ANALYSIS OF CUSTOMER AWARENESS IN USING MOBILE BANKING APPLICATIONS

Putri Pastika Sagala[1*], Pristiyono[2], Budi Febriani[3]

[1,2,3]Faculty of Economics and Business, University of Labuhanbatu

ABSTRACT

Advances in digital technology in the form of smart phones, email, social networks, can fundamentally change our relationship with work and connect permanently. The focus of this research includes analyzing the factors that pose a threat to the use of mobile banking applications when transacting online in the community. Determination of the number of samples can amount to 5-10 of the number of indicators, so 10x10 = 100 respondents. The data analysis technique in this study depends on the data collection technique used to solve the problem in this study SmartPLS data analysis technique. The final result of this study is that the variables of customer knowledge and risk perception have no influence on interest in using the m-banking application. However, the variable customer awareness has an influence on the interest in using the m-banking application.

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* Corresponding Author at Department of Management, Faculty of Economics and Business, Universitas Pekalongan, Jl. Sriwijaya No. 3 Kota Pekalongan, 51111, Indonesia
E-mail address: putriwiko22@gmail.com (author#1), paktio16@gmail.com (author#2), author3@email.com (author#3)

1. Introduction

The rise of the digital era allows everyone to obtain convenience in various information either intentionally or unintentionally. Digitalization increasingly has a positive impact if used properly and wisely in accordance with the provisions and needs of each person. Advances in digital technology in the form of smart phones, email, social networks, can fundamentally change our relationship with work and connect permanently. (Chopra & Sharma, 2020). One example of the advancement of digital technology that is now easily encountered is when dealing with banking services where according to (Tran, Le, & Phan, 2023) the findings of the article show that flexible digital bank products and services bring many benefits with a high level of interaction, such as supporting the relationship between customers and banks and increasing operating income. This statement is reinforced by (Khanboubi, Boulmakoul, & Tabaa, 2019) that the Internet of Things (IoT) seems to be a worthy representative for future technological, economic, and social revolutions that pave the way for many more useful applications.

In a highly supportive study (Rubanov, 2020) said that financial services companies are more actively adopting digital-based financial technology and are potential markets, this is because digital-based banking services do not require the physical presence of banks or other intermediaries. From here the author increasingly understands that technology cannot be avoided intentionally by anyone including financial industry companies, on the contrary, companies that are notebene engaged in the financial industry must be able to accept this condition by making various changes, especially in

systems related to digital service transformation. Some of the study results (Sonono & Ortstad, 2017) that the role of digitalization in the banking sector has changed customer preferences and demands, as a result, banks in Sweden have become more digitally oriented to meet the new preferences and demands of their customers.

The important point of banking digitalization is to provide convenience for anyone in obtaining financial information and transactions and in obtaining digital financial services. (Pristiyono, 2021). The reason for the emergence of banking digitalization presents derivative products in the form of applications whose purpose is to provide convenience for its users. This is explicitly stated by (Shrier, 2022) that mobile banking applications have the potential to reduce costs by maximizing economies of scale, increasing transaction speed, security and transparency. Definition of mobile banking according to (Iskandar, 2020) is an application service that allows bank customers to make transactions via mobile phones or smartphones including payments, transfers, history, and others. The use of mobile banking services on smartphones allows customers to more easily carry out their banking activities without space and time restrictions.

In addition to providing convenience for users, the presence of mobile banking also has a negative side that not many people know even from them after using mobile banking such as providing momentary satisfaction where after using the mobile banking application when the goal has been achieved and they easily ignore it. According to the study (Renju Chandran, 2014) the threats or the downside of using mobile banking applications are not sure about transaction security, mobile security, network availability, high transaction costs, email and web security, identity theft, literacy of people in rural areas, not knowing new innovations, ability to operate handsets, inadequate distribution of applications and guidelines. Similarly, the threat of mobile banking according to (Purohit & Arora, 2021) challenges in mobile banking are related to systems, security, regulatory environment, economic feasibility.

The phenomena that support this research relating to the threat of using mobile banking applications occur most frequently in Indonesia. According to the study (Citra Christian & Sitokdana, 2022) it cannot be denied that there will be possible risks that can occur in m-Banking to disrupt existing business process activities. One of them is data leakage, down applications and many more. In empirical studies which are theoretically possible, the authors also present data or cases of abuse that occurred in mobile banking in Indonesia in 2022, the number of cases of data leakage accounts that were breached was 430.1 thousand accounts. According to case studies of crimes on mobile banking applications such as phishing according to (Ma'ady et al, 2023) that digital fraud most often occurs without users realizing it is phishing. Phishing is one of the digital fraud techniques to steal important personal data, such as passwords, credit card numbers, and other information of a personal nature.

Indications of the threat of crime in mobile banking applications that are rampant stem from deliberate mistakes by customers or application users in addition to not understanding the provisions or mechanisms for using mobile banking applications as recommended by the bank. Common user errors are users in conducting smartphone transactions relying on wifi (free) internet networks, user negligence in closing mobile banking accounts in open areas and smartphones that are freely misused by friends and close people to misuse them by providing application accounts or passwords. So in general, the above problems are important phenomena.

Although the number of cases of using mobile banking applications in Labuhanbatu Regency is quite small, it does not mean that the research problem is underestimated because this research has broad objectives, including through this research being an empirical source of information that the use of mobile banking on smartphones has risks. Therefore, the focus of this research includes analyzing the factors that pose a threat to the use of mobile banking applications when transacting online in the community so that it does not only provide information or knowledge. So the novelty of this research is to find factors that are empirically considered important in supporting the use of mobile banking in online transactions in the community so that it can help anyone avoid the threat of misuse of mobile banking applications.

2. Literature Review

Customer Knowledge

In the world of banking related to digital technology, customer knowledge is very dependent on customer knowledge, this is because customer knowledge is an important part of overall organizational knowledge. Definition of customer knowledge according to (Najat, 2017) defined as "the ability to interpret, assimilate, and call on data and information, both implied and obvious, to perform tasks entrusted to individuals with high excellence and distinction that help maintain the organization's competitive advantage. According to (Hendarti et al, 2023) that customer knowledge is the result of understanding or the result of a person's sensing of an object through his five senses, namely the senses of the eyes nose, ears and so on. According to (Hamzah et al, 2016) customer knowledge is the customer's knowledge of the company's products and the market that surrounds them related to the interaction of previous customer requirements and expectations. In this context, customer knowledge related to mobile banking applications is the ability and knowledge sourced from *customer interactions with banking products through hearing and vision.*

H_1 : Customer knowledge has an influence on interest in using mobile banking applications.

Risk Perception

According to (Saes, 2023) risk perception is people's assessment of the future outcomes that may occur if they or others follow a particular course of action. Further investigation, it is important to take a closer look at the concept of risk. According to (Vasvári, 2015)(Vasvári, 2015), a prerequisite for the existence of risk is uncertainty, i.e. the future of the future cannot be determined in advance, but depends on current human activity. He adds that there is no absolute certainty, stating that one can never be anything, as much of the available information is inaccurate or incomplete. According to (Astuti & Fajarratri S, 2010) risk is defined as a consumer's subjective estimate of suffering a loss in receiving a desired outcome. Therefore, the definition of risk perception from using mobile banking applications is the perception that may occur when using mobile banking applications and customers can already accept the risks of the possibilities that occur.

H_2 : Perceived Risk has an influence on interest in using mobile banking applications.

Customer Awareness

The awareness referred to in this study is of course related to customer awareness when using mobile banking applications. According to (Mentari, 2018) explains the definition of customer awareness in the banking world is the level of customer adoption in persuading customers through various means of advertising displayed by banks. Awareness has been defined as the level or amount of information that customers have about the properties of a product, and how confident they are to try it, and how to remind them to buy, meaning that the higher the customer's awareness of a product, the more they will try and buy it. (Akaileh, Bashabsheh, & Almrafee, 2023).. Meanwhile, the definition of customer awareness is defined as an assessment, feelings and desires about a product (mobile banking application). (Junaidi et al, 2023).

H_3 : Customer awareness has an influence on interest in using mobile banking applications.

The relationship between customer knowledge, risk perception and customer awareness

The relationship between variables plays an important role in describing the correlation between customer knowledge, risk perception and customer awareness in the interest in using mobile banking applications. (Thakur & Srivastava, 2015); (Tiwari, Tiwari, & Gupta, 2021).

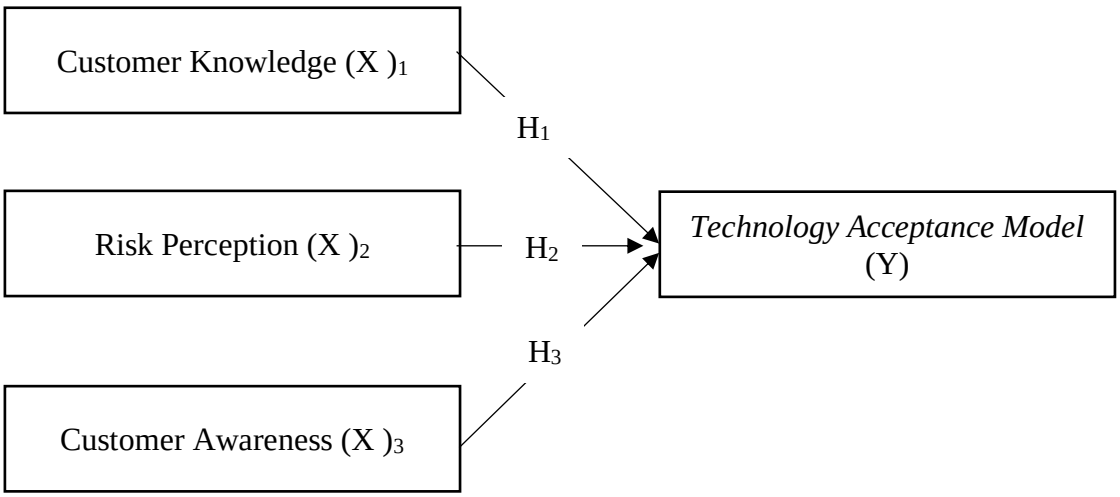

Figure 1. Framework of Thought.

3. Method, Data, and Analysis

This research is quantitative research where in solving the problem the author describes empirically with the support of primary data (questionnaires) containing statements about the research instrument distributed to research respondents. The variables and indicators of this study include:

Table 1. Research Variables and Indicators

No.	Variables	Indicator
1.	Customer Knowledge (X)1	1. Product category awareness 2. Product terminology 3. Product attributes (Soliha, Marlien, Widyasari, Rivai, & Khotimah, 2019).
2.	Risk Perception (X)2	1. Level of risk in using electronic money 2. Security in transactions using electronic money 3. System security in electronic money 4. Convenience in using electronic money 5. Reliability of electronic money systems (Indriyani MS, Fatma, & Hasyim, 2022).
3.	Customer Awareness (X)3	1. Recall 2. Recognition 3. Purchase 4. Consumption (Sari, Syamsuddin, & Syahrul, 2021)
4.	Technology Acceptance Model (Y)	1. Experience 2. Complexity 3. Volunteerism (Kurniawati, Arif, & Winarno, 2017)

The target population of this study is the people of Labuhanbatu Raya Regency - North Sumatra, so the population size is unknown, so to determine the number of samples in this study considering the research model used is the Structural Equation Modeling (SEM) where the ideal sample is between 100-200 samples while considering the number of indicators in the model. (Fitri, Arifin, & Yanita, 2020).

Furthermore, the sample size can be 5-10 of the number of indicators, so 10x10 = 100 respondents. The data analysis technique in this study depends on the data collection technique used, where primary data (main data using questionnaires) will be directly distributed to 100 respondents using a Likert scale (Scale 1-5) ranging from the categories Strongly Disagree (1), Disagree (2), Disagree (3), Agree (4) and Strongly Agree (5). So in solving the problems in this study the authors used SmartPLS data analysis techniques.

4. Result and Discussion

Factor Loading

In the initial stage of testing the validity of a model, it is determined from the requirement that the loading factor must be greater than 0.60, so the variable indicator is said to be valid. As can be seen from the table:

Table 2. *Factor Loading Output*

	Customer Awareness	Customer Knowledge_	Risk Perception	Technology Acceptance Model
Kn1	0.827			
Kn2	0.845			
Kn3	0.888			
Kn4	0.869			
Pn1		0.927		
Pn2		0.965		
Pn3		0.918		
Pr1			0.850	
Pr2			0.923	
Pr3			0.894	
Pr4			0.884	
Pr5			0.829	
TAM1				0.844
TAM2				0.884
TAM3				0.809

Source: SmartPLS output, 2024

From the data in Table 2, which is the output factor loading, it is stated that it has a value of> 0.60 so that it fulfills the outer model *Convergent Validity* test.

Average Variance Extracted *(AVE)*

After the model meets the *Convergent Validity* requirements, another outer model test is to see the output of the *Average Variance Extracted* (AVE) value. The expected *Average Variance Extracted* (AVE) value must be> 0.50. The following *Average Variance Extracted* (AVE) value can be seen in Table:

Table 3. *Average Variance Extracted (AVE) Output*

Variables	Average Variance Extracted (AVE)	Description
Customer Awareness	0.736	Valid
Customer Knowledge_	0.878	Valid

Risk Perception	0.768	Valid
Technology Acceptance Model	0.716	Valid

Source: SmartPLS output, 2024

The results of processing research data sourced from questionnaires obtained output or *Average Variance Extracted* (AVE) value of the system quality variable of 0.822, information quality of 0.734, consumer knowledge of 0.791, advertising of 0.784, promotion of 0.813 and purchasing decisions of 0.725 as a whole have an AVE value above the value of 0.50 (standard) so that it can be concluded that the model meets the outer model requirements *Convergent Validity***.**

Composite Reliability

The cut off point value limit for *composite reliability* and *Cronbach alpha* is 0.70. So you can see the *composite reliability* and *Cronbach alpha* values below:

Table 4. *Composite Reliability and Cronbach Alpha Output*

Variables	Cronbach's Alpha	Composite Reliability
Customer Awareness	0.894	0.917
Customer Knowledge_	0.932	0.956
Risk Perception	0.926	0.943
Technology Acceptance Model	0.818	0.883

Source: SmartPLS output, 2024

A good outer model in PLS is Based on Table 4 above shows that all constructs have a value must pay attention to the value of *Composite Reliability* and *Cronbach Alpha* greater than the value set at 0.70 and fulfilled so that no undimensionality problems are found so that it meets the requirements**.**

Inner Model Testing

R-Square

After knowing the model meets the outer model requirements, then further test the inner model using the coefficient of determination (R^2) approach as the final requirement for the specified model. As for the coefficient of determination (R^2), among others:

Table 4. *R-Square Output*

Variables	R-Square
Technology Acceptance Model	0.535

Source: SmartPLS output, 2024

The results of obtaining the coefficient of determination (R^2) that the purchasing decision variable has an R-square value of 0.960 or 96%. The expected coefficient of determination (R^2) is between 0-1. So it can be concluded that the R-square value of the purchasing decision variable is in a very good range.

Hypothesis Test

The indicator used in hypothesis testing in this study is the t value which is compared to the t-table value. The hypothesis is declared accepted if the t value is greater than the t-table, and the hypothesis is declared rejected if the t value is smaller than the t-table with the results of the

significance of the path coefficient test. Based on these provisions, the accepted and rejected hypothesis testing results can be seen in Table 4 below:

Table 5. Hypothesis Testing Results

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
Customer Knowledge_ -> Technology Acceptance Model	0.240	0.225	0.250	0.960	0.337
Risk Perception -> Technology Acceptance Model	-0.036	-0.011	0.280	0.127	0.899
Customer Awareness -> Technology Acceptance Model	0.568	0.566	0.125	4.553	0.000

Source: Research Results, 2024

Discussion

1. *H_1 : Customer knowledge has an influence on interest in using mobile banking applications.*
   From the results of hypothesis testing in table 5 above, it shows that the p-value of the Customer Knowledge -> Technology Acceptance Model of 0.337 is greater than the significance value of 0.05 so that it can be stated that the proposed hypothesis is rejected. So it can be concluded that customer knowledge has no effect on interest in using mobile banking applications. The results of this study support the statement (Purnamasari, Ayu Kinanti, & Destia Wahyuningsih, 2024) partially perceived usefulness has no effect on interest in using M-banking, meaning that even though financial technology aims to provide real convenience, the benefits have not had a positive impact on interest in using m-banking so that from this we know that someone who does not have knowledge about m-banking, this person will not affect the use of m-banking.
2. *H_2 : Perceived Risk has an influence on interest in using mobile* **banking** *applications.*
   From the results of hypothesis testing in table 5 above, it shows that the p-value of the Risk Perception -> Technology Acceptance Model of 0.899 is greater than the significance value of 0.05 so that it can be stated that the proposed hypothesis is rejected. So it can be concluded that risk perception has no effect on interest in using mobile banking applications. The results of the study support the statement (Almaiah et al., 2023) The findings show that perceived risk has a negative impact on customer trust and their attitude towards using mobile banking services. This certainly illustrates that the perception of risk in using m-banking is currently still worrying or still has weaknesses, especially in the application system, including in terms of security.
3. *H_3 : Customer awareness has an influence on interest in using mobile banking applications***.**
   From the results of hypothesis testing in table 5 above shows that the p-value of the Customer Awareness -> Technology Acceptance Model of 0.000 is smaller than the significance value of 0.05 so that it can be stated that the proposed hypothesis is accepted. So it can be concluded that customer awareness affects the interest in using mobile banking applications. The results of this study strongly support research (Hariharan, 2024) that more than 50% of respondents have used bank mobile applications for the purpose of balance verification, fund transfer and bill payment. This illustrates that the level of customer awareness in using m-banking is quite high and has a strong relationship. Customer awareness in research is related to recall, recognition, purchase and consumption.

5. Conclusion and Suggestion

Conclusions

The final result of this study is that the variables of customer knowledge and risk perception have no influence on interest in using the m-banking application. However, the customer awareness variable has an influence on the interest in using the m-banking application. The existence of customer awareness indicates that consumers already have knowledge and also understand the level of risk from using the m-banking application.

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