
The Effect of Responsiveness, Reliability, Ease, Security, and Aesthetics on Customers' Satisfaction Using Mobile Banking

Ronny¹

¹Universitas Hayam Wuruk Perbanas, Faculty of Economic and Business
Surabaya, Indonesia

doi: 10.51505/ijebmr.2022.6713

URL: <http://dx.doi.org/10.51505/ijebmr.2022.6713>

Abstract

This study aims to examine the effect of security, reliability, convenience, aesthetics, and responsiveness on customer satisfaction using mobile banking. The study was conducted in Indonesia with 582 samples having used mobile-banking banks. The data were collected by distributing questionnaires online to the respondents. Then, they were analyzed using SEM (Structured Equation Model). The result shows that the variables of aesthetics, ease, and security had a significant effect on customer satisfaction using mobile banking. It implies that the banks should strengthen and improve the aesthetic quality of mobile banking applications so that they can make the customers attractive to use it. Besides, they should also always provide convenience for customers to use mobile banking while maintaining the security of customer data.

Keywords: mobile banking; customers' satisfaction; use of mobile banking; security of customer; mobile banking applications

1. Introduction

Economic growth is inseparable from the support of using information technology in business and government administration. In addition, the ability of the public to access information technology is also an opportunity that makes them attractive towards the companies, especially the banks to offer information technology-based consumer services. More particularly, the banks are the service providers that utilize information technology to their customers for the transaction by using information technology. For that reason, customer satisfaction is the goal of banking services and, therefore, the banks will not make their customers hesitate to use various types of e-banking services such as mobile banking, internet banking, SMS banking, and phone banking.

In some previous studies on information technology-based banking services, customers' satisfaction is the main goal in bank services, as in the research of Singh et al (2017), Asad et al (2016), Karthikeyan and Soniya (2016), Raghavendra and Kumar (2016), Ling et al (2016), Irabatti (2013), Ahangar (2011), Nochai and Nochai (2013), Doost and Ashrafi (2014), Ma (2012). Therefore, customers' satisfaction is a measure of the success of bank services. Whether it is high and low customers' satisfaction, it indicates the service evaluation on a number of variables that affect customer satisfaction.

Several previous studies also have provided evidence that the important variables in research on information technology-based banking services are related to their effect on customers'

satisfaction, including security variables (Nochai and Nochai, 2013; Clemes et al, 2012), convenience (Nochai and Nochai, 2013), reliability (Ma, 2012; Irabatti, 2013), Aesthetics (Ariff et al., 2013), Responsive (Khan et al. 2018). By having the evidence based on the previous studies, it can be stated that information technology-based banking services allow the variables of security, reliability, convenience, responsiveness, and aesthetics to be factors that can affect customer satisfaction. The purpose of this study is to examine and analyze The Effect of Responsiveness, Reliability, Ease, Security, and Aesthetics on Customers' Satisfaction Using Mobile Banking.

2. Theoretical Review and Hypotheses

Reliability

Reliability is defined the consistent performance and dependability of the services offered by service providers in which it must always have the same quality and form (Mwendwa et al., 2016). Reliability also concerns the readiness or appropriateness of employees to provide services or goods. Moreover, reliability can be related to the period during which an employee can offer the requested service (Mwendwa et al., 2016). It also relates to the ability to provide services according to customer expectations in terms of speed (how fast the transaction is carried out), accuracy (how correct the transaction is in terms of withdrawing money) and if the equipment operates 24 hours as expected (Ejigu, 2016). Reliability involves a service provider's ability to offer committed services reliably and accurately. In a general sense, reliability means the organization fulfills its promises, such as promises about service provision, pricing, delivery and problem solving (Khan et al., 2018). Reliability is the basis of the banks's service performance, the company struggles to keep promises and pay attention to the results where customers may depend on the services guaranteed by the company's business provider. (Rahaman et al., 2020).

In the context of information technology-based banking services, the concept of reliability is the bank's ability to remain available properly or as promised to meet customer needs. Reliability according to Ahangar (2011) can be related to the ease of downloading or accessing the bank's website, including the availability of accurate information in easy-to-understand language, and transactions that can run until they are complete or final. Nochai and Nochai (2013) also view the concept of reliability from transactions that can run completely to completion, e-banking services that can run well as promised, including the first time customers use them also go well. From the concept of reliability above, it can be judged that reliability as the consistent performance and dependability of the services offered by the service providers, with readiness or appropriateness or based on the customers expectation as fast as possible.

Security

In service security is the most important factor for the target segment when customers decide to choose mobile banking. The most important issues that customers have found in e-commerce are privacy and security (Sari et al., 2018). They think that online service owners need to provide guarantees in terms of privacy and security so that the customer can increase their trust. Privacy includes providing security for customers regarding their personal information. Data should not

be shared and credit card information should be stored securely. In other words, security can be characterized as how much the mobile banking service is protected and it also protects the customer's banking data from any intrusion. Thus, if the privacy concerns identified with the mobile banking service can be guaranteed by the bank, the customer will be assured about the good performance of bank services and encouraging wider utilization of m-banking services (Ketema and Selassie, 2020)

Furthermore, the concept of security is the risk of disruption of information technology-based banking services and the bank's efforts to continuously improve it. In connection with the elements of security, Nochai and Nochai (2013) argue that the security of e-banking includes such as the banks storing data by ensuring privacy security, customers can check the history of past transactions so that customers can verify or check transactions that have been made. Meanwhile, according to Gupta & Bansal (2012), the concept of information technology-based bank service security can be reviewed as how the banks show honesty in e-banking operations e.g., they do not commit fraud, and how the banks can organize secure e-banking. Another argument is also by Gupta & Bansal (2012) and Nochai and Nochai (2013) that they share the same importance that customer data is managed honestly so as to avoid security attacks and improper use of customer data.

Responsiveness

Responsiveness deals with the banks' willingness to help customers with fast services, including providing assistance to customers when they complain about e-banking services such as no receipts received by customers for transactions that have been made, situations where e-banking does not function for hours and sometimes days. Therefore, the banks need to pay attention to their responsiveness in order they do not produce low quality service as the customers expect (Ejigu, 2016). Responsiveness is for the customers should be based on the length of time they have to wait for help, answer to the questions or concerns about their problems, thus, service quality can be improved through the responsiveness (Khan et al. 2018). The responsive employees in practice can be indicated such as by notifying their customers accurately when the ordered goods are ready, giving full attention to the customers, encouraging service, and responding according to the customers' requests. The employees' readiness is to provide services at any time if there is a shortage or service problem will affect customer satisfaction (Rahaman et al, 2020)

In the context of information technology-based banking services, the concept of responsiveness relates to the banks' ability of bank with their services to respond to customers' requests in financial transactions and the banks' ability to overcome problems faced by customers. Ahangar (2011) explains about handling the problems faced by customers in the use of e-banking such as there is information that can be traced by customers to get clarity on solutions to problems faced, available information services that are easily accessible can come from online chat facilities with bank customer service. Ahangar (2011) also emphasizes the responsive factor in the implementation of e-banking, namely how the bank's online application can be properly available and easily accessible and the attitude of the bank to be willing to compensate for problems that cause customer losses.

Ease

Ease is defined as the customer in which they expect that they do not need to use the system with great effort (Al-Hawary and Al-Smeran, 2017) while the perceived ease of use of the system is a system that does not stress the customers to interact so that they expect that the system is useful (Sari et al, 2018). Therefore, ease of use basically affects consumer satisfaction (Ketema and Selassie, 2020).

In the context of information technology-based banking services, the ease of use of the system is related to the concept of efficiency, namely how the technological capabilities available or provided by the bank can be used by customers using a low amount of time. According to Nochai and Nochai (2013) the concept of efficiency is the minimum time when a customer makes a transaction, if the customer faces a problem or obstacle, a complete help function is available that can help find a solution. The minimum time in using e-banking can be obtained if customers are easy to obtain information, fast in logging in and out and accessing e-banking which can be done at any time (Ahangar, 2011).

Aesthetics

Website design is a dimension that affects customers' perception of being the buyers. It is also n is defined as how the banks provide information to customers in a way that is pleasing and it has a distinctive and attractive website design (Al-Hawary and Al-Smeran, 2017). Aesthetics is an application design that provides convenience, benefits and attractiveness for customers when using e-banking. Gupta and Bansal (2012) stated that the aesthetics of the web can be viewed in 3 ways, namely the ease of information, namely how the information available/ presented in e-banking is easy to understand. It can be an attractive website display, namely how the bank's website is able to attract the attention of customers. It can also be the web that updates, namely how the bank's website can present the latest information or designs or promos. In addition, Asad et al. (2016) in line with Gupta and Bansal (2012) pay attention to the physical appearance of the bank's website in order to satisfy its users. It is stated that it is important to have an ease of finding information on the web that is easy for customers to follow when using e-banking is important in web aesthetics (Ariff et al., 2013).

Customers' Satisfaction

Customer satisfaction shows how well a product or service meets the customers' expectation (Mwendwa et al., 2016). The term of customer satisfaction is often used by workers in marketing to measure the extent to which the organization's ability to provide products that meet or exceed consumers' expectations, to identify the possibility of repeat purchases of products in the future. In general, customer satisfaction is the customers' expression or feelings towards the organization and its products or services (Alsamydai et al., 2012). Besides that, customer satisfaction refers to the utility felt by customers for the products or services offered such as banks (Uwalaka and Eze, 2020). Customer satisfaction van be used to measure the customers' sharpness and expectations regarding the performance of the product or service they have consumed and the customers to evaluate whether the performance of the product or service have met their expectations. If the product or service fails to meet the customers' needs or desires,

they will be dissatisfied, and if the service performance is consistent with their expectations, they will be glad and satisfied (Rahaman et al., 2020).

Customer Satisfaction is the level of customer satisfaction due to the use of e-banking, the fewer obstacles the customer feels, the more customer satisfaction increases. There are several variables that can affect customer satisfaction, including the Aesthetic variable by Asad et al. (2016); Responsive variables by Sharma & Malviya (2014), Zafar et al. (2011); Reliability variable by Gupta & Bansal (2012), Zafar et al. (2011); the convenience variable by (Nochai and Nochai, 2013); and the security variable by Kumbhar (2011). Responsiveness, Reliability, Ease, Security, and Aesthetics in several studies on mobile banking are important.

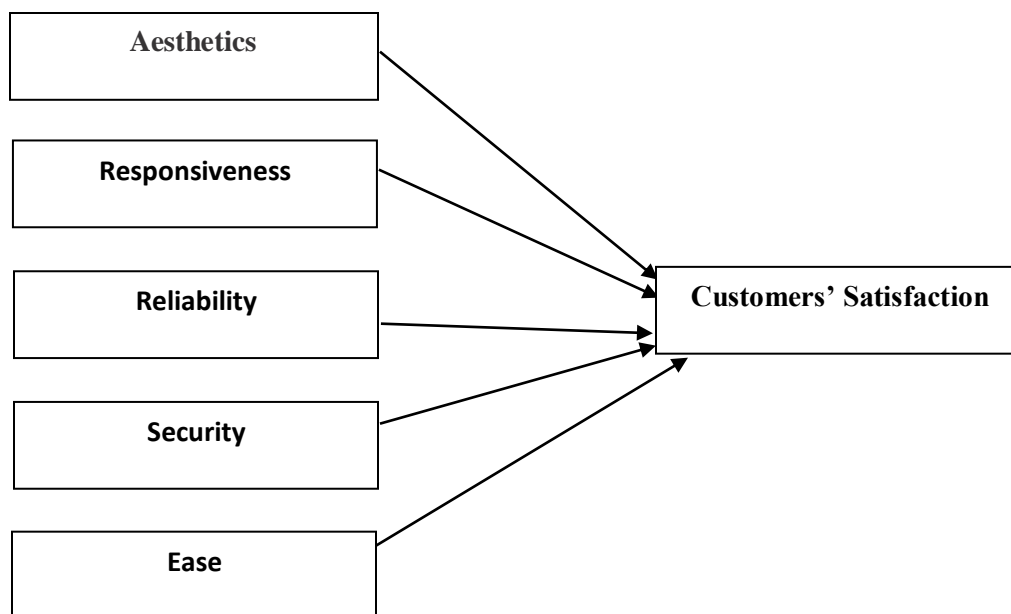


Figure 1. Conceptual Framework

The purpose of this study is to analyze whether the variables of aesthetics, responsiveness, reliability, security, ease have a significant effect on customers' satisfaction in using the bank mobile banking services and, therefore, there are 5 hypotheses, as the following:

- H1: Aesthetics has a significant and positive effect on Customer Satisfaction
- H2: Responsiveness has a significant and positive effect on Customer Satisfaction
- H3: Reliability has a significant and positive effect on Customer Satisfaction
- H4: Security has a significant and positive effect on Customer Satisfaction
- H5: Ease has a significant and positive effect on Customer Satisfaction

3. Method

Population and the Sample

This research is quantitative, using descriptive research design method where the researcher wants to describe the effect of aesthetics, security, reliability, ease, and responsiveness to customer satisfaction in using the banks' mobile banking services in Indonesia. The data were collected by distributing the questionnaires to the respondents. Furthermore, the population consists of bank customers as mobile banking users in Indonesia while the sample is set at 582 sample of the respondents' selected based on the criteria being bank customers who have used mobile banking services, their age is at least 19 years, with an average of using mobile banking at least 1 time a month.

Data Collection Technique

The primary data were obtained directly through data collection by distributing online questionnaires. The questionnaire consists of items that are related to testing the hypothesis. They were taken from those that were completely filled out by the respondents. Questionnaires were distributed by sending the Google address form of the questionnaire via SMS or WhatsApp to respondents who only meet the criteria.

Research Instrument

Responsiveness, Reliability, Ease, Security, and Aesthetics are independent variables, and satisfaction variable is the dependent variable. The scale used in the research instrument is the ordinal scale. The research instrument was prepared with reference to the variables along with their indicators, and then they were tested for their validity and reliability. By doing so, the valid and reliable instrument is an instrument that can be used for data collection. The convergent validity requirements used are that all indicators have a loading factor value above 0.7; convergent validity is also assessed from the AVE value for each construct > 0.5 . The validity of the instrument is also assessed based on Discriminant validity on the cross loading value and the square root of the AVE, Discriminant validity is related to the principle that different constructs should not be highly correlated. Construct reliability can be evaluated from the Cronbach alpha value and the composite reliability value of each construct. The recommended value of composite reliability and Cronbach alpha is more than 0.7.

Data Analysis Technique

The data were analyzed and interpreted in which it is expected to uncover certain social phenomena. In analyzing the data, the researcher used Structural Equation Modeling (SEM) with SmartPLS software as used in the model and hypothesis assessment.

4. Result and Discussion

Respondent Description

The data collection was carried out on a total of 582 respondents with the respondents' characteristics as presented in Table 1.

Table 1.
Research Respondent Description

Characteristics	Characteristics	Number of Sample	Percentage
Gender	Female	352	60%
	Male	230	40%
Age	19-25 years	85	15%
	26-35 years	299	51%
	36-45 years	117	20%
	Above 45 years	81	14%
Level of Education	Primary/ /Junior HS/ Senior HS	19	3%
	Diploma	64	11%
	S1 (Undergraduate)	469	81%
	Master/Doc.	30	5%
Jobs	Private Employees	452	78%
	Entrepreneurs	44	8%
	Civil Officers	81	14%
	Jobless	5	1%
Frequency of using Mobile Banking	1-4 times	96	16%
	5-8 times	126	22%
	9-12 times	87	15%
	above 12 times	273	47%

Evaluation of Outer Model

Evaluation of the outer model was done by testing Convergent Validity and Discriminant Validity. Convergent validity relates to the principle that measures of a construct should be highly correlated while Discriminant validity relates to the principle that measures of different constructs should not be highly correlated (Hartono, 2011). For the convergent validity test, a loading factor above 0.7 is used and the Average Variance Extracted (AVE) > 0.5, which means that the Convergent Validity is very good (Ghozali, 2021). The result of this evaluation using PLS Model is on Figure 2.

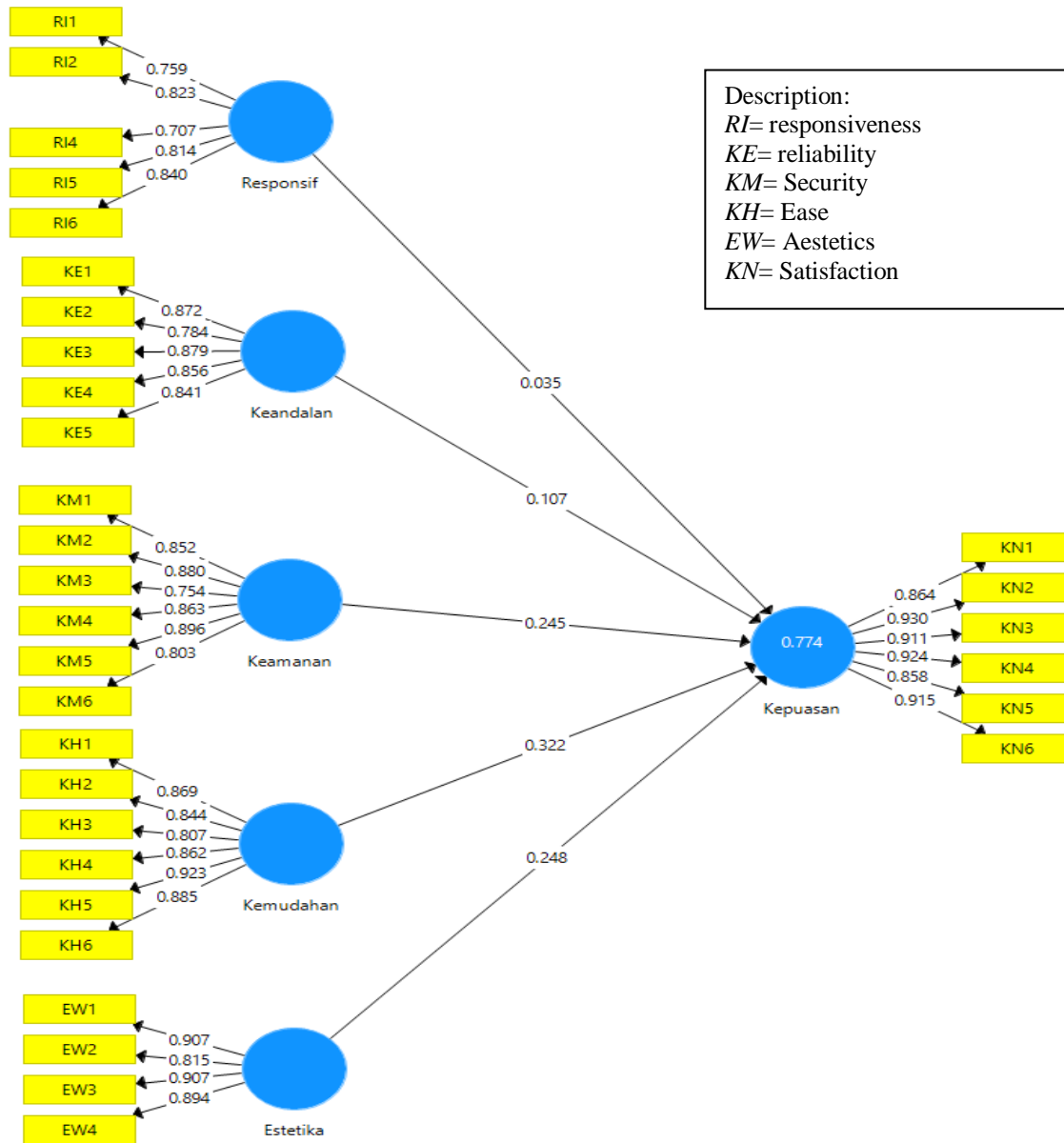


Figure 2. Results of PLS Model Estimate

The estimation results from the PLS model in Figure 3 shows that all indicators have a loading factor value above 0.7 so that they meet the requirements of convergent validity. In addition to looking at the loading factor value in each indicator, convergent validity is also assessed from the AVE value in each construct. The AVE value for each construct is shown in Table 2.

Table 2.
The Values of Loading Factor and AVE

Variables	Indicators	Loading Factor	Cut Value	AVE	Cut Value of AVE	Convergent Validity
Responsiveness	RI1	0.759	0.7	0.624	0.5	valid
	RI2	0.823	0.7			valid
	RI4	0.707	0.7			valid
	RI5	0.814	0.7			valid
	RI6	0.840	0.7			valid
	RI1	0.759	0.7			valid
Reliability	KE1	0.872	0.7	0.717	0.5	valid
	KE2	0.784	0.7			valid
	KE3	0.879	0.7			valid
	KE4	0.856	0.7			valid
	KE5	0.841	0.7			valid
Aesthetics	EW1	0.907	0.7	0.777	0.5	valid
	EW2	0.815	0.7			valid
	EW3	0.907	0.7			valid
	EW4	0.894	0.7			valid
Ease	KH1	0.869	0.7	0.750	0.5	valid
	KH2	0.844	0.7			valid
	KH3	0.807	0.7			valid
	KH4	0.862	0.7			valid
	KH5	0.923	0.7			valid
	KH6	0.885	0.7			valid
Security	KM1	0.852	0.7	0.711	0.5	valid
	KM2	0.880	0.7			valid
	KM3	0.754	0.7			valid
	KM4	0.863	0.7			valid
	KM5	0.896	0.7			valid
	KM6	0.803	0.7			valid
Satisfaction	KN1	0.864	0.7	0.811	0.5	valid
	KN2	0.930	0.7			valid
	KN3	0.911	0.7			valid
	KN4	0.924	0.7			valid
	KN5	0.858	0.7			valid
	KN6	0.915	0.7			valid

The results as based on the PLS analysis in Table 2, it shows that the AVE value of all constructs exceeds 0.5, indicating that all variables have met the required convergent validity criteria. For Discriminant validity, which is assessed on the cross loading and square root of AVE and when the correlation of the construct with the measurement item is greater than that of the other constructs, the measurement item on the construct is considered good/ The value of the square

root of AVE for each construct is greater than the correlation value between the constructs and other constructs has a good Discriminant validity (Ghozali, 2021). Table 3 shows the value of cross loading. The result shows that the indicator is valid because the value of the cross loading indicator on the variable is greater than that of the other variables.

Table 3.
Cross Loading

	Aesthetics	Security	Reliability	Ease	Satisfaction	Responsiveness
EW1	0.907	0.663	0.656	0.678	0.704	0.605
EW2	0.815	0.630	0.595	0.675	0.641	0.615
EW3	0.907	0.647	0.624	0.691	0.687	0.581
EW4	0.894	0.713	0.689	0.740	0.744	0.666
KE1	0.605	0.781	0.872	0.708	0.668	0.715
KE2	0.530	0.633	0.784	0.657	0.579	0.519
KE3	0.602	0.750	0.879	0.717	0.677	0.608
KE4	0.672	0.743	0.856	0.723	0.717	0.742
KE5	0.664	0.728	0.841	0.711	0.702	0.618
KH1	0.706	0.800	0.762	0.869	0.782	0.641
KH2	0.707	0.719	0.699	0.844	0.682	0.611
KH3	0.587	0.654	0.701	0.807	0.649	0.598
KH4	0.644	0.722	0.748	0.862	0.684	0.648
KH5	0.726	0.731	0.719	0.923	0.775	0.636
KH6	0.724	0.721	0.692	0.885	0.760	0.631
KM1	0.665	0.852	0.757	0.721	0.732	0.669
KM2	0.631	0.880	0.749	0.719	0.712	0.592
KM3	0.583	0.820	0.611	0.620	0.598	0.508
KM4	0.679	0.863	0.720	0.732	0.735	0.628
KM5	0.649	0.896	0.748	0.758	0.733	0.635
KM6	0.600	0.803	0.670	0.678	0.611	0.562
KN1	0.694	0.717	0.665	0.706	0.864	0.609
KN2	0.725	0.764	0.717	0.762	0.930	0.642
KN3	0.711	0.753	0.721	0.756	0.911	0.638
KN4	0.712	0.753	0.733	0.761	0.924	0.642
KN5	0.680	0.678	0.684	0.756	0.858	0.556
KN6	0.740	0.753	0.758	0.780	0.915	0.680
RI1	0.506	0.481	0.497	0.504	0.469	0.759
RI2	0.571	0.515	0.560	0.556	0.510	0.823
RI4	0.483	0.475	0.496	0.498	0.458	0.707
RI5	0.554	0.621	0.679	0.607	0.601	0.814
RI6	0.634	0.680	0.719	0.665	0.672	0.840

Table 4 shows that all constructs have the square root value of AVE that is above the correlation value compared to other latent constructs. Therefore, the model has met Discriminant validity.

Table 4.
Fornell-Larcker Criterion

Variables	Aesthetics	Security	Reliability	Ease	Satisfaction	Respon- siveness
Aesthetics	0.881					
Security	0.754	0.861				
Reliability	0.729	0.843	0.847			
Ease	0.790	0.838	0.831	0.866		
Satisfaction	0.789	0.818	0.792	0.837	0.901	
Responsiveness	0.701	0.714	0.760	0.724	0.698	0.790

The construct reliability was assessed by basing on the Cronbach Alpha value and the composite reliability value of each construct (Hartono, 2011). The recommended composite reliability and Cronbach’s alpha values are higher than 0.7 so that the reliability is good (Ghozal, 2021).

Table 5.
Reliability Test Results

Variables	Cronbach’s Alpha	Composite Reliability
Esthetics	0.904	0.933
Security	0.918	0.936
Reliability	0.901	0.927
Ease	0.933	0.947
Satisfaction	0.953	0.963
Responsiveness	0.850	0.892

The reliability test results presented in Table 5t shows that all constructs have a composite reliability value > 0.7 and Cronbach alpha > 0.7. Therefore, all constructs have met the required reliability.

Inner Model Evaluation

Table 6.
SRMR Values

Criteria	Saturated Model	Estimated Model
SRMR	0.049	0.049

The result\s of the goodness of fit test for the PLS model in table 6 shows that the SRMR saturated model value is 0.049 and the estimated model is 0.049. The SRMR value of a good model on the saturated model and the estimated model below 0.08 is considered good (Ghozali,

2021). It means that the SRMR value of the saturated model of 0.049 is included in the good value category because the research model is suitable for testing the research hypotheses.

Tables 7.
R Value

	R Square	R Square Adjusted
Satisfaction	0.774	0.772

In Table 7, the result of the PLS R-Square represents the degree of variance of the constructs that are described by the model. The criteria for evaluating the structural model evaluation such as if R square has a minimum value of 0.67 indicating a good model (Ghozali, 2021); In table 7, the R-square value of 0.774 means that the model is good, where the variability of the customers' satisfaction construct can be explained by the responsiveness, convenience, reliability, security and aesthetic constructs is 77.4%.

Testing the Hypotheses

Table 8
Results of Direct Effect Testing

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
Aesthetics -> Satisfaction	0.248	0.243	0.059	4.204	0.000
Security -> Satisfaction	0.245	0.244	0.060	4.079	0.000
Reliability -> Satisfaction	0.107	0.111	0.070	1.518	0.130
Ease -> Satisfaction	0.322	0.332	0.076	4.213	0.000
Responsiveness-> Satisfaction	0.035	0.025	0.066	0.526	0.599

Based on the results of testing the hypotheses in Table 8, it can be described as the following:

1) The *p-value* for the effect of aesthetics on satisfaction is 0.000 with a *t-statistic* of 4.204 and a positive path coefficient of 0.248, because the *p-value* < 0.05, *t-statistic* > 1.65 and a positive path coefficient, it can be concluded that aesthetics has a positive and significant effect on customers' satisfaction. It shows that the better the aesthetics of the mobile banking application, the higher the customers' satisfaction is. This also indicates that the aesthetics of the mobile banking application has a significant effect on the level of customers' satisfaction in using mobile banking. Thus, the bank can improve the aesthetic factor of the mobile banking application by increasing the attractiveness of its appearance.

2) The *p-value* for the influence of security on customer satisfaction is 0.000 with a *t-statistic* of 4.079 and a positive path coefficient of 0.245. Since the *p-value* < 0.05, *t-statistic* > 1.65 and the path coefficient is positive. Therefore, it can be concluded that security has a positive and significant effect on customer satisfaction. It also indicates that the better the security of the mobile banking application, the higher the customers' satisfaction is. This shows that mobile banking security is a variable that affects the level of customer satisfaction. It implies that the bank can improve better security from time to time so that customers feel more secure in the use of mobile banking. This result is in line with research by Jannat and Ahmed (2015), Uwalaka and Eze (2020), Asfour and Haddad (2014), Sari et al. (2018).

3) The *p-value* for the effect of reliability on customer satisfaction is 0.130 with a *t-statistic* of 1.518 and a positive path coefficient of 0.107. Due to the *p-value* > 0.05, *t-statistic* < 1.65 and the path coefficient is positive. Therefore, it can be concluded that reliability has a positive and insignificant effect on customer satisfaction. It also indicates that the better the reliability of mobile banking, it is not enough to encourage higher customers' satisfaction is. This shows that the assessment of the reliability of the use of mobile banking is a variable that cannot be taken into account to encourage high customers' satisfaction; the Bank may consider innovating the quality of reliability of mobile banking services. This result is not in line with those by Mwendwa et al., 2016; Ejigu (2016), Khan et al. (2018), Asfour and Haddad (2014), Ketema and Selassie (2020)

4) The *p-value* for the effect of Ease on Satisfaction is 0.000 with a *t-statistic* of 4.213 and a positive path coefficient of 0.322. Due to the *p-value* < 0.05, *t-statistic* > 1.65 and the path coefficient is positive, it can be concluded that convenience has a positive and significant effect on customer satisfaction. It also indicates that the better the ease of use of the mobile banking application, the higher the customers' satisfaction is. This shows that the ease of use of mobile banking affects the level of customer satisfaction in the use of mobile banking. These results are in line with those by Jannat and Ahmed (2015), Uwalaka and Eze (2020), Asfour and Haddad (2014), Sari et al. (2018), Ketema and Selassie (2020)

5) The *p-value* for the influence of Responsiveness on Customer Satisfaction is 0.599 with a *t-statistic* of 0.526 and a positive path coefficient of 0.035. Due to the *p-value* > 0.05 and *t-statistic* < 1.65 and the path coefficient is positive. Therefore, it can be concluded that responsiveness has no significant effect on customer satisfaction in using mobile banking. It also indicates that good responsiveness of the mobile banking application has not been able to affect the level of customers' satisfaction. The result is not in line with those by Mwendwa et al., 2016; Ejigu (2016), but it is in line with those by Jannat and Ahmed (2015), Khan et al. (2018).

5. Conclusion and Recommendation

It can be generalized that aesthetics, ease, and security all have a significant effect on customers' satisfaction in using mobile banking. Besides that, this study provides evidence that the variables of aesthetics, ease, and security in using mobile banking are important because they affect either high or low customers' satisfaction. It depends of how the banks pay attention to these factors. This research was conducted not for all types of customers but limited to non-corporate

customers, and the number of samples was 582 samples. It is recommended in future research on mobile banking research by examining the effect of service quality on customer loyalty. The implementation of the research results shows that the aesthetics, ease, and security factors must be improved in order to increase the satisfaction of mobile banking users.

References

- Ahangar, RG. (2011). An Investigation into the Determinant Of Customer Preferences and Satisfaction of Internet Banking (Empirical Study of Iranian Banking Industry). *Journal of Applied Sciences*, 11(3), 426-437
- Alsamydai, MJ, Yousif, RO, & Alkhasawneh, MH. (2012). The Factor Influencing Consumer' Satisfaction and Continuity to Deal With e-banking Services in Jordan. *Global Journal of Management and Business Research*, 12(14), 128-142
- Al-Hawary, SIS, & Al-Smeran, WF. (2017). Impact of Electronic Service Quality on Customers Satisfaction of Islamic Banks in Jordan. *International Journal of Academic Research in Accounting, Finance and Management Sciences*, 7(1), 170-188
- Ariff, MSM, Yun, LO, & Zakuan, N. (2013). The Impacts of Service Quality and Customer Satisfaction on Customer Loyalty in Internet Banking. *Procedia - Social and Behavioral Sciences*, 81(2013), 469-473
- Asad, MM, Mohajerani, NS, & Noursereh, M. (2016). Prioritizing Factors Affecting Customer Satisfaction in the Internet Banking System Based on Cause and Effect Relationships. *Procedia Economics and Finance Journal*, 36(2016): 210-219
- Clemes, MD, Gan, C., & Du, J. (2012). The Factors Impacting on Customers' decisions to adopt Internet Banking. *Journal of Bank and Bank System*, 7(12), 33-50
- Doost, HV, & Ashrafi, A. (2014). Relationship of Online Service Quality with Customer Satisfaction in Internet Banking case study: Pasargad Bank. *International Journal of Economy and Social Science*, 3(1), 130-135
- Ejigu, SN. (2016). E-Banking Service Quality and Its Impact on Customer Satisfaction in State Owned Banks in East Gojjam Zone Ethiopia. *Journal of Economics and Sustainable Development*, 7(21), 100-110
- Gupta, KK, & Bansal, I. (2012). Development of an Instrument to Measure Internet Banking Service Quality in India. *Researchers World*, 3(2):11-25
- Irabatti, PA. (2013). Customer Satisfaction of Online Banking in SBI and ICICI-a Comparative Study in Pune City. *International Journals of Techno-Management Research*, 1(1), 1-14
- Jannat, M., & Ahmed, I. (2015). Factors Influencing Customer Satisfaction of Mobile Banking Services: A Study on Second-Generation Banks. *European Journal of Business and Management*, 7(26), 88-96
- Karthikeyan, P., & Soniya, K. (2016). Technology Adoption and Customer Satisfaction in Banking Technological services. *Journal of Internet Banking and Commerce*, 21(3), 1-22

- Ketema, E., & Selassie. YW. (2020). The impact of M-banking quality service on customer's satisfaction during Covid-19 lockdown: The case of Bank of Abyssinia. *African Journal of Marketing Management*, 12(2), 21-37
- Khan, AG, Lima, RP, &Mahmud, MS. (2018). Understanding the Service Quality and Customer Satisfaction of Mobile Banking in Bangladesh: Using a Structural Equation Model. *Global Business Review*, 22(1), 85-100
- Kumbhar, VM. (2011). Factors Affecting the Customer Satisfaction in e-banking: Some Evidences Form Indian Banks. *Management Research and Practice*, 3(4), 1 – 14
- Ling, GM, Fern, YS, &Boon, LK. (2016). Understanding Customer Satisfaction of Internet Banking: A case study in Malacca. *Procedia Economics and Finance Journal*, 37(2016), 80-85
- Ma, Z. (2012). Factors Affect the Customer Satisfaction of Internet Banking: an Empirical Study in China. *Journal of Convergence Information Technology*, 7(3), 101-109
- Mwendwa, AM., Makokha, EN, & Namusonge, GS. (2016). Effect of Mobile Banking on Customer Satisfaction in Selected Banks in Trans-Nzoia County. *International Journal of Recent Research in Commerce Economics and Management (IJRRCEM)*, 3(4), 12-22
- Nochai, R.,& Nochai. T. (2013). The Impact of Internet Banking Service on Customer Satisfaction in Thailand: A Case Study in Bangkok. *International Journal of Humanities and Management Sciences*, 1(1), 101-105
- Raghavendra, B.,& Kumar, PS. (2016). Customer Satisfaction towards Internet Banking Services (A study focused on Public Sector Banks in Rayalaseema Region). *International Journal of Management and Commerce Innovations*, 4(1), 491-498
- Rahaman, MA, Taru, RD, Ali, MJ, & Rahman, Z. (2020). Investigating the Effect of Service Quality on Bank Customers' Satisfaction in Bangladesh. *Journal of Asian Finance Economics and Business*, 7(10), 823-829
- Sari, NAM., Yunus, NAM, Humaidi, N., & Nordin, A. (2018). The Relationship between E-Service Quality and User Satisfaction Regarding the Use of Mobile Banking in The Banking Industry. *International Journal of Academic Research in Business and Social Sciences*, 8(12), 1663-1676
- Sharma, G.,& Malviya, S. (2014). Internet Banking Service Quality and Its Impact On Customer Satisfaction In Indore District Of Madhya Pradesh. *International Journal of Business and Management Invention*, 3(3), 1-6
- Singh, IP, Singh, P., & Bassi, P. (2017). Customer Satisfaction with Internet Banking in Public and Private Bank. *International Journal of Engineering Sciences & Research Technology*, 6(3), 270-276
- Uwalaka, SC, & Eze, P. (2020). Effect Of Mobile Banking On Customers Satisfaction In Commercial Banks In Anambra State. *International Journal of Innovative Social Sciences & Humanities Research*, 8(1), 101-109

Zafar, M., Zaheer, A., Rahman, S., & Rehman, K. (2011). Impact of online service quality on customer satisfaction in banking sector of Pakistan. *African Journal of Business Management*, 5(30), 11786-11793

Book

Ghozali, I. (2021). *Structural Equation Modelling dengan metode alternative Partial Least Squares (PLS)*. Semarang: Badan Penerbit Universitas Diponegoro.

Hartono, J.M (2011). *Konsep dan Aplikasi Structural Equation Modeling*. Yogyakarta: UPP STIM YKPN