

USE AND PROTECTION OF CUSTOMERS USING THE INTERNET BANKING AGAINST CYBER CRIME IN THE SPECIAL REGION OF YOGYAKARTA

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ABSTRACT

This study aims to determine: (1) the effect of the use of internet banking on the occurrence of cybercrime in DIY, (2) the influence of bank customer protection in the use of internet banking on the occurrence of cybercrime in DIY, (3) the influence of internet banking and protection. Bank Customers in Using Internet Banking against Cyber Crime in DIY. The data collection technique was carried out by the questionnaire data collection method. The population in this study were users of internet banking in the DI Yogyakarta region. A sample of 72 respondents was determined by the random sampling technique. The analysis technique used is multiple linear regression analysis. The results of the study indicate that (1) there is a positive and significant influence on the use of Internet Banking on Cyber Crime in the DIY region, and there is an influence from each Customer Protection variable, namely, there is a negative and significant influence on Client Charter on Cyber Crime in the DIY region, there is a positive and considerable influence Confidentiality of Customer Data on Cyber Crime in the DIY region, there is no significant and insignificant effect of Test and Trial Drive on Cyber Crime in the DIY region, there is a positive and significant influence of Customer Support Service on Cyber Crime in the DIY region, (3) there is an influence on the use of Internet Banking and Protection of Customers Using Internet Banking (Client Charter, Confidentiality of Customer Data, Test and Trial Drive, and support Service) against Cyber Crime in the DIY region.

Keywords: Internet Banking, Customer Protection, and Cyber Crime

1.0 INTRODUCTION

Technological developments in globalization are increasingly developing as supporting facilities used in human activities. In today's life, technology cannot be separated from people's lives, as if it is a basic need. In this day and age where life is too influenced by technology, especially the internet. With the development of the times, especially through the internet, many innovations have emerged in various fields of human life, especially in the business world. Humans now assume that with the internet their work and needs can be fulfilled effectively and efficiently.

Internet (Interconnection Networking) is an entire network that is physically connected to each other and has the ability to read and decipher communication protocols so as to enable communication and interaction between one another throughout the world without being limited by space, and time, energy, and cost. Indonesia itself is ranked 5th out of 20 countries

with the highest number of internet users. And internet users in Indonesia every year also always increases. Indonesia is ranked fifth with the number of users as of June 30, 2016, which is 132.7 million users (<https://proxsisgroup.com/articles/waspadailah-hantaman-serangan-cyber-terhadap-indonesia/>)

The use of increasingly advanced technology today makes various parties are competing to create an innovation that is in great demand by the community. One of the innovations created is in the banking sector. In the past, if we wanted to take money, transfer money, and other transactions we had to go all the way to the bank and not to mention having to queue even from morning to noon. Along with the development of an increasingly advanced era, innovations in the banking sector have been created in the form of e-banking or electronic banking.

Some of the products created on the basis of internet banking are Electronic Data Capture or EDC for buying and selling transactions via credit and debit cards, mobile banking, phone banking, and video banking that can be used face-to-face with bank tellers. Internet banking can be used for various activities, such as checking account balances, paying bills such as electricity and telephone, transferring funds between accounts or between banks, and ordering tickets.

The presence of internet banking has offered a number of flexibility and convenience in conducting transactions, both between banks and their customers, banks and merchants, banks and banks and customers with their customers. facility internet banking certainly makes it easier for customers to conduct banking transactions without having to come to the bank directly. Internet banking also provides accommodation for banking activities through a computer network anytime and anywhere quickly, easily and safely because it is supported by a strong security system. This is useful to ensure the security and confidentiality of data and transactions made by customers. In addition, with internet banking, banks can increase the speed of service and reach in banking activities.

In the development of banking technology such as internet banking, the bank must pay attention to aspects of customer protection, especially security related to customer privacy. Service online security, namely customer connection security, transaction data security, server, and information system network security from the server. The aspect of delivering banking product information should be conveyed proportionally, meaning that the bank does not only inform the advantages or peculiarities of its products, but also the security system for using the products offered.

Behind the convenience obtained from using internet banking, there are also risks involved in using this service, including many violations of the law regarding personal data via the internet and also regarding the financial risks suffered by bank customers in using internet banking due to the actions of criminals. IT, crimes like this are often also referred to as cybercrime, even further is the use of sophistication in information technology and computers by criminals for the purpose of money laundering and terrorism crimes. Therefore, many crimes occur, especially with this internet banking product, the banking industry must be able to prepare security features that are able to maintain the level of public trust that electronic transactions are safe. Indonesia itself is considered the country most at risk of experiencing IT security based on sources from the Security Threat Report in 2013.

In current practice, protection of data privacy/personal information in online on the internet can be obtained based on existing laws and regulations, for example, the Law the Data Protection Act or other laws that also regulate the protection of the privacy of personal data. In addition, legal protection can also be obtained based on regulations made by the site, such as privacy policies, privacy notices, privacy statements, and site terms of service. One of the important purposes of the law regarding the protection of data privacy is to ensure that each individual has the ability to monitor and access their personal information collected by other parties and to provide corrections if necessary.

The forms of crime that often occur in the banking sector are man-in-the-middle attacks and trojan horses that can disrupt service security. The general description of the activity which is often called the man in the middle attack is that the attacker creates a website and makes customers who use internet banking or users enter the website. In order to successfully trick users, the website must be made as closely as possible to website the actual bank outfit tokens, an attacker can send a challenge-response to the user before making an illegal transaction. Meanwhile, trojan horses are fake programs with malicious purposes that are infiltrated into a commonly used program. Here the attackers install a trojan on the user. When a user starts logging into the website, the attacker rides the session through a trojan to carry out the transactions he wants. Trojan Horses different from other destructive viruses in that are they cannot be detected.

The need for active socialization from banking to the public or customers and banking employees regarding the forms of crime that can occur with the products or services it provides. Currently, there is a technology and legal regulations that can make internet banking safe, but banks and the government need to continue to strive to make internet banking more secure and secure. However, there is an impression that banking business actors and the general public are less aware of criminal cases on internet banking. Therefore, it is necessary to make comprehensive efforts from all parties to move toward a better direction.

Based on the description above, the author intends to carry out research on the effect of internet banking facility users' internet banking against cybercrime in the DIY region.

2.0 RESEARCH METHODS

This research uses descriptive research methods with a quantitative approach. A quantitative method is a scientific approach to economic managerial decision-making. This approach departs from data which is then processed and manipulated into valuable information for decision making.

The type of data used in this study consists of primary data and secondary data. Primary data is data taken directly from the object of research, namely using a questionnaire. While secondary data is data obtained from documents from banks and other sources related to this research. The population in this study was internet banking in DI Yogyakarta. The sampling technique in this study used the incidental sampling technique. According to Sugiyono (2012) incidental sampling is a sampling technique based on chance, that is, anyone who coincidentally / incidentally meets a researcher can be used as a sample if it is seen that the person who happened to be met is suitable as a data source. Roscoe (1975) in Uma Sekaran

(2006) provides a general reference for determining sample size, namely if in multivariate research (including multiple regression analysis), the sample size should be 10 times larger than the number of variables in the study. In this study, the authors made the decision to find the number of samples by 12 times the number of variables, namely 6 so that the sample used was 72 respondents.

The data collection technique used is using a questionnaire or questionnaire technique. The questionnaire technique is a form of data collection tool in the form of questions. It is hoped that by distributing a list of questions to respondents, researchers can collect data that is relevant to the research objectives that have a high level of reliability and validity.

3.0 RESULTS AND DISCUSSION

3.1 Description of Data

Data used in this study were obtained by distributing online and offline to respondents using internet banking in the Special Region of Yogyakarta. The number of questionnaires distributed to the respondents was 72 according to the number of research samples. Most of the respondents aged 20-22 years were 54 people (75%), then followed by 17-19 years old as many as 5 people (6.94%), then aged 26-28 years as many as 2 people (2.78%). then the age of 38-40 years and 41-43 years which both amount to 1 person (1.39%). of respondents using internet banking is between 1-2 years as many as 28 people (38.89%), less than 1 year as many as 25 people (34.72%), between 3-4 years as many as 13 people (18.06%), more from 5 years, there are 5 people (6.94%), and respondents who use internet banking between 4-5 years are 1 person (1.39%). Intensity of most respondents who use internet banking per month most often uses an intensity of 1-3 times as many as 32 people (44.44%), then with an intensity of more than 10 times as many as 16 people (22.22%), then with an intensity of 4 -6 times a total of 14 people (19.44%), then with an intensity of never using internet banking every month as many as 6 people (8.33%), and with an intensity of 7-10 times a number of 4 people (5.56%).

3.2 Prerequisite Test for Data Analysis

The normality test in this study used the Kolmogorov-Smirnov I-Sample. Based on the results of the normality test, the test results obtained Asymp.Sig of 0.975. Because of the value of Asymp.Sig. Above 0.05, it can be concluded that the data is normally distributed. The linearity test results show that X1 is 0.674, X2 is 0.154, X3 is 0.202, X4 0.401, X5 0.311. Deviation from Linearity for all models has a significant value above 0.05. So it can be concluded that the model is linear and can be used for linear regression tests. While the test shows that the value of VIF X1 is 1.259, X2 is 1.790, X3 is 1.715, X4 is 1.591, and X5 is 1.328. Because the value of VIF <4 it can be concluded that there is no multicollinearity in the regression model.

The heteroscedasticity test aims to test whether in the regression model there is an inequality variance from the residuals of one observation to another observation. This study uses the Glejser in SPSS 17.0. The test results show that sig X1 is 0.972, X2 0.630, X3 0.625, X4 is 0.834, X5 0.808. These results indicate that there is no heteroscedasticity for all variables because the probability is above 5%.

3.3 Regression Analysis Test Results Multiple

Table 1. Regression Test Results

Independent Variable	Regression Coefficient	t stat	Sig
Konstanta	-2,911	-0,304	0,762
Internet Banking use	0,281	2,124	0,037
Client Charter	-0,591	-2,341	0,022
Confidentiality of Customer Data	0,630	2,518	0,014
Test and Trial Drive	0,036	0,187	0,852
Customer Support Service	0,528	2,514	0,014
F stat		4,714	
F table		2,37	
R		0,513	
R ²		0,263	
Sig F		0,001	
Adjusted R Square		0,207	

4.0 DISCUSSION

4.1 The Effect of Internet Banking on Cyber Crime in DIY

The coefficient value is 0.281. At the 5% significance level, it can be seen that the tcount is 2.124 with a significance value of 0.037 because the regression coefficient has a positive value and a significance (p) <0.05, the first hypothesis which reads "There is a positive influence on the use of Internet Banking on Cyber Crime" is accepted.

These results reinforce recent research from Kaspersky Lab. From the Consumer Security Risks Survey conducted by B2B International and Kaspersky Lab, it was revealed that 5% of global users have lost money online fraud online. This shows that new cybercrime in banking has also begun to emerge, not using conventional techniques anymore but by using more advanced applications, one of which is internet banking. trend transactions banking is increasing, causing cybercrime in this field to also increase, this is influenced by the increasing use of mobile wallets. People shopping and making payments are no longer conventional by coming to the office directly, but payments can be made online banking through mobile banking, internet banking, ATMs, and supermarkets that provide these payment facilities.

4.2 Influence Client Charter on Cyber Crime in DIY The

The regression coefficient value is -0.591. At the 5% significance level, it can be seen that tcount is -2.341 with a significance value of 0.022, because the regression coefficient has a negative value and a significance value (p) <0.05, the second hypothesis reads "There is an influence of Client Charter on Cyber Crime in the Special Region Yogyakarta" is accepted.

The results of this study support the statement of Prime Minister Margareth Thatcher in the UK when she first introduced the term Citizen Charter, also known as the Client Charter, that

service contracts are a new approach in public service that places service users as the center of attention or the most important element. Through client charter, it is hoped that it will form a culture of service. In this context, the needs and interests of service users are the main consideration in the entire service delivery process. The results of trials in several regions in Indonesia described in the journal Karjuni (2010) prove that the implementation of the Client Charter has many benefits, both for the bureaucracy, service users, and other user stakeholders. These benefits include: First, it can provide service certainty including time, costs, procedures, and service methods. Second, to provide information on the rights and obligations of service users, service providers, and other stakeholders. Third, to simplify the process of controlling service delivery. Fourth, help to improve service performance. Fifth, it helps to identify the needs, expectations, and aspirations of service users.

4.3 Effect of Confidentiality of Customer Data on Cyber Crime in DIY The

The regression coefficient value is 0.630. At the 5% significance level, it can be seen that tcount is 2.518 with a significant value of 0.014 because the regression coefficient has a positive value and a significance value (p) < 0.05 , the third hypothesis which reads "There is a positive effect of Confidentiality of Customer Data on Cyber Crime in the Special Region Yogyakarta" is accepted.

In accordance with the law on bank secrecy provisions in Indonesia as regulated in Law no. 10 of 1998 Article 40 paragraph (1) states that banks are required to keep information about depositors and their deposits confidential. Bank secrecy which is meant by everything related to information regarding depositors and their deposits includes all information about persons and entities that receive the provision of services and services in the traffic of money. theory of absolute bank secrecy states that all information about customers and their finances recorded at the bank must be kept confidential without exceptions and restrictions. Confidentiality about customers and their finances may not be disclosed, for any reason and by anyone. Confidentiality about customers and their finances should not be disclosed and banks must be responsible for all the consequences. Meanwhile, according to the relative theory, all information regarding customers and their finances recorded at the bank must be kept confidential, but if there is a reason that can be justified by law, bank secrets regarding the finances of the customer concerned may be disclosed to the authorized official.

4.4 The Effect Test and Trial Drive on Cyber Crime in DIY The

The regression coefficient value is 0.036. At a significance level of 5%, it can be seen that tcount is 0.187 with a significance value of 0.852, because the regression coefficient has a positive value and a significance (p) > 0.05 , the fourth hypothesis which reads "There is an effect of Test and Trial Drive on Cyber Crime in the Special Region Yogyakarta" is not accepted.

The results of this study state that there is no relationship between tests and Trial Drive with Cyber Crime. This can be supported by the theory of Roche (2014) that this test and trial drive is a form of service quality which is an important element of customer satisfaction. In this aspect of the test and trial drive emphasis is on good response through the provision of website, quick response when accessing internet banking, the bank conducts socialization and education of customers in using internet banking and is followed by clear information on

website bank customers can also chat online with bank staff who can be contacted directly to communicate about obstacles in using internet banking, websites with a good appearance, and are more communicative so that they can be understood.

4.5 Influence Customer Support Service on Cyber Crime in DIY The

The regression coefficient value is 0.528. At the 5% significance level, it can be seen that tcount is 2.514 with a significance value of 0.014 because the regression coefficient has a positive value and a significance value (p) <0.05, the fifth hypothesis which reads "There is an influence of Customer Support Service on Cyber Crime in the Special Region of Yogyakarta" is accepted.

The results of this study explain that the better the services provided by the bank, the more loyal customers will be in using internet banking. This is in accordance with the theory of Kasmir (2003) that customer service plays a very important role in companies and banks. Therefore, the task of customer service is the backbone of the operational activities of the banking world. The role of customer service is to keep old customers loyal to customers through fostering closer relationships with customers so that customers will remain loyal to being users of internet banking products even though there are many incidents such as cyber that occur in the banking world. The better services provided by the bank such as reliability, responsiveness, insurance, and empathy, according to Lupiyoadi (2001) through Customer Support Service will certainly minimize the occurrence of cybercrime. Because, with good service quality, customers will feel that the transactions they have done so far are safe.

4.6 The Effect of the Use of Internet Banking and Customer Protection (Client Charter, Confidentiality of Customer Data, Test and Trial Drive, and Customer Support Service) Together on Cyber Crime in DIY

The results of the simultaneous calculation of the effect of the Use of Internet Banking, Client Charter, Data Confidentiality Customers, Test and Trial Drive, and Customer Support Service for Cyber Crime, at a significance level of 5%, the Fount value is 4.714 with an F significance value of 0.001. Because of the significance value of $F < 0.05$, the sixth hypothesis reads "There is an effect of the use of Internet Banking, Client Charter, Confidentiality of Customer Data, Test and Trial Drive, and Customer Support Service together on Cyber Crime in the Special Region of Yogyakarta" is accepted.

The results of this study support the journal issued by the Directorate of Banking Research and Regulation of Bank Indonesia, namely the security of transaction data and customer data is very important in internet banking. The safety and security of transaction data from any interception or theft from any party must be protected. Likewise, the data and information of bank customers' on internet banking must also get protected. The protection of transaction and customer data will be stronger and have definite legal force if regulated in the form of laws or regulations.

5.0 CONCLUSION

Based on the data that has been obtained from the research and the results of the analysis that has been carried out, the conclusions that can be put forward by the authors in this study are

that there is a positive and significant influence on the use of Internet Banking on Cyber Crime in DIY. The influence of Customer Protection on Cyber Crime for each of the variables can be explained that there is a negative and significant effect of Client Charter on Cyber Crime in DIY, and there is a positive and significant influence of Confidentiality of Customer Data on Cyber Crime in DIY, there is no influence and no significant Test and Trial Drive against Cyber Crime in DIY, there is a positive and significant influence of Customer Support Service on Cyber Crime in DIY. And there is a positive and significant effect for each variable of Internet Banking Use, and Customer Protection for Users of Internet Banking Facilities (Client Charter, Customer Data Confidentiality, Test and Trial Drive, and support Service) simultaneously or together against Cyber Crime in DIY.

6.0 SUGGESTIONS

Based on this research, several suggestions are put forward, namely this research provides information that customers still feel worried when providing financial information when making transactions through internet banking. With this information, it is hoped that it can provide input to the bank to further improve the security of internet banking and be more intensive in conducting security socialization in the use of internet banking. In addition, it is also hoped that there will be a form of protection for customers that is specifically regulated to protect customers from cybercrimes that are rife today. It is hoped that the bank will be able to create a kind of unit application to report any cybercrime and build anti-malware on all servers bank this study also provides information that customers must pay attention to the risks that can be caused by the existence of internet banking, not only in terms of convenience. By knowing the risks that can occur, customers can be introspective and careful in using internet banking. As for further research, it is recommended to focus more on the research variables not only on the scope of customer security and protection, considering that in the study the coefficient of determination or R² was only around 26.3%, while the other 73.3% explained other factors not examined in this study.

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