Factors Affecting the Intention to Reuse Mobile Banking Service

Ceva Lavenja Arahita

School of Economics and Business, Telkom University, Bandung, Indonesia

Jurry Hatammimi

School of Economics and Business, Telkom University, Bandung, Indonesia

Abstract

The accelerated advancement in technology resulted to the appearance of Self Service Technology. One form of self-service technology in the banking sector is the presence of mobile banking. This study aims to examine the influence of five factors toward the reusing of Mobile Bank Central Asia (BCA) in Bandung. Those factors used in this study were the extension of Technology Acceptance Model (TAM) constructs, i.e perceived usefulness, perceived ease of use, perceived credibility, customer awareness and social influence. Data was collected through distributed questionnaire to 100 respondents who used Mobile BCA by using judgment sampling. Multiple linear regression technique was employed to investigate the influence among variables. This study empirically concluded that consumer intention to reuse BCA mobile services was positively influenced by social influence, customer awareness and perceived ease of use. On the other hand, perceived usefulness and perceived credibility did not influence the intention of reusing Mobile BCA in Bandung. Further study is suggested to use probability sampling technique to cover the real voice of mobile banking user in Bandung and to explore the lack influence of perceived usefulness and perceived credibility toward reusing of Mobile BCA.

Key Words: Mobile Banking; Technology Acceptance Model; Intention To Reuse

JEL classification: M31

Introduction

The development of technology has created a new digital age (Kotler and Armstrong, 2008). The rapid increase of technological developments drives business people to adopt quickly to this development. The increasing competition in the banking industry also encourages the industry itself to quickly adapt to the existing market development. The banking industry is currently vying with each other to improve the quality of its services for the convenience of its customers. In the midst of the emergence of innovations, the use of self-service technology is one that is in demand by customers (Meuter et al., 2005). Self-service activity is the practice of customers to serve themselves and the interaction of human services is replaced by technology (Kotler and Keller, 2009). Some ways in which to improve services, among others, are by providing a wide range of facilities that make it easier for customers to do all banking

activities. One of these facilities is the presence of self-service technology called mobile banking. Mobile banking as part of e-banking technology is a banking information service via the latest wireless which is now offered by the bank by using a mobile phone to support ease of banking activities (Sulistiyarini, 2013). The customers can make transactions and use the banking services whenever and wherever they are only through mobile phone. Some examples of transactions or services are money transfers between banks, checking balances, payment transactions, and find out banking services information.

One bank in Indonesia that implement mobile banking system is Bank Central Asia (BCA). BCA is the first bank to launch a mobile banking system in Indonesia and better known as m-BCA, which has now been transformed into a Mobile BCA. Ministry of Communications and Information Republic of Indonesia stated that the number of Internet users in Indonesia has reached 82 million people and this made Indonesia as 8th largest internet user in the world (Ministry of Communication and Information, 2014). This figure was predicted to increase as internet penetration in Indonesia only around 28 percent of the total population of Indonesia (APJII, 2014). Meanwhile, the number of smart phone users in Indonesia, according to research conducted by Yahoo and Mindshare in mid-2013, was approximately 41.3 million people, while there were around 6 million people of tablet users (Maulana, 2013). Seeing this trend, the Bank began to transform mobile banking through smart phone applications namely Mobile BCA. Armand W. Hartono, Director of Bank Central Asia revealed that in only 15 days after it was launched in October 2011, the Mobile BCA application had been downloaded by about 17 thousand users (BCA, 2012).

Based on the of survey to 1710 respondents conducted by MARS Indonesia in 5 cities (Jakarta, Bandung, Semarang, Surabaya, and Medan), the lowest level of ownership of mobile banking account was in Bandung, it was around 33% (Zumar, 2013). In connection with the acceptance of new technologies in banking, the literature shows that if the specific needs of the consumer's desires met, then the consumer would probably not change the way they operate these technologies (Sathye, 1999). In the context of mobile banking, customer attitude in response to this service was depended on the ways of delivering the technology (Laforet and Li, 2005).

Even though the use of mobile banking has grown in Indonesia, especially in Bandung, it still needs an assessment to examine the factors affecting the customer's intention to reuse Mobile BCA. To achieve this goal, the present study expands the application of the concept of Technology Acceptance Model (TAM) model in the context of mobile banking. This study intends to determine the factors that influence the intention of reusing mobile banking, especially for customers who use Mobile BCA in Bandung. The objective of this study is to examine the influence of perceived usefulness, perceived ease of use, perceived credibility, customer awareness, and social influence toward intention of reusing Mobile BCA in Bandung.

Literature Review

Technology Acceptance Model (TAM)

Technology Acceptance Model (TAM) is a conceptual model developed by Davis (1989). According to him, the main goal of TAM is to provide a general explanation of the external factors on trust, personalization, and the intended use of the computer. TAM model developed by Davis is a model that is widely used for research on Information and Technology (IT) because it is relatively simple and easy to implement (Guriting and Ndubisi, 2006; Venkatesh and Morris, 2000). Pikkarainen et al. (2004) stated that the Technology Acceptance Model (TAM) is a model which explains most of the variance (approximately 40%) in interest and behavior in the use of information systems. TAM model is a result of the adoption of the Theory of Reasoned Action (TRA) model which renowned as the theory of reasoned action proposed by Fishbein and Ajzen (1975).

Usage Intentions

One's intention to use the system or technology could be influenced by his/her firm belief in the use of the technologies. Usage intentions of a technology lead to the goals of the users in conducting their activities and can be considered as the reason for their belief and behavior. Such behavior can be based on positive or negative feelings (Ajzen, 1991). The usage intention is a desire to perform certain behavior or activities (Jogiyanto, 2007). It can be assumed that if a person had a high intention, then the effect on behavior would be high as well (Pratiwi, 2012). The previous research shows that the acceptance of a technology could be seen from the desire or intention of a person to use the technologies (Amin, 2008; Davis, 1989; Lucyanda, 2007).

Perceived Usefulness

Perceived usefulness is defined as the degree to which a person believes that using a particular system or service would enhance his or her performance (Davis, 1989). A system with high perception of usefulness would make users believe the relationship between the usage and the positive performance. It suggests that using the technology in the work space would increase user's productivity, improve job performance, and enhance job effectiveness and usefulness (Wibowo, 2008). Pikkarainen et al., (2004) found that there was a positive relationship between perceived usefulness with the adoption of online banking. While Cheong and Park (2005) found that perceived usefulness positively affected the intentions and activities of mobile internet usage.

Perceived Ease of Use

Perceived ease of use is defined as the degree to which a person believes that using a particular system or service would be free of effort (Davis, 1989). Likewise, users are likely to adopt technology when the system is easy to use. Perceived ease of technology will have an impact or influence on the behavior and actions, i.e. the higher the person's perception of the ease of use of a system, the higher the level of information technology utilized (Amijaya, 2010). Guriting and Ndubisi (2006) found that the results of the ease of use (perceived ease of use) had a significant positive impact on the intentions and behavior of people in the use of online banking in East Malaysia. Bank customers tended to adopt online banking because they felt the utilization of mobile online was easy.

Perceived Credibility

In addition to the two general constructs of TAM namely perceived usefulness and perceived ease of use, the use of mobile banking could also be influenced by the user's perception of the credibility about security and privacy issues (Wang et al., 2003). The perception of credibility is defined as the extent to which a person believes that the use of mobile banking will have no security or privacy threats (Luarn and Lin, 2005). Security refers to the protection of information or system of any disturbance or outflows. Privacy refers to the protection for various types of data collected (with or without the user's knowledge) for the user to interact with a mobile banking system. By leaning on the investigation of users attitudes towards mobile banking, Laforet and Li (2005) used the privacy and security variables to express the perceived risk and revealed that the perception of risk was the most significant factor that influencing the adoption of mobile banking. In the previous study, it was found that perceived credibility significantly affected to a person's intention to use mobile banking (Amin, 2008; Riquelme and Rios, 2010; Laforet and Li, 2005). Because of the literature show that the experts used different perspectives to assess concerns about risk, trust and credibility, then each interpretation is entirely dependent on the discipline of researchers. Given that the perceived credibility has been widely used in the context of studies of mobile banking and internet banking, this study uses the perceived credibility that represents variables such as individual security, privacy, risk, and concerns about beliefs regarding the adoption of mobile banking (Yu, 2012). Based on these findings, perceived credibility is considered valid in the context of mobile banking.

Customer Awareness

According to Sathye (1999), the consumer will go through the steps or processes before they are ready to adopt a product. Such processes include knowledge, persuasion, decision, and confirmation. Adoption or rejection begins when there is a consumer awareness of the product. Consumers will find a service that offers the best value. Therefore, for the adoption of mobile banking, it is important for banks that offer this service to make consumers aware of the availability of these products and explains how mobile banking services can add relative value to other products or of competitors (Safeena et al., 2011). An important characteristic for the adoption of innovative service or product is to create awareness among consumers of the services or products. The result of research conducted by Pikkarainen et al. (2004) showed that the amount of available information possessed by customers about internet banking and its benefits had a significant impact on the adoption of internet banking. Additionally, Sathye (1999) noted that the customers' low awareness on internet banking would be an important factor for customers to fail to adopt internet banking.

Social Influence

Social influence is defined as the extent to which an individual feels that others are important to him, believing he had to use the new system (Davis, 1989). A social influence from peers and superiors consumers relating to the use of technology is also an important part of consumer behavior in the context of the adoption of information technology (Li-ly and Faziharudean, 2011). In a study of 158 customers of a major bank in Malaysia empirically proved that people's choice to use mobile banking was significantly influenced by the society around them (Amin et al., 2007 in Amin, 2008). Safeena et al. (2011) perceived that social influence is a subjective norm. According to Fishbein and Ajzen (1975) in Venkantesh and Morish (2000), subjective norm is defined as the extent to which an individual believes that the people who are important to him/her think that he/she should perform the behavior in question. A research conducted by Li-Ly and Faziharudean (2011) regarding the intentions of mobile data usage in Africa shows that social influence had a significant positive impact on the prediction of consumer intention to use mobile data services.

Research and Model

The hypothesis of this study are; Perceived usefulness has a positive effect on the intention of reusing mobile BCA; Perceived ease of use has a positive effect on the intention of reusing mobile BCA; erceived credibility has a positive effect on the intention of reusing mobile BCA; Customer awareness has a positive effect on the intention of reusing mobile BCA; Social influence has a positive effect on the intention of reusing mobile BCA.

The framework of this study uses the modified of Technology Acceptance Model (TAM). The model of the study was constructed as illustrated in figure 1.

Figure 1. Research Model

This study is descriptive causal study. A descriptive study is conducted to determine and explain the characteristics of the studied variables in a situation (Sekaran and Bougie, 2010). The method used in this research is quantitative research because this study is based on the philosophy of positivism, which is used for the study of population or a particular sample, and is characterized by data collection using research instruments, quantitative data analysis (statistics), and with the aim of testing the hypothesis that has been established (Sugiyono, 2013). In this study, the determined population is BCA customers who had applied to Mobile BCA services in Bandung. Sampling was done by using a non-probability sampling technique namely judgment sampling. The selection of judgment was chose to ensure that only the samples that have certain criteria had been established by researchers to be taken as a sample (Sugiyono, 2013). The total population of this study was unknown because the restriction to collect the data from the bank. By a calculation using the Bernoulli method, it could be obtained a sample of 100 customers. To measure the effect of the perceived usefulness, perceived ease of use, perceived credibility, customer awareness and social

influence toward intention to reuse Mobile BCA, this study implemented multiple linear regression. F test and t test were also applied to examine the simultaneous and partial hypothesis.

This study used multiple linear regression tests because there is more than one independent variable that affects the dependent variable (Sunjoyo et al., 2013). The independent variables of this study consist of the perceived usefulness, perceived ease of use, perceived credibility, customer awareness and social influence, whereas the dependent variable is intention to reuse Mobile BCA.

Results and Discussion

Data were collected by distributing questionnaires to 100 respondents, namely the BCA customers who live in Bandung and have been using BCA mobile. Table 1 illustrates that from 100 respondents, 61% of them were female and 39% were male. Majority of respondents were 21-30 years old amounted 51%.

From table 1, based on the occupation, it can be seen that the dominant respondents were college students in the proportion of 41%. 52% of respondents had finished their high school education while 43% of them had graduated from bachelor degree. Based on the duration of Mobile BCA usage, the customers who had been using Mobile BCA for 1 to 2 years shared the same proportion with the ones who had been using Mobile BCA below 1 year amounted 36%. Those were followed by above 2 years usage's customers with 28%. Finally, based on the usage frequency, the largest number of respondents used Mobile BCA less than once in a week with 38%. Respondents who use Mobile BCA 1 to 3 times a week and 3 to 7 times a week shared the same numbers of 27%.

Table 1. Characteristics of the respondents

Variable	Classification	Frequency	Percentage
Gender	Male	39	39%
	Female	61	61%
Age	≤ 20	18	18%
	21-30	51	51%
	31-40	14	14%
	41-50	14	14%
	> 50	3	3%
Occupation	Student	11	11%
	College Student	41	41%
	Employee	23	23%
	Entrepreneur	18	18%
	Others	7	7%
Educational level	Junior High School	7	7%
	Senior High School	45	45%
	Bachelor degree	43	43%
	Master degree or above	5	5%
Experience with Mobile BCA (Months)	≤ 6	17	17%
	7-12	19	19%
	12-24	36	36%
	> 24	28	28%
Frequency of using Mobile BCA (time(s) per week)	< 1	38	38%
	1-3	27	27%
	3-7	27	27%
	7-9	8	8%

Table 2. Multiple Regression and Hypothesis Testing

Model	R = 0,689		R2 = 0,475	Adjusted R2 = 0,447		
Model	F value = 16,999		Sig. = 0,000			
Model	Unstandardized Coefficient		Standardized Coefficient	t	Sig.	Result
	B	Std. Error	Beta			
constants	0,348	0,390		0,892	0,374	
Perceived usefulness	-0,093	0,099	-0,082	-0,940	0,350	Rejected
Perceived ease of use	0,167	0,082	0,166	2,028	0,045	Supported
Perceived credibility	0,048	0,091	0,048	0,529	0,598	Rejected
Customer awareness	0,293	0,125	0,232	2,335	0,022	Supported
Social influence	0,485	0,085	0,491	5,732	0,000	Supported

Based on statistical analysis as shown on Table 2, it is found that the result of Hypothesis 1 was rejected. It shows that the perceived usefulness did not affect the intention to reuse Mobile BCA. This result is consistent with the previous research relating to the acceptance and usage of mobile banking intentions in other countries (Aboelmaged and Gebba, 2013; Karma et al., 2014). However, this contradicts to other studies such as Daud et al. (2011), Kazi and Mannan (2013), and Safeena et al. (2011).

Table 2 shows that the second hypothesis was received. It shows that the perceived ease of use positively affected the intention to reuse Mobile BCA. The similar results are also supported by the previous research on the acceptance and usage of mobile banking (Karma et al., 2014; Kazi and Mannan, 2013; and Safeena et al., 2011). However, this result contradicts to other studies such as Daud et al. (2011). It shows that if the Mobile BCA application is easy to use and does not require burdensome efforts, it would make the customers reuse the service.

Furthermore, the third hypothesis was rejected. It indicates that the perceived credibility did not affect the intention to reuse Mobile BCA. The result is consistent with previous research relating to the acceptance and usage of mobile banking intentions in other countries (Karma et al., 2014; Kazi and Mannan, 2013). However, the result contradicts to other studies such as Amin (2008) and Daud et al. (2011). Customer perception of the risks, security, and high uncertainty such as data loss and misuse of personal information will become obstacles to customers to reuse Mobile BCA.

In addition, table 2 displays that the fourth hypothesis was received. It suggests that the customer awareness positively influenced the intention to reuse Mobile BCA. The similar results are also supported by previous research (Daud et al., 2011 and Safeena et al., 2011). The high consumer awareness regarding Mobile BCA services will further encourage customers' intention to reuse Mobile BCA.

The fifth hypothesis was received as well. It suggests that the social influence positively influenced the intention to reuse mobile BCA. The similar results are also supported by previous research (Kazi and Mannan, 2013; Safeena et al., 2011; and Yu, 2012). In this study, social influence has the highest partial influence to the intention of Mobile BCA reusing by its customers in Bandung. The findings of this study highlight that customers tend to reuse Mobile BCA because it is influenced by the people around them, such as friends and family.

Conclusions

It is found that the results of the variables namely perceived usefulness, perceived ease of use, perceived credibility, customer awareness, and social influence had influenced the customers' intention to reuse Mobile BCA in Bandung simultaneously in the amount of 44.7%. Partially, Social Influence, Customer awareness, and Perceived Ease of Use

respectively influenced the intention to reuse Mobile BCA. On the other hand, Perceived Usefulness and Perceived Credibility had no effect toward the intention to reuse Mobile BCA in Bandung. The results of this study indicate that dimension of the pragmatic free in deciding to reuse Mobile BCA is based on customer perception of use with ease, customer awareness, and social acceptance than the uses and benefits of Mobile BCA application.

For further research, it should be made a research to explore the lack of influence of perceived usefulness and perceived credibility in reusing Mobile BCA. It is also better to add moderator variable to represent the study holistically. Further study is suggested to use probability sampling technique to cover the real voice of mobile banking user in Bandung as well.

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