



Impact of Personalization of Services, Privacy and Trust to Intention Bank Customers' Use of Online Banking Services

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Abstract. The purpose of this paper is to examine factors that affect public bank customers' use of online banking services. This research uses quantitative methods. This study used primary data with the sample of 100 customers who used online banking services. The data used PLS analysis. This study provides empirical evidence the factors affecting the usage of online banking services. The findings of this study can help decision makers in the Indonesia bank to develop the adoption of online banking emphasizing personalized and trusted services offered with high level of security and privacy. The results of the model tested suggest that the use of online banking services is influenced by the Propensity of technology adoption, value for online personalization, Customers' concern for privacy, E-trust, Technological leadership, E-loyalty. Practical Implication of this research, the public bank should promote the adoption of online banking services by supporting personalization of services, privacy and trust.

Keywords: Intention, technology adoption, customers' value, privacy, e-trust, technology leadership, e-loyalty

1 Introduction

The financial services industry in Indonesia is one of the industries that plays an important role in economic activities. Technological advances in telecommunications and information technology continue to evolve including in the banking world and are increasingly competitive (Al-Jabri & Sohail, 2012). Along with the development of the times leading to the digitalization era, it has changed people's behavior patterns in using financial services, especially electronic banking services. Changes in people's behavior patterns have

encouraged the emergence of new financial service actors known as financial *technology-based* financial service providers that offer new innovations in financial services.

Electronic services or online banking services themselves have gained considerable attention in recent years. Given the rapid growth of the internet and the globalization of the market, most companies are trying to attract and retain bank customers in a highly competitive market share (Shatat, 2017). Established and mature information systems have a huge influence on the development of more efficient banking services in the banking sector (Arora & Sandhu, 2018; Mansumittrchai & N. AL-Malkawi, 2011).

Innovation in banking technology resulted in an increase in the use of electronic commerce transactions. Currently, there is a migration of transactions from cash to electronic transactions. Factors that influence bank customers in using online banking services are important to understand. Initially most bank customers could only do banking transactions at banks, or with Automated Teller Machines (ATMs) or telephones, but nowadays many bank customers can benefit from internet banking and online banking services. Online banking services grew out of necessity to satisfy the needs of bank customers (Al-Ajam & Md Nor, 2015).

Banks are currently competing to create an online banking service where the service can provide conveniences to its users. Banks that want to compete in creating electronic banking services must understand the regulations made by Otoritas Jasa Keuangan Indonesia and the conditions that must be met to apply electronic banking services.

According to the financial services authority, electronic banking services/ online banking services are services for customersto obtain information, conduct communications, and conduct banking transactions through electronic media. Electronic banking services or online banking services are offered to optimize the use of customer data in order to serve customers more quickly, easily, and in accordance with the needs of bank customers, and can be done completely independently by customers, taking into account security aspects.

According to the financial services authority regulation Number 12 /Pojk.03/2018 Chapter I article 1 concerning the implementation of digital banking services by commercial banks explains that electronic banking services are services for bank customers to obtain information, communicate, and conduct banking transactions through electronic media. Electronic-based banking services provided by banks allow customers to carry out banking activities easily in transactions, making payments and other transactions via the internet with the bank's website that has been given a security system.

Pikkarainen et al. (2004) define *E-banking* as an internet portal that allows bank customers to use a variety of banking services from paying bills to making investments. Internet banking is defined as the delivery of banking services to bank customers via the internet (Chi et al., 2007).

Mobile banking is a form of digital banking development that offers facilities from banks in this modern era. Mobile banking facilities include payments, transfers,

history, and others. Internet Banking reduces operational costs including staff resources and physical facilities for banks. For bank customers, internet banking offers a wide range of electronic bank transactions without being limited by time and place (AlKailani, 2016). Other benefits that the Bank has the potential to achieve through the adoption of online banking services can reach a wider geographical location and reduce operational costs on the part of the Bank including handling fees, transaction fees, labor and overhead costs (Tarhini et al., 2016).

Online banking services provide many benefits and conveniences but many bank customers are still reluctant to use them (Chiu et al., 2017). The concerns of bank customers in the use of online banking services give rise to perceptions about the level of complexity of such services, their perception skills and infrastructure are also needed (e.g. computers, and the internet). The lack of security and privacy when using banking online services is a concern for bank customers (Dwivedi et al., 2014).

Salem et al. (2019) shows that *propensity adoption technology, The value of online personalization by bank customers, Bank customers' concern for privacy, E-trust, Leadership technology, and E-loyalty* affect the use of bank customers in using online banking services. The results of the study explained that banks can apply the results of this study to develop online services to meet the expectations and needs of bank customers to make transactions anywhere and anytime, AlKailani (2016) obtained results that *Perceived ease of use, Perceived usefulness, Perceived Risk (PR), Perceived Trust (PT) and Bank Credibility (BC)* influence on internet adoption in Jordan. This research shows that trust and Perceived Risk (PR) are factors that have a major influence on the use of Internet Banking. According to the research of Magotra, I., Sharma & Sharma, (2015) shows that the tendency of technology adoption affects the acceptance of technology in banking bank customers. This research explains that the tendency to adopt high technology in customers is assumed to be a technology that is used has benefits and is easy to use.

The findings of previous studies show that the use of online banking services by bank customers is influenced by various variables. Based on TAM theory, the acceptance of a technology requires an analysis of factors that affect acceptance that can come from users or the system itself. Researchers are aimed at analyzing the influence of the Propensity of technology adoption, value for online personalization, Customers' concern for privacy, E-trust, Technological leadership, E-loyalty to the use of online banking services.

2 Literature Review

2.1 Use of Online Banking

The rapid development of the times has made the environment more

competitive, resulting in reduced customer loyalty. Banking can offer online banking services as their competitive advantage to need to retain and acquire bank customers. Along with the development of information technology that leads to digital banking services, the bank is fully oriented to the needs of its customers by using digital technology through *devices* and applications (*software*).

The use of online banking services is a service provided by banks to conduct banking transactions through the internet network (investopedia.com-2020). Online banking services and electronic banking services where in Indonesia it is better known as E-banking. The financial services authority explains that digital banking services or online banking services are services that use electronic or digital means owned by banks or digital media that are carried out independently.

Internet Banking is a combination of two basic terms, namely Internet and Banking. According to O the financial services authority "internet banking" is a service for conducting banking transactions through the internet network. The process of using it is relatively very easy, simply by visiting the bank's website to make banking transactions (finansialku.com, 2019). According to the financial services authority, mobile banking is a service to conduct banking transactions via mobile phones, using applications on the handphone. Mobile banking is a service provided by banks to carry out various banking transactions through sharing features on smartphones (cermati.com, 2015). According to Sathye (1999) in Mukherjee and Nath (2003) defines E-banking as several banking activities that can be carried out by customers of the bank concerned to be able to access available information such as balance checks, transfers, transfers, bill payments and others via telecommunications networks.

2.2 The Concept of Technology Acceptance Model (TAM)

Technology Acceptance Model (TAM) is a model built to analyze the factors that influence the acceptance of a technology in an organization. TAM was first introduced by Davis in 1989. The TAM model was actually adopted from the Theory of Reaction Action/TRA model introduced by Ajzen and Fishbein (1980) and proposed by Davis (1989), that is, an action theory that would determine a person's attitudes and behavior with a single well-founded premise regarding a person's reaction and perception of something. Users of information technology (IT) will influence attitudes and reactions in acceptance of technology.

2.3 Research Models

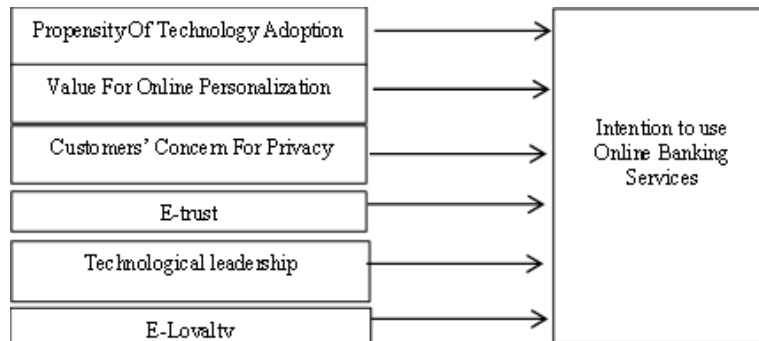


Figure 1. Research framework

3 Methodology

3.1 Data

The object of this study is a public go bank. The subject of this study is a customer of the public bank in Indonesia. The data source used in this study is primary data. This data collection is usually carried out by distributing *questionnaires* to the research subject. The questionnaires the researchers used were sourced from questionnaires that had been used previously by (Salem et al., 2019).

3.2 Sampling Techniques

The population in this study was all customers of public banks who used online banking services. The sample is part of the number and characteristics possessed by the population (Sugiyono, 2011). The sampling method is non-probabilistic sampling, especially the accidental sampling technique, which is a technique for determining samples based on chance (Sugiyono, 2011). Measurement Scale using the Likert scale. *The Likert* scale is designed to test how strongly the subject approves or disagrees with a statement on a 5-point scale.

3.3 Data Analysis Methods

After the necessary data has been collected, the next stage is to analyze the data with correlation regression analysis to determine the influence of independent variables to dependent variables. The PLS (Partial Least Square) analysis used in this study was carried out using the Smart PLS program version 3.0. Decision making of the hypothesis can be carried out by event i.e. on testing at a significance level of 0.05.

4. Analysis Results

In this study, *R-square* value testing was carried out which was used to explain to measure the degree of variation in changes in independent variables to dependent variables. the influence of certain exogenous latent variables on endogenous latent variables. The higher the value of R^2 , the better the model is at predicting the object of study. The structural model of this study can be seen in the following figure:

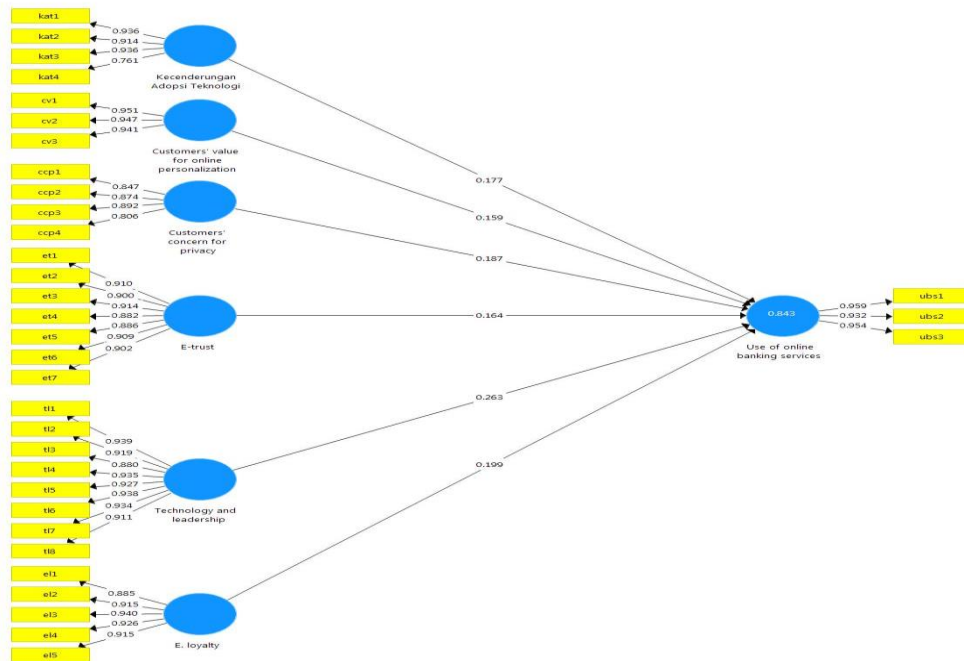


Figure 2. Research Structure Model

Effect of technology adoption tendencies, the value of online *personalization* by bank customers, *Bank customers' concern for privacy*, *E-trust*, *Leadership technology*, *E-loyalty* towards the use of online banking services by bank customers has an R^2 or *R-Square* value of 0.843. If an R^2 of 0.75 indicates a substantial or strong built model, if 0.5 indicates a moderate built model and 0.25 indicates a weak model (Ghozali, 2016). From the results of data processing in this study, the value of R^2 was obtained in the following table:

Table 1. R-square values

Variable	R^2
<i>Inention to Use of online banking services</i>	0.843

Based on Table 1, it shows that the results of the R^2 explain that the percentage of

the large use of online banking services by bank customers can be explained by the tendency to adopt technology, Online personalization value, Privacy concern, E-trust, Leadership technology, and E-loyalty of 84.3%, and 15.7% is influenced by other variables that were not studied in this study.

Structure Model Test the Path Coefficient Model Hypothesis

This hypothesis test is a causality analysis carried out to determine the relationship between variables. Causality analysis can be used to determine the influence that occurs between exogenous variables and endogenous variables. Exogenous variables are expressed to have a significant effect on endogenous variables if the p-value (probability) ≤ 0.05 . The results of the hypothesis test are presented in Table 2.

Table 2 Hypothesis Test Results

Variables	Original Sample	Standard Deviation	T Statistics	P Values	Information
Propensity Of Technology Adoption -> Intention Use of online banking services	0.177	0.088	2.046	0.041	Accepted
Customers' Value For Online Personalization -> Intention Use of online banking services	0.159	0.070	2.260	0.024	Accepted
Consumer Concern For Privacy -> Intention Use of online banking services	0.187	0.056	3.313	0.001	Accepted
E-Trust -> Intention Use of online banking services	0.164	0.078	2.094	0.037	Accepted
Technology Leadership -> Intention Use of online banking services	0.263	0.088	2.979	0.003	Accepted
E-loyalty -> Intention Use of online banking services	0.199	0.070	2.832	0.003	Accepted

Hypothesis testing is intended to test the influence of an independent variable on a dependent variable or the influence of a dependent variable on another dependent variable. In other words, want to test the significance of the influence of an influencing variable against another variable that is affected. In the results of this study table, the signification level used is 5%. The hypotheses that can be described based on the results in Table 2 are refer that Propensity of Technology Adoption, Customers' Value for Online Personalization; Consumer Concern for Privacy, E-Trust, Technology Leadership, E-Loyalty give positive and significant impact to the Intention Use of online banking services.

5. Discussion

5.1 The Impact of Propensity Of Technology Adoption To Intention Bank Customers' Use Of Online Banking Services

The results show that the tendency of technology adoption has a positive and significant effect on the use of online banking services by bank customers. The greater the tendency to adopt technology, the greater the use of online banking services by bank customers, due to technological advances that have developed such as internet services, electricity and other technologies.

This result is in line with TAM theory, where respondents have a tendency to use technology where technological advances have an effect so that respondents will have a tendency to adopt technology. In addition, these results are in line with the research of Salem et al. (2019) that the trend of technology adoption has a positive and significant effect on the use of online banking services by bank customers.

In this study, most respondents had a tendency to adopt technology towards the use of online banking services. This is because respondents believe in the technology used and the conditions or situations that support adopting the technology.

5.2 The Impact of Propensity Of Customers' Value For Online Personalization to Intention Bank Customers' Use Of Online Banking Services

The results show that the value of online personalization by bank customers has a positive and significant effect on the use of online banking services by bank customers. The value of online personalization is more about a more personal relationship with its bank customers to meet the wishes of bank customers. The greater the value of online personalization by bank customers, the greater the use of online banking services by bank customers, because the online services designed and offered by banks can influence bank customers in the use of online banking services, as well as the ease of devices that can be accessed via computers, gadgets, mobile phones, etc. in using online services.

This is in line with TAM's theory that respondents believe that the value of online personalization will affect the online services offered by the bank, so that bank customers can more easily use online banking services. In addition, these results are in line with the research of Salem et al. (2019) that the value of online personalization by bank customers has a positive and significant effect on the use of online banking services by bank customers. The results of this study stated that some respondents stated an important factor in the value of online personalization by bank customers, namely the process / result of personalization itself. This is because each respondent has their own expectations regarding the value of online personalization.

5.3 The Impact of Propensity Of Consumer Concern For Privacy To Intention Bank Customers' Use Of Online Banking Services

The results show that bank customers' concern for privacy has a positive and significant effect on the use of online banking services by bank customers. The greater the concern of bank customers on privacy/ security of privacy, the greater the use of online banking services by bank customers because bank customers are very sensitive about the privacy information that will be used by the bank.

Bank customers' concern for privacy affects respondents to the use of online banking services by bank customers where in this case bank customers see the reputa-

tion / privacy policy imposed by the bank. This is due to the importance of data regarding the privacy data obtained so that it affects the use of online banking services by bank customers. These results are in line with the research of Salem et al. (2019) that bank customers' concern for privacy has a positive and significant effect on the use of online banking services by bank customers.

This research shows that some respondents think privacy is very sensitive so respondents are very careful in providing information to other parties. This is due to the concerns of bank customers regarding violations / losses that will be caused if providing privacy data.

5.4 The Impact of Propensity Of E-Trust to To Intention Bank Customers' Use Of Online Banking Services

The results show that *E-Trust* has a positive and significant effect on the use of online banking services by bank customers. The larger the *E-Trust*, the greater the use of online banking services by bank customers, this is because bank customers believe that the online services offered are reliable, have good technical technicians, and provide consistent information so as to show integrity and good ethical standards. The results of this analysis are in line with the research of Salem et al. (2019) that *E-Trust* has a positive and significant effect on the use of online banking services by bank customers.

5.5 The Impact of Propensity Of Technology Leadership To Intention Bank Customers' Use Of Online Banking Services

The results show that *Technology and leadership* have a positive and significant effect on the use of online banking services by bank customers. The greater the *Technology and leadership*, the greater the use of online banking services by bank customers. This is because the technology shown by banks provides a competitive advantage compared to other competitors and provides the best service to satisfy the expectations of bank customers. This research is in line with TAM's theory that *technology and leadership* will influence the use of online banking services by bank customers, this is because respondents will use a technology if it provides benefits to respondents. where if it provides benefits. In addition, these results are in line with the research of Salem et al. (2019) that *Technology and leadership* has a positive and significant effect on the use of online banking services by bank customers.

5.6 The Impact of E-loyalty to To Intention Bank Customers' Use Of Online Banking Services

The results show that *E-loyalty* has a positive and significant effect on the use of online banking services by bank customers. The greater the *E-loyalty*, the greater the use of online banking services by bank customers, this is because bank customers have confidence in the bank services offered, thus making bank customers loyal or loyal to the bank's services.

This research are in line with the research of Salem et al. (2019) that *E-loyalty* has a positive and significant effect on the use of online banking services by bank customers. This research shows that most respondents have e-loyalty to online banking services due to factors that support bank customers to be loyal such as ease of use, customer trust, privacy policy and so on.

6. Conclusion

Based on the description and analysis stated Intention Use Of Online Banking Services are influenced by Propensity Of Technology Adoption, Customers' Value For Online Personalization, Consumer Concern For Privacy, E-Trust, Technology Leadership, E-Loyalty. The results of this study show that the variables in this study provide the view that banks need to invest heavily in the latest technology and communication infrastructure to provide services for bank customers.

7. Suggestion

Banks need to invest more in the latest information and communication technology infrastructure and provide necessary facilities for bank customers such as building customer service centers or designing advertisements so that consumers will tend to use online banking and request additional online services. The existence of online banking makes it easier for bank customers to use banking activities such as money transfers and making payments so that they can overcome problems related to location and time. Based on this research, provides banking advice is expected to design an easy and useful system in order to create a positive attitude for customers in connection with the adoption of online banking services by bank customers. Improving the quality of the internet banking system in order to attract more use of online banking services by bank customers and meet the hope of also the need to make online transactions anytime and anywhere.

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