consumer attitudes. Keywords: Relative advantage, Compatibility, Trial-ability, Intention to use, Consumer’s attitude

1. Introduction
The development of technology, especially information technology has now reached a level that is very impressive; facilitate activities in the transaction, the member convenience to customers, rapid, practical, effective, and efficient. The ease of presenting an online feature real time capabilities of banks, technological charged multiple delivery channels to connect with customers are: ATM, Telephone Banking, Internet banking, TV Banking, and Mobile Banking.

Mobile banking development in Indonesia is so fast, because the m-banking service is able to provide flexibility and practicality and ease of transactions such as balance inquiry, payment, transfer, or other financial services anytime and anywhere just by using the mobile phone network and Internet connection so far. M-Banking service is relatively safe because it uses a layered security system, ie from the mobile telecommunications providers, as well as the banking system of the network in question. With Mobile banking customers can use banking services 24 hours a day without having to visit a bank branch.

Intention to use the new innovation is the response or reaction of an individual to the environment, and social culture. Individuals acting as consumers have the right to accept or reject a new product, which is one form of consumer behavior. Consumer behavior theory to explain the process of consumer actions be influenced by one thing to produce multiple outputs. Howard and Shet (1967) explains that consumer behavior can be seen from the process, which is input in the form of marketing and environmental stimuli that will produce output in the form of attitudes toward the behavior, intention and purchase behavior

M-Banking service is an opportunity for banks to offer added value as an incentive to customers. Promotion mobile banking will provide implikasis ecara performed directly on the consumer adoption of the technology. With this facility, any person who has a mobile phone can easily transact anywhere and at any time but must be connected to the Internet. All banks provide facilities mobilebanking to get satisfaction and an increase in the number of customers (Widyastuti, 2008).

Each customer has a different role in adopting a new technology, most consumers are able to accept and use the new technology while others are not. In determining the choice of consumers will evaluate all information related to a matter that will manifest later on his attitude. This attitude will be formed on the intention to use and so ended up with an action associated with it (Dabholkar, 1994).

Davis (1989) Vankatesh and Davis (1996) and Succi dan Walter (1999), argues that banks invest in information systems such as the Internet and mobile banking for several reasons, such as cost savings, improved quality of products and services, and to produce more without an increase in costs.

The attitude of the customers towards the adoption or acceptance of new formations system seriously implied for the success of the system. If the customer is not willing to accept or adopt the new system, the system will not provide the maximum benefit for the bank. The more the customer receives diaper system, customers are increasingly willing to make changes in practice and using the time and effort to start using the new information system (SuccidanWalter, 1999).

According Kohli (2004) m-banking service gives customers easy access to account information and transaction capabilities in real time. The advantages of m-banking account is not easy to be cracked by someone irresponsible parties. Based on the advantages of that, banks are confident to attract customers to
conduct banking activities

2. Literature Review

Relative advantages

Relative advantage is defined as the degree to which an innovation is perceived as better or superior than ever before. This can be measured from any segment, such as economic, social prestige, comfort, and satisfaction. The greater the relative advantage perceived by the adopters, the faster these innovations can be adopted (Rogers, 1983).

Nor and Pearson (2007) explains that the relative gain is defined as the extent to which the innovation can be considered to be a better idea to replace the things you want improved performance. Lichtenstein and Williamson (2006) stated that the relative advantage has clearly influenced the choice of banking methods. With this it can be concluded that the relative advantage that is significantly associated with attitudes, such as the founded results by previous studies (Shih and Fang (2004), Nor and Pearson (2007), and Williamson Lichtenstein (2006).

Compatibility

Rogers (1995) defines compatibility as an innovation is considered consistent with the socio-cultural values and beliefs, experiences, and needs of potential adopters. Hoerup (2001) explains that every innovation that affects the opinions, beliefs, values, and outlook. If the innovation is compatible with the needs of the individual, then the uncertainty will decrease and the rate of adoption of innovation will increase. Naming innovation is an important part of the compatibility. Perceived compatibility of an innovation illustrates how consistent it is associated with individual values, experiences, and needs. Compatibility is the degree to which an innovation is perceived as consistent with the values whose mother, past experiences and needs of potential adopters. (Andliviari Huisman, 2006). Compatibility refers to the extent of the service user is considered as consistent with existing values, beliefs, customs and current and previous experience (Chenetal, 2004).

Triability

Triability is the degree to which an innovation can be tested within a certain limit (Rogers 1995). Triability adopt an innovation when they first can be evaluated, and were allowed to experiment with innovations to feel more comfortable (Agarwal and Prasad, 1998; Rogers, 2003). Tan and Teo (2000) assert that if given the opportunity to evaluate innovation, customer minimize the particular concerns of the unknown, which led to acceptance. Therefore, repeating the Lamb's evaluation and assistance in the use of mobile banking during the trial period can reduce the uncertainty about mobile banking, eventually creating positive consumer attitudes to using mobile banking. Trialability can also be viewed as the degree to which an innovation may be experimented with on a limited basis (Huisman andliviari, 2006)

Consumer attitude

Defines attitude as a learned predisposition of individuals to give respond likes or dislikes are consistently with the attitude object. The response was the result of a process evaluation of an individual's belief attitude towards the object (Fishbein & Ajzen, 1975). Attitude is driving the emergence of intentions and furthermore, to initiate the purchase or use. TRA, Azjen and Fishbein (1975, in Nysveen et al., 2005b) defines attitude toward the behavior as negative or positive feelings of a person (an evaluative feeling) on performing the target behavior. In mobile services, attitude towards behavior (usage) refers to the feeling of doing evaluative consumer behavior (usage), and there is great support for the positive effects of attitudes toward the use of mobile services in behavioral intention to mobile services (Nysveen et al., 2005b).

Intention to Use

Ajzen (1991) states that intention as a person's tendency to choose to do or not do any work. Intention can also define as how many desire to try and how strong effort allocated to make it happen.

According Fusilier and Durlabhji (2005) there are two items to measure intention statement of use, the first assuming having access mobile banking, customers interested in using it, the second after the having access to mobile banking customers are expected to use it, the intention is a desire that has not been done. High intention will influence the behavior of the higher as well. But there is no possibility could also occur intentions can influence consumer attitudes and vice versa if a person has to be not necessarily intend.

3. Research Methodology

Location and Object

To obtain the data and information that is accurate and relevant required to hold a series of studies on Bank Customers in Banda Aceh. While the object of this study is the Effect of Diffusion of Innovations on Intention to Use Mobile Banking with Consumer Attitudes as Mediation Variable.

Population and Sampling

The population in this study is the Customer's registered as a user of mobile banking in Banda Aceh, which has Independent Mobile Application, with a sample set of 100 customers. Sampling was conducted using purposive
sampling is the criteria: Registered as a bank customer in Banda Aceh bank and Has Independent Mobile Applications

Data Analysis Tools
Analysis of the data used in this study is the use of path analysis (path your analysis) using the IMB program. Analysis of the path (the path your analysis) is a statistical technique used to test the causal relationship between two or more variables, and also used to look at the direct and indirect influence of a set of variables as causes of variables to a set of other variables that are variable due to (Sewall Wright et al., 1996).

4. Result and Discussion
Effect of Relative Advantage, Compatibility, and Trialibility on Consumer Attitudes
Relative advantage, compatibility and trialibility significantly affects on consumer attitudes. Advantage relative to the level of significance level of 0.05, the level of compatibility with a significance level of 0.1, trialibility with significance level 0.05 level. It is characterized by the value of $F > F (24,525 > 3,079)$ at a significance level of 0.001. Variable relative advantage, compatibility and trialibility jointly influence the attitude of bank customers Banda Aceh. The magnitude of the effect of the three variables simultaneously is indicated by the coefficient of determination. The coefficient of determination is the effect of three variables on consumer attitude is equal to 0.434. That is by 43.4% based attitude change can be explained by a change of variables relative advantage, compatibility and trialibility of 65.9% while the rest is explained by factors other than the variable relative advantage, compatibility and trialibility.

![Figure 1. Path Analysis](image1.png)

Partial Effect of Relative Advantage, Compatibility, and Trialibility on Consumer Attitudes
Based on the research result it can be concluded that the relative advantage is positively significant effect on the attitude of the Bank's customer in Banda Aceh. It is characterized by a significant value $0.000 < 0.05$. Then the compatibility variable is positively significant effect on bank customers' attitudes in Banda Aceh. It is characterized by a significant value $0.045 < 0.1$. Furthermore trialibility variable positively significant effect on the Bank's customer attitudes in Banda Aceh. It is characterized by a significant value $0.000 < 0.05$.

Effect of Relative advantage, Compatibility, Trialibility, the Intention to Use the Consumer Attitudes
Based on the result can be explained that the compatibility of the variable intention to use positive effect is not significant with a significance level of 0.05 level. Variables significant relative advantage is positively related to the intention to use the level of significance level of the intention to use 0.05. Triability variable significantly positive affects on the attitude of the customer with a level of significance level of 0.05. Consumer attitudes towards intention to use significant positive effect on attitudes to the significance level 0.05. Hal level is characterized by the value of $F > F (18,746 > 2,689)$ at a significance level of 0.000.

![Figure 2. Path analysis all variables](image2.png)
Effect of Relative Advantage, Compatibility, Trialibility, to Intentions of Use with the Consumer Attitudes

Based on the result it can be concluded that the relative advantage is positively significant effect on customer intention of Bank in Banda Aceh. This is characterized by a significant level of $0.045 < 0.05$. Compatibility intention not significant effect on the Bank's customer in Banda Aceh. It is characterized by a significant level of $0.715 < 0.05$. Furthermore trialibility variables significantly influence customer intention of Bank in Banda Aceh. It is characterized by a significant level of $0.000 < 0.05$. While consumer attitudes variable was also a significant effect on the Bank's customer intent in Banda Aceh. It is characterized by a significant level of $0.042 > 0.05$.

Effect of Direct and Indirect

Each variable has a large influence of different variables that have the most dominant effect on the attitudes of customers of the Bank in Banda Aceh is trialibility variable. Trialibility directly have an influence on the customer's intention to take a position in the Bank's mobile banking in Banda Aceh at 0,393. While the total effect of 0.461.

5. Conclusions and Suggestions

Conclusion

Based on the results of research and discussion that has been described in the previous chapter, it can be drawn some conclusions as follows:

1. There is a significant direct effect between relative advantage, compatibility and attitude trialibility with customers using mobile banking Bank in Banda Aceh.
2. There is a direct effect of the relative advantages and partially triability significant positive effect on intention to use mobile banking Bank in Banda Aceh. Compatibility is insignificant effect on intention to use.
3. There is a significant direct effect between consumer attitudes with the intention to use mobile banking Bank in Banda Aceh. This means that with the mobile banking product support ease in transaction, the customer will automatically feel the new technology, thus gaining the benefits offered by mobile banking products.
4. There is a significant direct effect between relative advantage, compatibility and triability on the intention to use mobile banking customers through the Bank's attitude in Banda Aceh. That is the intention intertwined with attitudes and advantages, suitability, renewable technologies can provide the benefit to using a new aspect of the Bank.

Suggestion

Suggestions can be submitted from the research results obtained are as follows:

1. The managerial Bank in order to always keep the quality of the latest products launched by either giving rise to the benefits to the customer in order to create a good relationship between customers and employees.
2. Improve and enhance the performance of customer service (customer service) is to be responsive to complaints and was able to resolve the problem in a short time.
3. For further research needs to add to the sample, the study period, the number of observations with more long time, and comparing with other bank that has better quality, so that the results would be more supportive and can be generalized well.

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