



The Moderating Roles of E-Satisfaction in the Relationships Between E-Service Quality and E-Loyalty An Empirical Study in E-Commerce

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Abstract. E-Service Quality is one important element for a company to work better in order to create satisfaction and generate loyalty. This study aims to examine the effect of E-Service Quality on E-Loyalty with E-Satisfaction as a moderating effect. This is a quantitative research that use verificative and descriptive method to analyze the data. The sampling used is probability sampling with the type of simple random sampling. The research was conducted by distributing questionnaires to a sample of 48 Shopee customer respondents. The survey results were analyzed using multiple regression analysis. E-Service Quality has a positive significant effect on E-Satisfaction, and E-Satisfaction has a positive significant effect on E-Loyalty. E-Service Quality has no direct effect on E-Loyalty. E-Service Quality has a positive effect on E-Loyalty mediated by E-Satisfaction. The world is moving towards the digital era, E-Service Quality plays an important role in creating customer satisfaction that will lead to customers. This study tries to reveal the impact of E-Service Quality on E-Loyalty with E-Satisfaction as a moderating effect.

Keywords: E-commerce · E-loyalty · E-satisfaction · E-service quality · Online Shopping

1 Introduction

Building customer loyalty is not an easy thing. Achieving customer loyalty is paramount to company survival [1] and retention of customer loyalty directly affects profitability and business success [2]. Loyal customers will generate long-term revenue and profits for the business and reduce costs associated with acquiring new customers [3]. In every line of business in today's competitive scenario, it is very difficult to get loyal customers and keep them loyal as usual [2]. The role of e-loyalty has received tremendous attention from business practitioners and academics [4]. It is very important for business people to know the determinants or factors that affect customer loyalty in e-commerce [2] considering that customer loyalty in online businesses is very difficult to achieve because competition is only a few clicks away [5].

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Continuous technological innovation provides customers with a shopping experience with the concept: anytime, anywhere, through mobile devices, tablets, personal laptops, and now computers that are part of the lives of most customers [6]. According to [7], Indonesia is a country that prioritizes digital, and the Indonesian people are among the most enthusiastic users of digital technology in the world. With the spread of usage in 2020 and continued with restrictions on community activities, the growth of e-commerce in Indonesia is growing rapidly. Indonesia is the ninth largest market for e-commerce with US\$43 billion in revenue in 2021, ahead of Canada and behind India [8]. During this COVID-19 quarantine period, a new type of customer has emerged, who is buying products and services through electronic channels, and significantly reducing their transactions in physical stores [9]. Based on [10], the COVID-19 pandemic has made people stay at home and change their habits, including shopping behaviour from offline to online. Customers who only shopped online before the pandemic jumped from 11% to 25.5% in early 2021. Meanwhile, 74.5% of customers continued to shop offline and online during the pandemic, despite indications that they shopped more online. 36.8% of customers often shop online (1–3 times a month) with an average budget of up to IDR 250,000.00 per month. The three most sought after products when shopping online are fashion and accessories, credit, and vouchers, as well as body care and beauty products. When shopping online, 89.5% of customers choose regular delivery services, and 21.6% choose express or instant delivery. On-time delivery and cheaper prices are the two main reasons customers choose regular services. 86.5% of customers choose marketplace as their favorite shopping channel compared to social media (36.9%) and product websites (8.0%). The largest number of billion-dollar tech start-ups in Southeast Asia – including, notably, Tokopedia, GO-JEK, Traveloka, and Bukalapak [7]. Table 1 show the number of visitors on e-commerce as follow:

In the last three years, the competitive landscape of digital trading platforms looks quite dynamic. Several e-commerce companies are competing for the position of the most accessed marketplace [11]. One of the most familiar internet-based shopping companies

Table 1. Number of E-Commerce Visitors

Domain	Traffic Share	Monthly Visitors	Unique Visitors
Tokopedia	28,52%	154,0 M	46,86 M
Shopee	24,70%	133,4 M	40,41 M
Lazada	4,92%	26,60 M	10,50 M
Bukalapak	4,18%	22,59 M	9,082 M
Orami	3,45%	18,62 M	13,36 M
OLX	2,91%	15,72 M	4,910 M
Blibli	2,60%	14,05 M	7,315 M
Ralali	1,54%	8,344 M	5,80 M
iPrice	1,45%	7,811 M	5,451 M
Amazon	1,30%	7,006 M	4,870 M

Table 2. Cross-Browsing Behavior

	Also Visited	
	Shopee	Tokopedia
Shopee	–	42,77%
Tokopedia	26,66%	–

or marketplaces in Indonesia is Shopee. Shopee is a leading e-commerce platform in Southeast Asia and Taiwan which was founded in 2015. Based on [12] in Table 1 data for the period November 2021–January 2022, Tokopedia is the most visited e-commerce platform by the Indonesian people. Per month, Tokopedia is visited 154 million times. With Shopee (133.4 million times) in second, Lazada (26.6 million) in third, and so on. Table 2 show cross-browsing behavior on Shopee and Tokopedia customer as follow:

Each percent in Table 2 represents the share of visitors to Site A (visitors to) who also visited Site B (also visited) on the same trip. Data are based on the previous period (that is, a 3-month period compared to the previous three months). Cross-browsing behavior occurs when a customer visits two websites or online channels in one trip [13]. Data shows that 42.77% of Shopee users also visited Tokopedia on the same trip and 26.66% of Tokopedia users also visited Shopee on the same trip. This cross-browsing behavior can be an indication of customer disloyalty to a platform and if ignored will have an impact on the company.

Now the Internet has become the basis of all marketing activities which creates a revolution in the retail market and reverses the previous market scenario [14]. Changes in customer behavior from offline shopping to online encourage business people to run their business operations online so that the use of internet media is ideal for marketing goods or services. Yes, this is the golden mantra for customer satisfaction that will be the precursor to getting customer loyalty: because planning product features according to customers' own needs will increase customer enjoyment which in turn increases the pulse of product repurchase [14]. Competition for traffic & digital marketing engagement between marketplaces is very tight. There is no big difference from one market to another. This is important to encourage companies to perform effective service quality to provide an optimal impact for the company and of course on customer satisfaction which will lead to loyalty. Every e-retailer is unavoidable to maintain the quality that is channeled through online businesses, considering that service quality plays an important role in customer satisfaction which in turn develops loyalty [14].

The concept of service quality is included in the marketing of services. E-service quality is a service provided to customers using the internet. Internet-based services make customers feel more efficient in conducting transactions in terms of time and cost [15]. E-service quality is described as a method consisting of pre-purchase, purchase, and post-purchase activities involving the evaluation, selection, purchase, and fulfillment of products and services through websites [16]. E-service quality has been shown to have an effect on e-satisfaction [1, 6, 14, 17–26]. This study uses a modified SERVQUAL model to examine the relationship between the dimensions of e-service

quality with e-satisfaction and e-loyalty. The dimensions that will be used are Website Design, Customer Service, Security/Privacy, and Fulfillment [25].

H1: E-service quality has a positive effect on E-satisfaction

H2: E-service quality has a positive effect on E-loyalty

H3: E-service quality has a positive effect on E-loyalty through E-satisfaction

Kotler [27] describes satisfaction as a person's feelings or pleasure or disappointment resulting from comparing the perceived performance (or outcome) of a product or service with expectations. If the performance or experience is less than expected, the customer is dissatisfied. [25] stated that customer satisfaction has a positive relationship with repurchase intentions, WOM, and site visits. [17] stated that Satisfaction was found to mediate the relationship between E-service quality and Behavioral and Attitudinal Loyalty and a significant relationship was found between customer service and e-satisfaction and trust. [1] stated that satisfaction is the dominant aspect of online shopping, but satisfaction has no significant effect on cognitive loyalty. [24] stated that e-satisfaction encourages e-loyalty. Based on the literature, the following are the hypotheses:

H4: E-Customer Satisfaction has a positive effect on E-loyalty.

The term e-loyalty was first mentioned around 2000. [28] describes customer/brand loyalty in cyberspace as an evolution from a traditional product-driven concept, controlled by marketers to a distribution-driven, customer-driven concept, and facilitated by technology. Then the concept of e-loyalty continues to grow and attracts the attention of many researchers. E-loyalty has been defined by several researchers: E-loyalty is a customer's intention to revisit and repurchase from an e-commerce portal, even when other alternatives are available [29]; E-loyalty is customer commitment and favorable disposition towards online companies [41]. The concept of loyalty has been studied extensively. Several studies have shown that loyalty is influenced by e-satisfaction [2, 3, 6, 14, 15, 17–20, 22–26, 30] but contradicts the results of research [1] which says e-satisfaction has no effect on cognitive loyalty.

Based on the description above, researchers will conduct further analysis of "The Moderating Role of E-Satisfaction in the Relationships Between E-Service Quality and E-Loyalty". "An Empirical Study in E-Commerce". To increase e-loyalty in e-commerce, evaluating e-service quality, and e-satisfaction are very beneficial for e-commerce platforms and researchers, especially when customer shopping behavior shifts towards online purchases as it is today. The purpose of this study was to determine the effect of the variables E-service quality, E-satisfaction, and E-loyalty.

2 Methods

There are two research variables in this study, including the dependent variable (endogenous) namely E-loyalty (Y1), and E-satisfaction (Y2), and the independent variable (exogenous) namely E-service quality. The unit of analysis used as respondents in this study is the Shopee application customer in Indonesia. This research was conducted in less than one year from March 2022 to May 2022, so the method used was cross-sectional. The research method used was descriptive quantitative verification. The

descriptive method aims to obtain data that can explain the characteristics of a particular object, event, or situation. The verification method aims to examine, confirm, confirm, and convince research hypotheses through certain mechanisms. The data used in this study consisted of primary data and secondary data. Primary data collection is carried out actively by distributing questionnaires to a number of respondents according to the targets that are considered to represent the entire population of research data. Respondents from this study are customers of the Shopee application in Indonesia who are members of Shopee's official Instagram. Secondary data is sourced from literature studies through various books, journals, and articles taken on the internet related to research. The population in this study is the Instagram followers of the Shopee application in Indonesia, amounting to about 8.6 million followers. In this study, it is impossible for all populations to be studied by the author, this is due to several factors including limited costs, energy, and time available so 48 respondents were selected as research samples with probability sampling and simple random sampling. The instrument was tested using the classical assumption test and the survey results were analyzed using multiple regression analysis and the data were analyzed by descriptive analysis.

This study aims to identify e-service quality using a modified SERVQUAL model and to examine the relationship between the dimensions of e-service quality with e-satisfaction and e-loyalty. To analyze the effect between variables, a 5-point Likert scale was used. There are five indicators used to measure E-Service Quality, namely Website Design, Customer Service, Security/Privacy, and Fulfillment [25, 31, 32]. Five indicators are used to measure E-satisfaction, namely, customers are satisfied with e-commerce, e-commerce is approaching the ideal platform according to customers, e-commerce always meets customer needs [14, 25, 33], the customer experience is pleasant, and e-commerce always meets expectations. Three indicators are used to measure E-loyalty, namely customers who recommend e-commerce to people who ask for advice, customers who encourage their friends and relatives to use e-commerce, and for matters related to e-commerce customers always choose e-commerce as the first choice [14].

3 Result and Discussion

Table 3 show respondent characteristic. Of the 48 respondents obtained, 19% were 21–25 years old, 65% were 26–30 years old, and 17% were more than 30 years old. 42% is men and 58% is a woman. 6% is housewife, 63% are civil servant or employee, 8% are student, and 23% are an entrepreneur. 21% is have income Rp0–Rp5.000.000, 33% Rp5.000.000–Rp10.000.000, 25% Rp10.000.000–Rp15.000.000, and 21% more than Rp15.000.000.

Validity test in Table 3 shows the ability to measure an indicator in measuring a concept. The validity test was carried out on each question item (indicator) that formed the research variable, show by Table 4.

From the results of the validity test, all items have a value of $r_{count} > r_{table}$, it can be stated that all items used for this study are valid.

Result of reliability test show by Table 5.

From the results of the reliability test, Cronbach's Alpha value of $0.958 > 0.70$, it can be said that the data collected is reliable.

Table 3. Respondent Characteristic

	Description	Total	%
Age	21–25 years old	9	19%
	26–30 years old	31	65%
	>30 years old	26,60 M	10,50 M
	Grand Total	22,59 M	9,082 M
Gender	Man	20	42%
	Woman	28	58%
	Grand Total	48	100%
Working Status	A Housewife	3	6%
	A civil servant/Employee	30	63%
	A Student	4	8%
	An Entrepreneur	11	23%
Income	Rp0–Rp5.000.000	10	21%
	Rp5.000.000–Rp10.000.000	16	33%
	Rp10.000.000–Rp15.000.000	12	25%
	>Rp15.000.000	10	21%
	Grand Total	48	100%

Coefficients show by Table 6.

From the analysis above, the significance value of E-service quality is $0.000 < 0.05$, so it can be concluded that there is a direct significant effect of E-service quality on E-satisfaction. The better the performance of Shopee's E-service quality, the greater the customer's E-satisfaction. This is in line with previous research which showed that E-service quality has a positive effect on E-satisfaction [1, 6, 14, 17–26].

Model summary of this research show by Table 7.

The magnitude of the effect of E-service quality on E-satisfaction is 0.716 or 71.6% while 28.4% is influenced by other variables outside this study.

Table 8 show coefficient 1 as follow:

From the analysis above, the significance value of Eservice quality is $0.907 > 0.05$, so it can be concluded that there is no direct influence of E-service quality on E-loyalty. This is contrary to previous research which states that E-service quality affects E-loyalty [1, 6, 14, 17–26].

The significance value of E-satisfaction is $0.000 < 0.05$ so it can be concluded that E-Satisfaction directly affects E-loyalty. This is in line with previous research which stated that E-satisfaction was positively related to E-loyalty [2, 3, 6, 14, 15, 17–20, 22–26, 30] but contradicts the results of research [16] which says e-satisfaction has no effect on cognitive loyalty.

Table 9 show model summary 1 as follow:

Table 4. Validity Test

Item	r-count	r-table	Validity
WD1	,393**	0,339	Valid
WD2	,491**	0,339	Valid
WD3	,533**	0,339	Valid
WD4	,596**	0,339	Valid
WD5	,548**	0,339	Valid
WD6	,346*	0,339	Valid
WD8	,428**	0,339	Valid
WD9	,517**	0,339	Valid
WD10	,478**	0,339	Valid
WD11	,478**	0,339	Valid
WD12	,584**	0,339	Valid
WD13	,410**	0,339	Valid
WD14	,661**	0,339	Valid
WD15	,559**	0,339	Valid
WD17	,446**	0,339	Valid
WD18	,484**	0,339	Valid
WD19	,582**	0,339	Valid
WD20	,647**	0,339	Valid
WD21	,363*	0,339	Valid
WD22	,617**	0,339	Valid
WD23	,595**	0,339	Valid
WD24	,504**	0,339	Valid
CS1	,422**	0,339	Valid
CS2	,665**	0,339	Valid
CS3	,422**	0,339	Valid
CS4	,660**	0,339	Valid
CS5	,675**	0,339	Valid
CS6	,738**	0,339	Valid
SE1	,478**	0,339	Valid
SE2	,772**	0,339	Valid
SE3	,537**	0,339	Valid
SE4	,653**	0,339	Valid

(continued)

Table 4. (continued)

Item	r-count	r-table	Validity
SE6	,389**	0,339	Valid
FF1	,650**	0,339	Valid
FF2	,515**	0,339	Valid
FF3	,661**	0,339	Valid
FF4	,467**	0,339	Valid
FF5	,481**	0,339	Valid
FF7	,639**	0,339	Valid
FF8	,523**	0,339	Valid
FF9	,516**	0,339	Valid
SQ1	,757**	0,339	Valid
SQ2	,764**	0,339	Valid
SQ3	,787**	0,339	Valid
CS1	,728**	0,339	Valid
CS2	,658**	0,339	Valid
CS3	,703**	0,339	Valid
CS4	,782**	0,339	Valid
CS5	,710**	0,339	Valid
LO1	,727**	0,339	Valid
LO2	,698**	0,339	Valid
LO3	,599**	0,339	Valid

Table 5. Reliability Test

Reliability Test	
Cronbach's Alpha	N of Items
0,958	52

The magnitude of the effect of E-service quality and E-satisfaction on E-loyalty is 0.786 or 78.6%, while 21.4% is influenced by other variables outside this study.

The Moderating Role of E-Satisfaction in the Relationships Between E-Service Quality and E-Loyalty show by Fig. 1.

From Fig. 1 it is known that the direct effect given by E-service quality on E-satisfaction is 0.111 while the indirect effect of E-service quality on E-loyalty through E-satisfaction is the multiplication between the beta value of E-service quality on E-satisfaction with the beta value of E-satisfaction to E-loyalty that is $0.111 \times 0.667 =$

Table 6. Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1,934	3,071		0,63	0,532
	E-Service Quality	0,111	0,016	0,716	6,959	0

Table 7. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,716a	0,513	0,502	1,77785

a. Predictors: (Constant), E-Service Quality

Table 8. Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1,934	3,071		0,63	0,532
	E-Service Quality	0,111	0,016	0,716	6,959	0
	E-Satisfaction	0,667	0,074	0,895	9,058	0

a. Dependent Variable: E-Loyalty

Table 9. Model Summary 1

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,887 ^a	0,786	0,777	0,8882

a. Predictors: (Constant), E-Satisfaction, E-Service Quality

0.0740. It can be said that the higher the e-service quality provided by the company, the higher the customer satisfaction with the company. Through e-service quality, there will be an increase in customer satisfaction followed by an increase in profits. The results of data calculations show that eservice quality does not directly affect e-loyalty. It can be concluded that in this study, the data collected did not succeed in proving a direct relationship between the variables of e-service quality and e-loyalty, but that does not mean that the variables have no effect, on the contrary, the sample data failed to prove

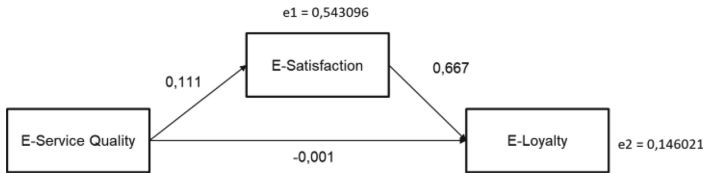


Fig. 1. The Moderating Role of E-Satisfaction in the Relationships Between E-Service Quality and E-Loyalty

the relationship. Based on the results of hypothesis testing, it can be concluded that hypothesis 1, hypothesis 3, and hypothesis 4 are accepted while hypothesis 2 is rejected.

4 Conclusion

It can be concluded that in this study E-service quality has an effect on E-loyalty through E-satisfaction, but the data collected did not succeed in proving a direct positive relationship between the E-service quality variable and E-loyalty, but that does not mean that the variables have no effect, otherwise the sample data failed to prove the relationship. It is important for organizations to have the right quality E-service which will help them attract customers and capture more market. As it is rightly said that the customer is the king of the market, therefore it needs to be managed properly in order to have a positive image of the company. In conclusion, there is a relationship between digital marketing and customer purchasing decisions, which implies that customer preferences depend on effective digital marketing planning, implementation and control.

Acknowledgments. Future research can be carried out, taking into account additional factors in E-service quality, E-Customer Satisfaction, E-loyalty and different channels. This may contrast with the results of this analytical study to identify variation. Future analysis can be carried out on completely different industries in different markets, and on specific organizations and customers. In this study, only 48 samples were collected and only two independent variables were used. For further research, it is recommended to use a larger sample in order to represent the results of the study and to use more than two independent variables in order to find out more about what factors can affect E-loyalty in Shopee e-commerce. Companies must be able to maintain the effectiveness of their E-service quality in order to compete with other e-commerce, given the intense competition that exists in similar industries.

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