# INCITEST

Proceedings of the 1st International Conference on Informatics, Engineering, Science and Technology, INCITEST 2019, 18 July 2019, Bandung, Indonesia

It is our great honor and pleasure to introduce the Proceedings of the 2nd International Conference on Informatics, Engineering, Science, and Technology (INCITEST 2019). The event is valuable and meaningful since it brings together the scientists, engineers, researchers, practitioners, students, and civil society organization representatives to nurture research networks between universities and industries. The Conference is held on 18 July 2019 in Bandung, Indonesia and is hosted by Universitas Komputer Indonesia (UNIKOM). With its main theme on "Building Competitive Advantage to Face Industry 4.0", this event is hoped to serve as a platform of gathering for anyone interested in exploring potential solutions and answering issues and challenges to Face Industry 4.0.

All articles in this issue have been subjected to a peer-review process based on their originality and quality. The organizing committee would like to express appreciation to all supporters, sponsors, and participants for great contribution to the conference success. Many thanks go as well to all of the reviewers who helped us maintain the high quality of manuscripts included in the Proceedings published by our publisher partner, Europe Alliance for Innovation (EAI). We also express our sincere thanks to the members of the organizing team for their hard work.

Finally, our continuing success of this conference series can be one of indicator that we have through our right pathway to win the competition in Industrial era 4.0. « less

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# The Influence of E-Banking Service for Customer Satisfaction

Adeh R. Komala<sup>1</sup>, I. Kusnanan<sup>2</sup> { adehrkomala@email.unikom.ac.id <sup>1</sup>, imamkusnanan@mahasiswa.unikom.ac.id<sup>2</sup>}

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**Abstract.** The purpose of this research is to find out how the influence of internet service has an impact on customer satisfaction. This study used a descriptive analysis method in BRI banking service to obtain facts from existing problems and find factual information. The results of the descriptive analysis study show that internet banking service affects the comfort, security, and customer satisfaction. Comfort is the most important aspect of the internet banking because customers can interact with banks easily without the need to come to the bank, and internet banking speeds up banking transactions so that it can increase bank customer loyalty. It can be concluded that E-banking internet service has a very significant effect on customer satisfaction.

Keywords: Customer, User, ID, Balance, Account,

# 1. Introduction

Computer technology has been widely applied in every aspect of our lives, such as in business, government, education, finance, and even health [1]. The manual pattern of traditional society slowly changes to an automation system that uses sophisticated technology in its business processes. This process of change is called Business Evolution, as stated by ES Soegoto in his book Menjadi Pembisnis Ulung, namely the process of occurring business activities from time

to time according to the condition, technological, economic, social and cultural developments at present [2]. Technology and information have become the most important aspect of modern banking. The information has become the most valuable asset to be protected from insiders, outsiders, and competitors. The ability of a bank to take advantage of new opportunities often depends on its ability to provide open, accessible, available and safe network services. Having a good reputation for information security will increase market share and company profits. Therefore, banks must be responsible for fraudulent activities carried out through internet channels. Banks must refund most customers for losses, even though customers compromise their account credentials [3]. Indonesia's current population is 262 million people. Out of this amount, there are only 20% or 52 million of the population is served by banking services in Indonesia, and most of these people live in urban areas [4].

Research on the influence of the quality of e-banking services or internet banking on customer satisfaction has been done previously. The results of research conducted by Akbar & Paryes stated that customer satisfaction has a mediating role between the quality of e-banking services to customer loyalty [5]. This result is also in line with previous research conducted by Akbar Sher, Som, Fazli, and Alzaidiyeen, who found that service quality may create high loyalty through customer satisfaction [6]. According to Agyapong and Ghana, it is stated that potentially customer satisfaction is very influential in customer loyalty [7]. The results of research conducted by Ni Made Savitri Anggaeni & Ni Nyoman Kerti Yasa also stated that service quality has a very positive and significant effect on customer satisfaction in the use of internet banking services [8].

The purpose of this research is to find out how the influence of internet services on customer satisfaction by using descriptive analysis method at Bank Rakyat Indonesia (BRI) to obtain facts from existing problems and find factual information.

## 2. Method

This study used descriptive analysis method by describing the official website of Bank Rakyat Indonesia (BRI) internet banking to obtain facts about the satisfaction of bank customers from the problems that exist in the internet banking service and to find factual information through previous research related to the influence of the e-banking service on satisfaction for the customer. So that it could analyze what variables can influence customer satisfaction and how much influence e-banking services can get customer satisfaction loyalty.

## 3. Results and Discussion

Internet banking from BRI is a new way to conduct banking activities using an internet network that allows customers to be able to interact with Bank BRI wherever they are. All individual customers who have BRI saving accounts and have an ATM can use e-banking facilities by registering Bank BRI branches or can register directly through BRI ATMs. Registering the TOKEN at the BRI branch may be needed to support a financial transaction. As for non-customers, they are required to open a savings account in the BRI branch to get the facility of the BRI e-banking service.

BRI internet banking service has facilities for customers, such as look at the account balance and mutation, transfer with the same bank (BRI) or other bank, pay bills namely Telkom Bill, BRI Credit Card, and PLN, as well as purchasing something, such as Cellular and Electronic Money Credit, Communication with Bank BRI Customer Service through the Internet Banking Inbox facility.

BRI internet banking is designed to prioritize the security of customers personal and financial information, BRI internet banking uses the International Internet Standard Security SSL 3.0 program with a 256-bit encryption system, the most sophisticated information scrambling system at this time so that customers' personal & financial information cannot be read via the internet. The customer also gets a unique User ID & Password, so that there is no duplication and only the owner can access internet banking. Every time the customer logging in, they are only allowed to repeat the wrong User ID & Password 3 times before the access is blocked to prevent irresponsible misuse. Every transaction that is instructed will not be processed without confirmation and approval from the customer-owner itself, and also each transaction will be given a reference number that is used later if there is a question or a problem occurs related to the transaction. If there is no activity for 10 minutes, the system will automatically log-out the access from internet banking service to prevent unauthorized abuse.

This is in line with the results of previous research conducted by Shergill and Li (2005). This study proves that security in using internet banking services affects privacy and ethics. This result proves that users (customers) believe in internet banking if internet banking is based on ethical values, confidentiality, and high security [9]. Internet banking login view can be seen in Figure 1.

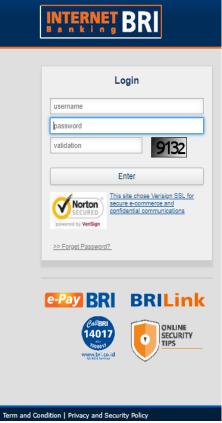


Fig. 1. Login. Figure was adopted from www.bri.co.id on Dec 10th,2018

On the login page, we can use the account. We need to enter the internet banking site. On the home page, each menu and sub-menu on BRI internet banking is designed to be easier for customers to use. In the home menu, we can see the account information that we have. Figure 2

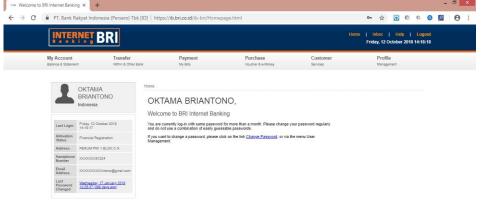


Fig. 2. Home. Figure was adapted from www.bri.co.id on Dec 10th,2018

The profile of the account owner will be displayed not specifically to remain secure. The system will notify the customer to immediately replace the account password if the account has not been replaced or still use the old password because changing the old password with a new one will avoid misuse of the e-banking account carried out by an unauthorized person. So, the system will make customers comfortable when using services from BRI internet banking. Customers can find out the remaining account balance in the My Account menu view. Figure 3

	lonesia (Persero) Tbk [l	D]   https://ib.bri.co.id/ib-bri	/Homepage.html			or 🕁 💽 (	0 0
	BRI					Inbox   Help Friday, 12 October 2	
My Account Balance & Statement	Transfer Within & Other Bank	Payment My Bills		Purchase Voucher & e-Money	Customer Services	Profile Management	
BALANCE INF	ORMATION	My Accounts >> Balance Inform	nation >> Balance				
Account Balance	>	Account Balanc	е				
Deposit Balance	>	E List of Saving Accounts					*
DPLK Balance	>						
Account Statemen	t >	Account Number	Product Type	Name	Currency	Balance	
& LOAN INFORM	ATION	030201060612502	BritAma	OKTAMA BRIANTONO	IDR	58.738,00	
Loan Detail	>	Note:					
CREDIT CARD	INFORMATION	Click on Account Statement to	see detail transaction				
Credit Card Mutati	on >						
★ OTHERS							

Fig. 3. My Account menu. Figure was adapted from www.bri.co.id on Dec 10th,2018

Any changes in balances contained in BRI will be immediately updated into BRI internet banking, while for transferring funds within BRI or other bank accounts, or by bill payment through BRI internet banking, the transfer of funds the account balance will immediately change both at the Bank BRI system and BRI internet banking. In the transfer menu view, customers can transfer funds between their accounts, to another account within BRI by filling out the form on the transfer form Figure 4.

INTERNET	BRI				Home   Inbox   Help Friday, 12 October 2		
My Account Balance & Statement	Transfer Within & Other Ban	k Payment My Bits	Purchase Voucher & e-Money	Customer Services	Profile Management		
** TRANSFER		Transfer >> Transfer >> Transfer Within Ban					
Transfer Within B	ank >	Transfer Within Bank					
Transfer to Other	Bank >	E Step 1 of 3 Transfer Within Bank				*	
KLIRING	>						
RTGS	>	1. Data Entry	2. Data Confirmation	3. Trains	action Complete		
	TRANSFER	Source Account	030201060612502 ( BritAma / IDR	t) 🔻	Help Information Your daily limits pagibe seen o		
Transfer Within B	ank >	Destination Account			Limits info		
Transfer to Other	Bank >	Choose from your Transfer List	- Select One - V		Remarks and Recipient Email not a mandatory field	is .	
View Status	5	Enter Destination Account     Destination Account			The remarks column could be used to provide information to		
P TRANSFER L	ST				the fund recipients regarding your transaction needs. It will		
Transfer List	2	Click here to save this account into Save with a nick name	your Transfer List		be sent to the email in accordance with what was sen by the Remitter in the	4	
		Amount	IDR T		Recipient Email Column, BRI shall not be held responsible		
		Remarks			should other unintended party receive emails due to the neolipence of sending the		
		Recipient Email			incorrect email address or due to other inconvenience		

Fig. 4. Transfer Menu. Figure was adapted from www.bri.co.id on Dec 10th,2018

Instant balance account will change in a system when successful transfer confirmation is sent to the destination. For this type of transfer, the customer cannot change/cancel all transfer that has been made through the internet. Whereas for the type of transfer according to date and routine, if it is still in the last waiting status, then the customer can change/cancel the transfer. In the payment menu section, customers can pay bills through BRI internet banking, Figure 5.

INTERNET					Friday, 12 October	2018 14:1	8:18	
My Account Balance & Statement	Transfer Wenn & Other Ban	k Payment My Bills	Purchase Voucher & e-Money	Customer Benices	Profile Management			
PAYMENT		Payment >> Payment >> BRI Credit Card						
Phone/Cellular	> *	BRI Credit Card						
BIRI Credit Card	2	IN Step 1 of 3 ERI Credit Card Payment				*		
Other Bank Credit C	ard >							
Installment	2	1. Data Entry	2. Data Confirmation	3. Travia	action Complete			
Electricity	2	Source Account	- Select One -	*	Help Information			
Ticket	2.	For Payment			Your daily limits can be seen Limits Info	00		
13 SCHEDULED P	VMENT	Select From Your Payment List	- Select One - 🔻					
Scheduled Paymen		<ul> <li>Enter Credit Card Number</li> <li>Credit Card Number</li> </ul>	G					
View Status		Click here to save the Credit Card Nu	n and a second s					
PAYMENT LIST		Save with a nick name	molet into your r symeric List					
Payment List	2			Reset Submit				

Fig. .5 Payment Menu. Figure was adapted from www.bri.co.id on Dec 10th,2018

The type of payment can be chosen, namely immediate payment, payment on the specified date, regular payment. Bills that can be paid on this facility are bills of Cellphones, Credit Cards, Electricity, Airplane Tickets, State Revenue, Insurance, Subscription Tv, BRIVA, DPLK, BRI Loans, Donations, PDAMs, Multi payment, Education. This will make it easier for e-banking because customers do not bother coming to the bill payment office directly and save the administrative fee. In the Purchase view allows customers to buy electronic money vouchers and deposits can be seen in Figure 6

Ny Account Base of Shareet     Time of Share here     Pyreint Ducket + Mader + Addage     Catomer     Profile Severe			RI					Friday, 12 October 2	018 14:18:18	
Putch Induct       Cellular Voucher         Putch Induct       Putch Induct         Becknick Voucher       Putch Induct         Putch Induct       Putch Induct         Becknick Voucher       Induct Induct         Putch Induct       Induct Induct         Becknick Voucher       Induct Induct         Becknick Voucher       Induct Induct         Becknick Voucher       Induct Induct         Becknick Voucher       Induct Induct         Voucher Type       - States One - V         Voucher Type       - States One - V	My A Batlan	e & Statement		Payment My Silk		Purchase Vouther & e-Money	Customer Services	Profile Management		
Putch Induct       Cellular Voucher         Putch Induct       Putch Induct         Becknick Voucher       Putch Induct         Putch Induct       Putch Induct         Becknick Voucher       Induct Induct         Putch Induct       Induct Induct         Becknick Voucher       Induct Induct         Becknick Voucher       Induct Induct         Becknick Voucher       Induct Induct         Becknick Voucher       Induct Induct         Voucher Type       - States One - V         Voucher Type       - States One - V			1	Durchase by Parchase by Call	dar Voorthar					
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							Reset Submit			
							Resat Submit			

Fig. .6 Purchase Menu. Figure was adapted from www.bri.co.id on Dec 10th,2018

Customers can also pay for purchases made on the BRI internet banking site. To purchase a cellular phone voucher, the nominal of the voucher will immediately add to the cellular phone credit. In the Customer Service menu, customers can report any complaints to the bank by sending messages via inbox through customer service Figure.7.

MA Account         Teaching         Pagement         Pagement         Cannow         Pagement         Pagement           Image: MESSAGE         Image: Imagement         Image: Imagement	INTERNET	SRI				Home   Inbox   Help   Logout Friday, 12 October 2018 14:18:18	
show     >       Seet     >       Compose New Message     >       To Deprice Market Account     >       Deprice Account Status     >       Deprice Account Status     >       Compose New Message     >       Adveral Transaction     >       Bit Meed Instructure     >       Bit Meed Instructure     >	My Account Balance & Datement	Transfer Within & Other Bank	Payment <sub>Ny lina</sub>	Purchase Vector & e-Money	Customer	Profile	
show     >       Seet     >       Compose New Message     >       To Deprice Market Account     >       Deprice Account Status     >       Deprice Account Status     >       Compose New Message     >       Adveral Transaction     >       Bit Meed Instructure     >       Bit Meed Instructure     >	T MESSAGE						
Compose New Maxaage > Compose Account Account Account > Compose Account Account Account > Compose Account Account Account > Compose Account Accoun		3					
Control C	Sent						
Reiningful Depend Ausuret 3 Depend Ausuret Bannes 3 Optimum Samous 4 Exalis-Disale Carlo 3 Bit Mahele Regulation 3	Compose New Messa	igi >					
Resemption Depend Account State > Depend Account State > Operate Reserves = EnderDonate Carl > Attinual Transaction > Bill Mode Regulation >	T DEPOSIT ACCOU	NT					
Deposit Account Status  Common	Open Deposit Account	a		US BAN	IN BRI		
Or OTHER MERVICES  ExaleDisate Carl     > Anova Transition     >  Etter Models Registration     >	Redemption Deposit A	Account >					
EnableOvatels Carlos > Abread Transation > Biff Models Registration >	Deposit Account Stats	as >					
Abread Transaction >> ERI Model Regulation >>	OTHER SERVICES	s					
BRI Mobile Registration >	Enable/Disable Card	>					
	Abroad Transaction	>					
5MS Notification Registration >	BRI Mobile Registratio	on: >					
	5M5 Notification Regi	istration >					

Fig. 7. Customer Service Menu. Figure was adapted from www.bri.co.id on Dec 10th,2018

Customers can also open deposits through internet banking facilities online without having to come directly to the BRI branch. So it can save time and costs spent.

This result is in line with research conducted by Raed Awamleh, and Cedwyn Fernandes that three factors cause customers to use internet banking. The three factors are freedom, comfort, and security. Customers do not need to deal directly with bank employees, and it is a pleasure to use e-banking services that customers can use the service for 24 hours. For security measures, customers have a good perception regarding the safety and reliability of banking services [10].

# 4. Conclusion

Based on the results of the descriptive analysis of the official BRI internet banking, it can be concluded that internet banking is very effective and efficient for the customer. It affects customer' satisfaction variables, security variables, and customer satisfaction are in line. If one of the three does not exist, then customer loyalty will decrease drastically. It will have a fatal impact on the bank.

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