THE INFLUENCE OF E-SERVICE QUALITY AND E-LOYALTY ON MOBILE BANKING CONSUMERS: MEDIATING EFFECT OF E-SATISFACTION AND E-TRUST

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ABSTRACT

Purpose: *This research aims to determine the effect of e-service quality to e-satisfaction and e-trust also its impact on e-loyalty mobile banking BRI customers. This research was conducted in the area of West Java with the samples of 100 people. The data was collected through observations, library reaearch, and questionnaires that use numerical scale of 5 points to measure 32 indicators. The analysis techniques used are using Partial Least Square-Structural Equation Modelling (PLS-SEM), path diagram, structural, direct, indirect and total effects, coefficient of determination analysis and hypothesis testing using the SmartPLS 3.0 program. The results showed that e-service quality, e-satisfaction, e-trust have a significant and positive effect on e-loyalty both directly and indirectly. Suggestion for the company in increasing customer loyalty really needs to consider to important variables such as satisfaction, trust and service quality. These three variables are highly related to maintaining a good level of loyalty, so the company continues to maintain the consistency of BRI customers to be loyal to BRI mobile banking.*

Keywords: E-Service Quality, E-Satisfaction, E-Trust, and E-Loyalty.

INTRODUCTION

Background

Indonesia has been active in a new era marked by the movement of various sectors of life towards digital. The rapid development of technology and information systems over the last few decades had a huge impact on all aspects of life, such as changes in lifestyle, including consumption patterns, business activities, marketing, and the financial sector worldwide (Alkhowaiter, 2020).

The development of information technology is in line with the development of the internet. The trend in Indonesian Internet usage has continued to increase over the past five years (2017-2021).

According to the results of the 2018 Indonesian Internet Service Providers Association (APJII) survey, there were 55.7% of internet users in the area controlled by the West Java region. The survey results of the Indonesian Internet Service Providers Association (APJII) also noted that internet penetration in several cities grew higher than the national average. Bandung City is an example with as many as 82.5% of the 2.5 million population in 2020 being internet users.

Indonesia's fast-growing Internet can overcome the barriers of distance and time (Asmoro et al, 2020). One of the industries that have experienced such progress is the banking industry. Banks are the heart of the country's economy, which is one of the drivers of economic recovery, especially in West Java. Data from the Central Statistics Agency (BPS) shows that West Java is a contributor to Gross Regional Domestic Product (GRDP) according to the Financial Services and Insurance Business Field for the 2021 period, which is 4.91%, followed by Central Java at 4.90%, East Java by 3.99%, and the Province of D.I.Yogyakarta by 1.45%.

The competition in the banking industry in this digital era is getting tougher with the emergence of financial technology (fintech) companies. Fintech comes with all-digital services. This situation makes the banking industry compete to provide and

improve digital-based services to attract customers in the hope of increasing customer trust and satisfaction as well as customer loyalty. One of the digital banking services that have increased significantly in the last eight years is mobile banking services.

Based on the results of the Jenius Study Survey in 2020 showed that there was a surge in the use of mobile banking from 71% to 83%. Customers become more active in conducting online transactions using mobile banking services. INDEF cites DBS Bank research which shows that 41% of the frequency of customer banking transactions in 2018 were mobile banking transactions. This figure increased almost seven times compared to 2010 when only 6% of the frequency of banking transactions were mobile banking transactions.

Mobile banking is an electronic banking system provided by banks to perform various banking transactions through various features or menus provided on banking applications and can be downloaded via gadgets/smartphones. Mobile banking transactions can be done anywhere and anytime for 24 hours without customers coming to the bank or Automated Teller Machines (ATM).

According to the published report of the Financial Services Authority (OJK) regarding Total Assets of 6 Conventional Banks (2020), it was noted that Bank BRI was the bank with the largest total assets of Rp. 1,309.32 trillion.

BRI explores digital banking services because the future of the banking business no longer expects much through interest income but fee-based income (FBI) obtained from transaction services. BRI's main focus is to increase customer satisfaction and loyalty in conducting transactions through digital banking services (digital banking).

According to the survey results by the Top Brand Award in 2017-2021, the ranking of BRI mobile banking has fluctuated. BRI mobile banking market share increased with details in 2017 with a market share of 12.2%, then increased to 14.6% in 2018, 17.0% in 2019, and 20.5% in 2020. However, in 2021, BRI mobile market share banking decreased from 20.5% to 15.0% or decreased by 5.5%. The degression in market share is thought to be caused by a lack of customer satisfaction and lower customer loyalty to BRI's mobile banking.

According to the results of the rating and review of BRI's mobile banking by Google Playstore (accessed March 2022), it shows that the total rating obtained is 3.9 out of 5 points and the reviews from users received are very diverse but tend to be less good and even seem bad. These ratings and reviews are general assessments of BRI mobile banking users on the performance of mobile banking and services perceived by customers. In this case, it can be concluded that BRI's mobile banking customers feel disappointed and have not felt satisfied with BRI's mobile banking services and this can affect customer loyalty to BRI's mobile banking services.

Service quality can encourage customers to commit to BRI's mobile banking services. The definition of e-service quality according to Zeithaml in the journal (Prisanti, Suyadi, & Arifin, 2017) is the extent to which a service can facilitate its users to make transactions easily, and effectively and efficiently. Good service quality will determine the level of satisfaction from customers, when customers are satisfied with the quality of service provided by the company it will generate loyalty from the customer itself so that e-satisfaction indirectly affects e-loyalty.

Electronic trust (e-trust) is defined as trust in the expectation in online risk situations that vulnerabilities will not be exploited. Giao et al. (2020) also explain that there is an influence between e-service quality on e-trust.

The e-service quality provided by the company can promise such as a stable and error-free system, responsive customer

service, a trusted authentication system, and guaranteed data confidentiality, which will increase consumer confidence to use the service. Consumers who already believe tend to feel satisfied with the product and are likely to be more loyal to the service.

This result is in line with previous research conducted by Agus Akbar (2019) which proved that e-service quality has a significant effect on e-loyalty through e-satisfaction. In this study, the indirect effect of e-service quality is higher than the direct effect so this explains that the quality of electronic services will have a higher impact on e-loyalty when the customer is satisfied first.

E-satisfaction is an assessment given by service users of online services used previously (Budiman, Yulianto, & Saifi, 2020). Customers who already feel satisfied with banking products or services tend to be more loyal to these products or services. According to Jeon & Jeong (2017), e-loyalty is the customer's intention to revisit the website with or without online transactions.

According to Melaning and Giantari (2019), user loyalty comes from how much industry performance creates satisfaction with the method of minimizing complaints. Focus on customer loyalty is very important in the digital banking system to maintain commitment in the relationship. Loyal customers will use the company's products more and for a longer time (Kotler and Armstrong, 2018: 44).

The theoretical basis is strengthened based on previous research conducted by Suariedewi and Suprapti (2020) which proves that the higher e-trust and e-service quality in e-banking services (mobile banking), the more e-loyalty of e-banking (mobile banking) service users will increase.

THEORETICAL BASIS

A. E-Service Quality

According to Blutt (2016), the development of Parasuraman theory (2005), e-service quality is an extension of a site's ability to provide and facilitate services to consumers related to transaction, purchase, and distribution activities efficiently and effectively. E-Service Quality has dimensions, including website design, fulfillment, customer service, and security/privacy.

B. E-Satisfaction

According to Ranjbarian et al in the Journal of Business Management research by Tobagus (2018:3), e-satisfaction or online customer satisfaction is the result of consumer perceptions of online convenience, transaction methods, site design, security, and service. According to Komara (2014), e-satisfaction is the satisfaction given after purchasing an industry with electronic services.

E-Satisfaction can be influenced by four main dimensions are convenience, merchandising, security, and serviceability.

C. E-Trust

According to Kotler and Keller (2016:225) in the Journal of e-Proceedings of Management research by Niscahya, M., & Trenggana, A. F. M. (2020:6404), e-trust is a customer's willingness to a company with several factors such as the perceived ability of the customer in integrity, honesty, kindness, and desire to depend on the services provided by the company.

E-Trust can be interpreted as trust in a service provider in the face of an online risk situation that an existing vulnerability will not be exploited. According to Kotler and Keller (2016), e-trust has four dimensions, including benevolence, ability, integrity, and willingness to depend.

D. E-Loyalty

According to Hur et al in the MEA Scientific Journal by Hamdallah & Aulia research (2020: 158), e-loyalty is the intention of customers to visit the website again with or without online transactions.

According to Jeon (2017), e-loyalty is defined by customer behavior that benefits the bank, namely creating usage and repeat purchases.

The focus on customer loyalty is essential in the digital banking system to sustain engagement in the relationship. E-Loyalty has four dimensions, including cognitive, affective, conative, and action.

E. Research Paradigm

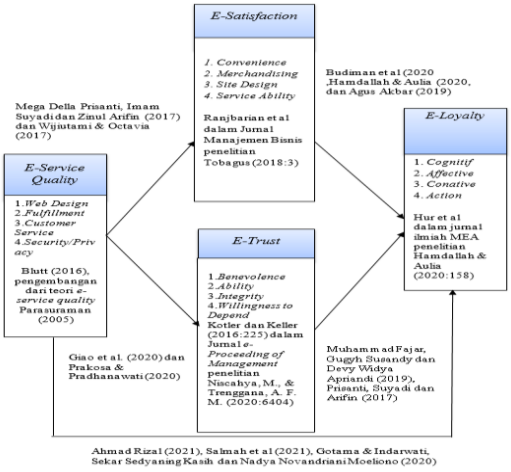

Figure 1. Research Paradigm

HYPOTHESES

Sugiyono (2017:63) states that a hypothesis is a temporary answer to the formulation of a research problem, where the research formulation has been expressed in the form of a statement sentence. The hypotheses in this study are as follows:

H_1: There is an influence of e-service quality on consumer e-satisfaction.

H_2 : There is an influence of e-service quality on consumer e-trust.

H_3: There is an effect of e-satisfaction on consumer e-loyalty.

H_4 : There is an influence of e-trust on e-loyalty.

H_5 : There is an influence of e-service quality on consumer e-loyalty.

H6 : There is an influence of e-service quality on consumer e-loyalty through e-satisfaction and e-trust both directly or indirectly.

METHOD

A. Type of Research

The research method used is descriptive and verification research methods with a quantitative approach. Sugiyono (2017:14) argues that quantitative research methods are research methods based on the philosophy of positivism, which is used to research specific populations or samples.

The descriptive method is used to determine the value of independent variables, namely e-service quality, e-trust, e-satisfaction, and e-loyalty. The verification research method is used to determine and assess how much influence e-service quality has on e-satisfaction and e-trust and its impact on the e-loyalty of customers using BRI mobile banking at the Bandung Regional Office.

B. Population and Sample

The population used for this research is BRI mobile banking users at the Bandung Regional Office. According to Sugiyono (2017:81), the sample is part of the number and characteristics possessed by the population. The sample uses the formula proposed by **Slovin in Calvin (2020:52)** with the results of 100 people.

C. Data Collection Techniques

The researchers collected data by observation, literature research, and questionnaires that were distributed to BRI mobile banking users at the Bandung Regional Office through a google form.

D. Data Analysis Techniques

The researchers used the Partial Least Square-Strucural Equation Modelling (PLS-SEM) method, path diagrams, path coefficients, structural equations, direct, indirect and total effects, coefficient of determination analysis and hypothesis testing with the SmartPLS 3.0 program.

E. Validity

According to Sugiyono (2017:384), validity is a measure that shows the level of reliability or accuracy of a measuring instrument. The validity test in this study

used the SmartPLS 3.0 program. The results of the validity test are shown in the section Measurement Model (Outer Model) section with convergent validity and discriminant validity.

F. Realibility

According to Sugiyono (2017:121), the reliability test was to determine whether the questionnaire used in this study showed a level of accuracy and consistency, even though the questionnaire was used twice or more at other times.

According to Nunnally in Ghozali (2014), a variable would be reliable if the alpha of Cronbach is > 0.7. If the reliability coefficient is above 0.7, the overall statement is considered to be reliable. The results of the SmartPLS reliability test are shown in the composite reliability value and the cronbach's alpha.

G. Partial Least Square-Structural Equation Modeling

According to Ghozali (2014:4), PLS-SEM analysis is a combined method of regression analysis, factor analysis, and path analysis. PLS-SEM is a multivariate technique that will show how to represent a series of causal relationships in a path diagram.

The PLS model has several steps, which are as follows:

1. Measurement Model (Outer Model)

According to Hartono and Abdillah (2014:1), the convergent validity of the measurement model with the reflective indicator model is assessed based on the correlation between the item score/ component score and the construct score or caan be seen from the value on the outer loadings calculated by PLS. The value of outer loadings is considered high if there is a correlation of over 0.70 with the construction to be measured. In addition, the value of outer loadings can be used to check the reliability of the indicator (Sarwono and Narimawati 2015).

Discriminant validity of the reflective indicator measurement model based on cross loading with the construct. If the cross loading value of each indicator in the construct is higher than the cross loading on other constructs, then it is said to be valid.

Another method for assessing discriminant validity is to compare the value of the square root of average variance extracted (AVE) of each construct with the correlations between other constructs in the model. If the AVE root value of each construct is higherthan the correlation value between the constructs and other constructs in the model, it is said to have a good discriminant validity value. It is recommended that the AVE value should be higher than 0.50.

Composite reliability measures the true value of a construct's reliability and is better at estimating the internal consistency of a construct. Cronbach's alpha measures the lower limit of the reliability value of a construct. The rule of thumb is that the value of alpha or composite reliability must be higher than 0.7.

2. Structural Model (Inner Model)

The inner models (inner relations, structural models, and substantive theory) describe the relationship between constructs based on substantive theory. According to Ghozali (2014:4), the structural model is evaluated using R^2 for the dependent construct, the Stone-Geisser Q^2 test for predictive relevance, and the t test and the significance of the structural path parameter coefficients.

The value of R^2 can be used to assess the effect of a particular independent construct on the dependent construct and whether it has a substantive effect. The results of R^2 of 0.67, 0.33, and 0.19 indicate that the model is "good", "moderate", and "weak".

The PLS model considers R^2 and Q^2 as predictors of relevance of the model and also estimates its parameters. A value of $Q^2>0$ indicates that the model has predictive relevance, on the other hand, if the value of $Q^2\leq 0$ indicates that the model lacks predictive relevance, the other hand if

value of $Q^2 \leq 0$ indicates that the model lacks predictive relevance. Calculation of Q^2 is done with the following equation:

$$Q^2 = 1-(1-R_1^2)(1 - R_2^2)(\ldots)(1 - Rp^{2)}$$

Desc:

R_1^2, R_2^2, …, Rp^2 is the coefficient of determination of the endogenous variable.

The magnitude of the value of Q^2 with a range of $0<Q^2<1$, where the nearest 1 means the better. The quantity of Q^2 is equivalent to the coefficient of total determination in path analysis.

According to Sarwono and Narimawati (2015), the value of f^2 Square shows how much influence the exogenous latent variable (independent variable) has on the endogenous latent variable (the dependent variable) on the structural or from latent variables to other latent variables. The size of f^2 Square as defined by Sarwono and Narimawati (2015) is:

a. The value of f^2 square of 0.02 is classified as a low-impact.
b. The value of f^2 square of 0.15 is classified as an appropriate influence.
c. The value of the square f^2 of 0.35 is classified as a strong influence.

3. Evaluation of Goodness of Fit

The research model that uses the outer reflective indicator model is evaluated based on convergent, discriminant validity, and composite reliability. The goodness of fit inner model can be measured using Q2 predictive relevance. The interpretation of Q2 is equal to the coefficient of total determination in path analysis (similar to R2 in regression).

H. Path Diagram

According to Juanim (2020:57), a path diagram is a tool to graphically describe the structure of causality relationships between independent, intervening (intermediary), and dependent variables. In path analysis, the variables analyzed for causality are divided into two groups, namely exogenous variables and endogenous variables.

The exogenous variables in this study are e-service quality while the endogenous variables are e-satisfaction, e-trust, and e-loyalty. The model of the relationship between the variables that have been described can be seen through the path diagram as follows:

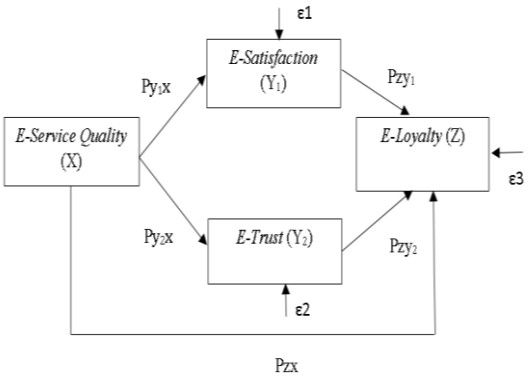

Figure 2. Structural of Relation Model between Research Variables.

I. Path Coefficients

The magnitude of the influence of exogenous and endogenous variables can be seen through the path coefficient which indicates the magnitude of the path of an exogenous variable to endogenous variables. Based on Figure 2. As can be seen, the path coefficient is as follows:

1. ρY_1X = path coefficient of e-service quality (X) to e-satisfaction (Y_1)
2. ρY_2X = path coefficient of e-service quality (X) to e-trust (Y_2)
3. ρZY_1 = path coefficient of e-satisfaction (Y_1) to e-loyalty (Z)
4. ρZY_2 = path coefficient of e-trust (Y_2) to e-loyalty (Z)
5. ρZX = path coefficient of e-service quality (X) to e-loyalty (Z)
6. ε = the influence of other factors

J. Structural Equation

According to Juanim (2020:60), structural equations describe causality relationships between search variables and are presented as mathematical equations. This analysis based on the following equation:

1. **First Substructure Path Equation**

$$Y_1 = \rho Y_1 X + \varepsilon 1$$

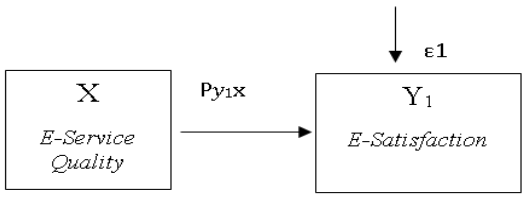

Figure 3. Structural Model I Relationship X to Y_1

2. **Second Substructure Path Equation**

$$Y_2 = \rho Y_2 X + \varepsilon 2$$

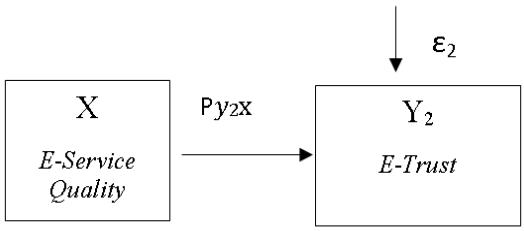

Figure 4. Structural Model II Relationship X to Y_2

3. **Third Substructure Path Equation**

$$Z = PZX + PZY_1 + PZY_2 + \varepsilon_3$$

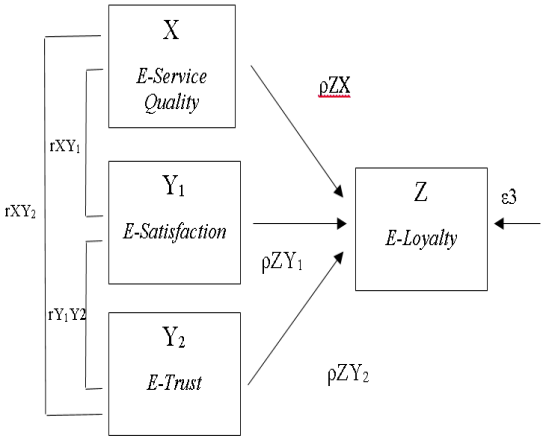

Figure 5. Structural Model III Relationship X, Y_1, Y_2 to Z

K. Direct, Indirect, and Total Effects

According to Juan (2020:60), Direct influence is the influence of one independent variable on the dependent variable, without going through other dependent variables. While the indirect effect is the influence of the independent variable affecting the dependent variable throughout the intermediate variable.

1. **Direct Effect**

The results of X to Y_1 and Y_2 also Y_1 and Y_2 to Z or more simply can be presented as follows:

$X \longrightarrow Z ; \rho ZX$

$Y_1 \longrightarrow Z ; \rho ZY_1$

$Y_2 \longrightarrow Z ; \rho ZY_2$

2. **Indirect Effect**

The indirect effect is the effect of X on Z through Y_1 and Y_2, or more simply it can be seen as follows:

$X \longrightarrow Y_1 \longrightarrow Z : \rho Y_1 X . \rho ZY_1$

$X \longrightarrow Y_2 \longrightarrow Z : \rho Y_2 X . \rho ZY_2$

3. **Total Effect**

The total effect is the sum of DE and IE (DE+IE).

RESULTS AND DISCUSSION

A. Descriptive Analysis Based on Characteristics of Respondents

Table 1. Characteristics of Respondents Based on Gender

No	Gender	Amount	Persentase
1	Male	35	35,0%
2	Female	65	65,0%
TOTAL		**100**	**100%**

Based on Table 1. It shows that mobile banking users in the Bandung BRI regional office by gender are dominated by women by 65.5% of the 100 respondents.

Table 2. Characteristics of Respondents Based on Age

No.	Age	Amount	Persentase
1.	18-23 Years	24	24%
2.	24-29 Years	48	48%
3.	30-35 Years	22	22%
4.	>35 Years	6	6%
TOTAL		**100**	**100%**

Based on Table 2. It shows that respondents who dominate the usage of BRI Bandung Regional Office mobile banking services have an age range of 24-29 or 48% of 100 respondents. This age range is a productive age who uses the internet daily and more aware of current

technological developments also can use BRI mobile banking.

Table 3. Characteristics of Respondents Based on Occupation

No	Occupation	Amount	Persentase
1	Student	2	24%
2	College Student	20	48%
3	Entrepreneur	15	22%
4	Private Employees	50	6%
5	Government Employees	9	9%
6	Others	4	4%
TOTAL		**100**	**100%**

Based on Table 3. regarding the characteristics of respondents by occupation, the majority of BRI mobile banking users in the Bandung Regional Office are private employees by 50% of 100 respondents. This explains that the customers of BRI Bandung Regional Office who use mobile banking are people who are working in the private sector and are potential consumers of financial services and insurance products.

Table 4. Characteristics of Respondents Based on Income

No	Income	Amount	Persentase
1	<Rp. 2.000.000	18	24%
2	Rp. 2.000.000 – Rp. 4.000.000	6	48%
3	Rp. 4.000.000 – Rp. 6.000.000	20	22%
4	Rp. 6.000.000 – Rp. 8.000.000	35	6%
5	>Rp. 8.000.000	21	9%
TOTAL		**100**	**100 %**

Based on Table 4. regarding the characteristics of respondents based on income, mobile banking users of BRI Bandung Regional Office are dominated by income in the range of Rp. 6,000,000 - Rp. 8,000,000 monthly. The income is the average income of a person who already has a fixed income every month.

Table 5. Characteristics of Respondents Based on Length of Being a BRI Customer

No	The length of being a BRI Customer	Amount	Persentase
1	< 1 tahun	11	24%
2	1 s.d 2 tahun	21	48%
3	3 s.d 4 tahun	44	22%
4	> 4 tahun	24	6%
TOTAL		**100**	**100%**

Based on Table 5. regarding the characteristics of respondents based on the length of time being a BRI customer, the majority of mobile banking users at BRI Bandung Regional Office have become BRI customers in the span of 3 to 4 years.

Table 6. Characteristics of Respondents Based on Frequency of BRI Mobile Banking Usage

No	The Frequency of use each day	Amount	Persentase
1	1 time a day	46	35,0%
2	> 1 time a day	54	65,0%
TOTAL		**100**	**100%**

Based on Table 6. regarding the frequency of use each day, shows that the majority of BRI customers at the Bandung Regional Office use BRI mobile banking more than once a day, which is 54% of 100 respondents. Because of that, the majority of customers are people who use the Internet a lot on a daily basis, so they do transactions more than once a day through mobile banking.

B. Descriptive Analysis Based on Variables

1. E-Service Quality

Based on the results of the recapitulation of answers to the questionnaire regarding the e-service quality variable using four dimensions consisting of twelve statements are in the poor category with an average index of 3.19.

2. E-Satisfaction

Based on the results of the recapitulation of answers to the questionnaire regarding the e-satisfaction variable using four dimensions consisting of nine statements are in the poor category with an average index of 3.12.

3. E-Trust

Based on the results of the recapitulation of answers to the

questionnaire regarding the e-trust variable using four dimensions consisting of six statements are in the poor category with an average index of 3.21.

4. E-Loyalty

Based on the results of the recapitulation of answers to the questionnaire regarding the e-loyalty variable using four dimensions consisting of five statements are in the poor category with an average index of 3.07.

C. Validity and Reliability

1. Convergent Validity

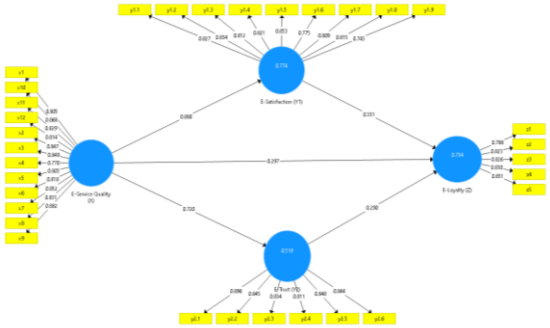

Figure 6. Calculation of Relation Model with SmartPLS.

Based on Figure 6. It shows that the overall value of the outer loading of each latent variable is able to explain the indicator variance with a value of more than 0.7 or 70% and its valid.

2. Discriminant Validity

Discriminant Validity – Cross Loading

	E-Loyalty (Z)	*E-Satisfaction* (Y1)	*E-Service Quality* (X)	*E-Trust* (Y2)	Ket
x1	0,594	0,705	**0,805**	0,556	Valid
x10	0,675	0,764	**0,868**	0,621	Valid
x11	0,741	0,755	**0,829**	0,577	Valid
x12	0,631	0,709	**0,814**	0,617	Valid
x2	0,659	0,716	**0,847**	0,575	Valid
x3	0,643	0,757	**0,849**	0,631	Valid
x4	0,613	0,634	**0,770**	0,515	Valid
x5	0,645	0,731	**0,803**	0,597	Valid
x6	0,643	0,722	**0,818**	0,585	Valid
x7	0,688	0,774	**0,852**	0,641	Valid
x8	0,693	0,717	**0,831**	0,599	Valid
x9	0,717	0,781	**0,882**	0,660	Valid
y1.1	0,688	**0,827**	0,741	0,640	Valid
y1.2	0,669	**0,834**	0,711	0,652	Valid
y1.3	0,684	**0,812**	0,705	0,641	Valid
y1.4	0,685	**0,821**	0,755	0,698	Valid
y1.5	0,684	**0,853**	0,745	0,650	Valid
y1.6	0,689	**0,775**	0,648	0,651	Valid
y1.7	0,673	**0,809**	0,760	0,629	Valid
y1.8	0,671	**0,815**	0,728	0,657	Valid
y1.9	0,570	**0,743**	0,608	0,642	Valid
y2.1	0,720	0,761	0,669	**0,896**	Valid
y2.2	0,650	0,698	0,632	**0,845**	Valid
y2.3	0,702	0,678	0,641	**0,834**	Valid
y2.4	0,588	0,573	0,516	**0,811**	Valid
y2.5	0,602	0,691	0,592	**0,848**	Valid
y2.6	0,633	0,662	0,594	**0,844**	Valid
z1	**0,788**	0,680	0,637	0,683	Valid
z2	**0,823**	0,725	0,699	0,642	Valid
z3	**0,826**	0,688	0,650	0,625	Valid
z4	**0,830**	0,644	0,637	0,612	Valid
z5	**0,851**	0,658	0,659	0,605	Valid

Figure 7. Discriminant Validity – Cross Loading

Based on Figure 7. It shows that the cross loading value on the latent variable itself is higher than the other latent variables, so it is valid.

3. Composite Reliability and Cronbach's Alpha

Table 7. Composite Reliability and Cronbach's Alpha

	Cronbach's Alpha	*Composite Reliability*	Ket
E-Loyalty (Z)	**0,881**	**0,913**	**Reliabel**
E-Satisfaction (Y1)	**0,934**	**0,945**	**Reliabel**
E-Service Quality (X)	**0,959**	**0,964**	**Reliabel**
E-Trust (Y2)	**0,921**	**0,938**	**Reliabel**

Based on table 7. It shows that all latent variables have met the reliable criteria, namely having a value of > 0.70. The results of the validity and reliability tests can be concluded that the questionnaire used in this study is appropriate to be used as material for carrying out statistical testing.

D. Verification Analysis

Figure 8. Path Diagram Construction

Based on Figure 8. the construction of the path diagram shows e-service quality is an exogenous latent variable with twelve indicators, which is associated with an exogenous-endogenous latent variable, namely e-satisfaction with nine indicators and e-trust with six indicators and an endogenous variable, namely e-loyalty with five indicators.

1. The Influence of E-Service Quality on E-Satisfaction

$$Y_1 = \rho Y_1 X + \varepsilon 1$$

f *Square*

	E-Loyalty (Z)	*E-Satisfaction (Y_1)*	*E-Service Quality (X)*	*E-Trust (Y_2)*
E-Loyalty (Z)				
E-Satisfaction (Y_1)	0,068			
E-Service Quality (X)	0,075	**3,432**		1,079
E-Trust (Y_2)	0,112			

Figure 9. f Square

Based on Figure 9. It shows that the value of f square is 3.432, which means that the e-service quality variable has a strong relationship with e-satisfaction.

R *Square*

	R *Square*	R *Square Adjusted*
E-Loyalty (Z)	0,734	0,726
E-Satisfaction (Y_1)	**0,774**	**0,772**
E-Trust (Y_2)	0,519	0,514

Figure 10. R *Square*

Based on Figure 10. It shows that e-service quality has an effect of 77.4% on e-satisfaction while as much as (1-R Square) which is 22.6% is the amount of contribution or influence given by other variables not examined. The value of R^2 (R Square) obtained is more than 0.67, so the effect of the exogenous construct of X on Y_1 is good.

Path Coefficients

	E-Loyalty (Z)	*E-Satisfaction (Y_1)*	*E-Service Quality (X)*	*E-Trust (Y_2)*
E-Loyalty (Z)				
E-Satisfaction (Y_1)	0,331			
E-Service Quality (X)	0,297	**0,880**		0,720
E-Trust (Y_2)	0,290			

Figure 11. Path Coefficients

Based on Figure 11. It shows the path coefficient of the e-service quality variable (X) to the e-satisfaction variable (Y_1) is 0.880, which means that the magnitude of the influence of the X variable on Y_1 is 0.880. This influence is positive.

Total Effect

	Original Sample (O)	*Sample Mean (M)*	*Standard Deviation (STDEV)*	*T Statistics (|O/STDEV|)*	*P Values*
E-Satisfaction (Y_1) -> *E-Loyalty* (Z)	0,331	0,328	0,128	2,596	0,010
E-Service Quality (X) -> *E-Loyalty* (Z)	0,798	0,801	0,033	24,457	0,000
***E-Service Quality* (X) -> *E-Satisfaction* (Y_1)**	**0,880**	**0,882**	**0,017**	**50,807**	**0,000**
E-Service Quality (X) -> *E-Trust* (Y_2)	0,720	0,722	0,043	16,760	0,000
E-Trust (Y2) -> *E-Loyalty* (Z)	0,290	0,285	0,091	3,182	0,002

Figure 12. Total Effects

Based on Figure 12, shows that the relationship between e-service quality and e-satisfaction is significant and positive as evidenced by a significant value greater than the significant level (0.000 <0.05), so there is a significant effect and the t count value (T Statistics) is higher than t table (50.807>1.979) then H_0 is rejected and H_1 is accepted in other words there is a significant effect.

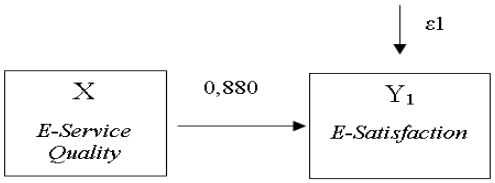

Figure 13. The First Structure Path Diagram

Based on Figure 13. shows that the overall effect of e-service quality on e-satisfaction is significant and positive with a path coefficient value of 0.880 and a coefficient of determination of 77.4, while as much as (1-R Square) which means 22.6% is the amount of contribution or influence given by other variables that are not examined.

2. The Influence of E-Service Quality on E-Trust

$$Y_2 = \rho Y_2 X + \varepsilon_2$$

f *Square*

	E-Loyalty (Z)	*E-Satisfaction (Y_1)*	*E-Service Quality (X)*	*E-Trust (Y_2)*
E-Loyalty (Z)				
E-Satisfaction (Y_1)	0,068			
E-Service Quality (X)	0,075	3,432		**1,079**
E-Trust (Y_2)	0,112			

Figure 14. f Square

Based on Figure 14. It shows the results of data processing obtained an f square value of 1.079 which means that the variable e-service quality has a strong relationship with e-trust.

R *Square*

	R *Square*	R *Square Adjusted*
E-Loyalty (Z)	0,734	0,726
E-Satisfaction (Y_1)	0,774	0,772
E-Trust (Y_2)	**0,519**	**0,514**

Figure 15. R Square

Based on Figure 15. shows that e-service quality has an effect on e-trust by 51.9% while (1-R Square) which means 48.1% is the amount of contribution or influence given by other variables not examined. The value of R^2 (R Square)

obtained is more than 0.33 but less than 0.67, so the effect of the exogenous construct of X on Y_2 is moderate.

Path Coefficients

	E-Loyalty (Z)	E-Satisfaction (Y_1)	E-Service Quality (X)	E-Trust (Y_2)
E-Loyalty (Z)				
E-Satisfaction (Y_1)	0,331			
E-Service Quality (X)	0,297	0,880		**0,720**
E-Trust (Y_2)	0,290			

Figure 16. Path Coefficients

Based on Figure 16. shows that the path coefficient of the variable e-service quality (X) to the variable e-trust (Y_2) is 0.720, which means that the magnitude of the influence of the variable X on Y_2 is 0.720. This influence is positive.

Total Effect

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
E-Satisfaction (Y_1) -> E-Loyalty (Z)	0,331	0,328	0,128	2,596	0,010
E-Service Quality (X) -> E-Loyalty (Z)	0,798	0,801	0,033	24,457	0,000
E-Service Quality (X) -> E-Satisfaction (Y_1)	0,880	0,882	0,017	50,807	0,000
E-Service Quality (X) -> E-Trust (Y_2)	**0,720**	**0,722**	**0,043**	**16,760**	**0,000**
E-Trust (Y2) -> E-Loyalty (Z)	0,290	0,285	0,091	3,182	0,002

Figure 17. Total Effects

Based on Figure 17. shows that the relationship between e-service quality and e-trust is significant and positive, as evidenced by a significant value higher than the significant level (0.000 <0.05), so that there is a significant effect and the t count value (T Statistics) is higher than t table (16.760>1.979) then H_0 is rejected and H_1 is accepted in other words there is a significant effect.

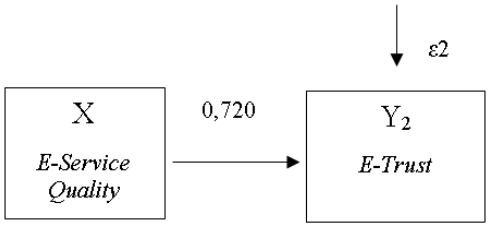

Figure 18. The Second Structure Path Diagram

Based on Figure 18. shows that the overall effect of e-service quality on e-trust is significant and positive with a path coefficient value of 0.720 and a coefficient of determination of 51.9%.

3. The Influence of E-Service Quality, E-Satisfaction, E-Trust on E-Loyalty

$$Z = PZX + PZY_1 + PZY_2 + \varepsilon_3$$

f Square

	E-Loyalty (Z)	E-Satisfaction (Y_1)	E-Service Quality (X)	E-Trust (Y_2)
E-Loyalty (Z)				
E-Satisfaction (Y_1)	**0,068**			
E-Service Quality (X)	**0,075**	3,432		1,079
E-Trust (Y_2)	**0,112**			

Figure 19. f Square

Based on Figure 19. shows that the results of data processing obtained the value of f square as follows:

a. It is 0.068 which means that the e-satisfaction variable has a weak relationship with e-loyalty.
b. It is 0.075, which means that the e-service quality variable has a weak relationship with e-loyalty.
c. It is 0.112 which means that the e-trust variable has a weak relationship with e-loyalty.

R Square

	R Square	R Square Adjusted
E-Loyalty (Z)	0,734	0,726
E-Satisfaction (Y_1)	0,774	0,772
E-Trust (Y_2)	0,519	0,514

Figure 20. R Square

Based on Figure 20. shows that e-service quality, e-satisfaction, and e-trust simultaneously affect e-loyalty of 73.4% while (1-R Square) which means 26.6% is the magnitude of the influence given by other variables not examined. The value of R2 (R Square) obtained is more than 0.67, so the influence of the constructs X, Y1, and Y2 on Z simultaneously are strong.

Total Effect

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
E-Satisfaction (Y_1) -> E-Loyalty (Z)	**0,331**	**0,328**	**0,128**	**2,596**	**0,010**
E-Service Quality (X) -> E-Loyalty (Z)	**0,798**	**0,801**	**0,033**	**24,457**	**0,000**
E-Service Quality (X) -> E-Satisfaction (Y_1)	0,880	0,882	0,017	50,807	0,000
E-Service Quality (X) -> E-Trust (Y_2)	0,720	0,722	0,043	16,760	0,000
E-Trust (Y2) -> E-Loyalty (Z)	**0,290**	**0,285**	**0,091**	**3,182**	**0,002**

Figure 21. Total Effects

Based on Figure 21. the results of data processing with path analysis, the path coefficient uses the value of the original

sample and p-values as a significant level with partial results obtained as follows:

1. The relationship between e-satisfaction and e-loyalty is significant as evidenced by a significant value higher than the significant level (0.010 <0.05), so there is a significant effect and the t count value (T Statistics) is higher than t table (2,596> 1,984) then H_0 is rejected and H_1 accepted. In other words, there is a significant and positive effect.
2. The relationship between e-trust and e-loyalty is significant as evidenced by a significant value higher than the significant level (0.002 <0.05) so that there is a significant effect and the t-count value (T Statistics) is higher than t table (2,596> 1,984) then H_0 is rejected and H_1 accepted. In other words, there is a significant and positive effect.
3. The relationship between e-service quality and e-loyalty is significant as evidenced by a significant value higher than the significant level (0.000 <0.05) so that there is a significant effect and the t count value (T Statistics) is higher than the t table (24,457 >1.984) then H_0 is rejected and H_1 accepted. In other words, there is a significant and positive effect.

Specific Indirect Effects

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
E-Service Quality (X) -> E-Satisfaction (Y1) -> E-Loyalty (Z)	0,291	0,289	0,112	2,610	0,009
E-Service Quality (X) -> E-Trust (Y2) -> E-Loyalty (Z)	0,209	0,206	0,068	3,078	0,002

Figure 22. Total Effects

Based on Figure 22. shows the following results:

1. The relationship of e-service quality (X) to e-loyalty (Z) through e-satisfaction (Y_1) is significant, as evidenced by the significant value higher than the significant level (0.009 <0.05) so there is a significant effect and the value t count (T Statistics) is higher than t table (2.610>1.984) then H_0 is rejected and H_1 accepted. In other words, there is a significant and positive effect.
2. The relationship between e-service quality (X) and e-loyalty (Z) through e-trust (Y_2) is significant, as evidenced by the significant value higher than the significant level (0.002 <0.05), so that is a significant effect and the value t count (T Statistics) is higher than t table (3.078>1.984) then H_0 is rejected and H_1 accepted. In other words, there is a significant and positive effect.

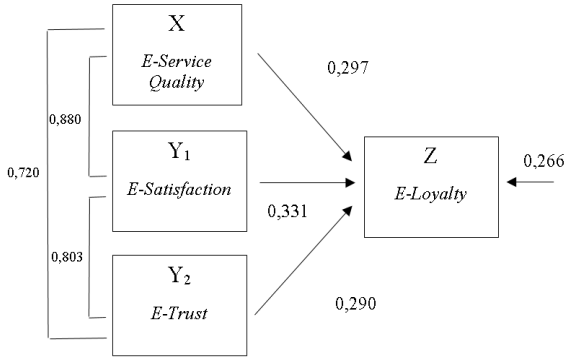

Figure 23. The Third Structure Path Diagram

Based on Figure 23, shows that the overall effect of e-service quality, e-satisfaction, and e-trust on e-loyalty is the coefficient of determination, which is 73.4% and the influence of other variables outside the model is 26.6%.

E. Direct, Indirect, and Total Effects

Direct, Indirect, and Total Effects

Variable	Direct Effects	Indirect Effects Through			Indirect Effects	Total Effects
		X	Y1	Y2		
X	0,0882		0,0865	0,0564	0,1429	**0,2311**
Y1	0,1096	0,0865		0,0771	0,1636	**0,2732**
Y2	0,0841	0,0564	0,0771		0,1335	**0,2176**
Total	0,2819	0,1429	0,1636	0,1335	0,4399	**0,7218**

Figure 24. Direct, Indirect, and Total Effects

Based on Figure 24. shows that the direct effect of the variable e-service quality on e-loyalty is 0.882, e-satisfaction on e-loyalty is 0.1096, and e-trust on e-loyalty is 0.081.

The indirect effect of e-service quality on e-loyalty through e-satisfaction is 0.0865, e-service quality on e-loyalty through e-trust is 0.0564, and e-satisfaction on e-services is loyalty through e-trust or e-trust to e-loyalty through e-satisfaction of 0.0771.

The total effect of the sum of the direct and indirect effects, the result is 0.7218. This value is the same as the coefficient of determination (R Square) of the overall effect of e-service quality, e-satisfaction, and e-trust on e-loyalty.

CONCLUSION

This study aims to determine the effect of e-service quality on e-satisfaction and e-trust and its impact on e-loyalty.

The results based on the first path analysis showed that e-service quality partially and simultaneously has a significant and positive effect on e-satisfaction with a contribution level of influence of 77.4% The results based on the second path analysis show that e-service quality partially and simultaneously has a significant and positive effect on e-trust with a contribution level of influence of 72.0%. The results based on the third path analysis show that e-service quality, e-satisfaction, and e-trust both directly or indirectly have a significant and positive effect on the coefficient of determination, which is 73.4% on e-loyalty.

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