

# Analysis of the Effect of Perceived Service Quality and Perceived Value on E Loyalty Through Customer Satisfaction and Customer Trust as Intervening Variables: Study on Wardah Beauty Products e-Commerce Consumers in Semarang City

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## Abstract

This research aims to analyze the influence of perceived service quality and perceived value on e-loyalty through customer satisfaction and customer trust as intervening variables on e-commerce consumers of Wardah beauty products in Semarang City. The research population was all consumers who purchased Wardah products online through the 5 largest e-commerce sites in Indonesia and a sample of 100 consumers. The data analysis method is path analysis with Smart Partial Least Square (PLS). This research produces findings that there is a positive influence of perceived value, customer satisfaction, customer trust on e-loyalty but perceived service quality has no effect on e-loyalty. There is a positive influence of perceived service quality and perceived value on customer satisfaction, while customer satisfaction has a positive influence on customer trust. There is an indirect influence of perceived service quality on e-loyalty through customer satisfaction. There is an indirect influence of perceived value on e-loyalty through customer satisfaction. There is an indirect influence of customer satisfaction on e-loyalty through customer trust.

**Keywords:** *Perceived Service Quality, Perceived Value, E-Loyalty, Customer Satisfaction, Customer Trust.*



## A. INTRODUCTION

Over the years, beauty has become a very important aspect for women, and this is not only limited to their choice of clothing, but also involves facial and body care. Women's beauty reflects the main priority in their lifestyle (Mohanapriya et al., 2019). Therefore, many women use beauty products and cosmetics to improve their appearance. This is what encourages cosmetic companies to compete in marketing beauty products with various variations, specifications and specific target markets, especially attracting the attention of women. The impact of this competition is the growth of the cosmetics market by 10-15% every year, as noted by Anjana in 2018 (Anjana, 2018).

One cosmetic company in Indonesia that is well known to consumers is PT. Paragon Technology & Innovation, which owns a beauty brand called Wardah. Wardah products can be grouped into four categories, namely facial skin care, body care, hair care and makeup products. This variety of Wardah products makes many

women choose Wardah as their choice of beauty products. This decision is influenced by various factors, including halal brand image, product safety, friendly prices, and ease of the purchasing process.

Currently, Wardah's product purchasing service has evolved from a physical cosmetics store to being available also via e-commerce platforms, to provide more convenience to consumers in the digital era. Sales of beauty products, including the Wardah brand, are the main focus, especially for women, including female students and college students, who dominate internet usage with a percentage reaching 70.18%. In 2020, a large number of beauty products were listed on various e-commerce platforms, such as Tokopedia with 15.3 million products, Bukalapak with 4.6 million products, and Shopee with 2.3 million products. Total sales by beauty brand are as follows:

**Table 1. Beauty Brand Sales Ranking Based on the 2020 E-Commerce Report**

No.	Beauty Brand	Shopee	Tokopedia	Bukalapak
1.	Wardah	6.6 Million	614 Thousand	83 Thousand
2.	Nature Republic	5.3 Million	470 Thousand	36 Thousand
3.	Innisfree	3.5 Million	160 Thousand	4 Thousand
4.	Emina	3.2 Million	79 Thousand	4 Thousand
5.	Purbasari	1.9 Million	201 Thousand	15 Thousand

Source: Indonesian Digital Marketing Association (2020)

Based on the data listed in the table above, it can be seen that the Wardah brand is the most popular beauty product sold via e-commerce platforms. Wardah's total sales reached 7.37 million units, consisting of 6.6 million products on Shopee, 614 thousand products on Tokopedia, and 83 thousand products on Bukalapak. Therefore, this research chose the Wardah beauty brand as the research object.

Wardah consumers today have many options for shopping online, and they can easily compare prices of the same product across several e-commerce platforms. Ordering and purchasing products can be done with just a few clicks on various e-commerce sites. However, many consumers still choose to ensure product authenticity by purchasing from official stores. In this case, Wardah itself provides an official website for selling its products via <https://www.wardahbeauty.com>, and also has official stores on various e-commerce platforms such as Shopee (Wardah Official Shop with 3.5 million followers), Lazada (Wardah LazMall with a number of followers reaching 1.3 million), Tokopedia (Wardah Official), and other platforms.

Based on data from the largest *e-commerce* in Indonesia which provides Wardah product sales services through *official stores* including Shopee, Tokopedia, Bukalapak, Lazada and Blibli. In this case, *e-commerce* with the highest level of visitors because it is the choice as an *online shopping site* is Shopee with monthly visitors reaching 96,460,000 followed by Tokopedia with 86,410,000 visits, Bukalapak with 32,760,000 visits, Lazada with 22,220,000 visits and Blibli with 18,340,000 visits (Salsabila & Zakaria, 2020). Therefore, researchers will focus the object of this research on these 5

*e-commerce sites* as objects and choices for consumers to purchase Wardah products through *official stores* online.

Every e-commerce platform that sells Wardah products must have excellence in its efforts to provide the best offers and optimal shopping experience, with the aim of increasing customer satisfaction while maintaining customer loyalty (*e-loyalty*). Service quality has a close relationship with the level of consumer satisfaction, and when consumers experience a certain level of satisfaction when interacting with e-commerce, this creates a high level of trust in repeatedly shopping on the e-commerce platform, and the result is the formation of *e-loyalty* (Wang & Prompanyo, 2020).

*E-loyalty* from consumers has an important role in maintaining the survival of an *e-commerce platform*. This is due to the fact that retaining existing customers tends to be more economical than acquiring new customers, which often requires higher promotional costs. A high level of *e-loyalty* can create efficiency for companies, therefore, to overcome competition in a competitive environment and support e-commerce success, companies must strive to build a loyal customer base, which will result in repeat purchasing patterns (Al- Ayed , 2022).

Every e-commerce platform has the potential to build *e-loyalty* by providing excellent service to customers. Through these actions, consumers will naturally form the perception that e-commerce provides high quality, and this becomes the main focus for every company, with an emphasis on the quality of the services they offer to customers (Njeru, 2019). This shows that perceived service quality, or perceptions of service quality, can be the main determinant of *e-loyalty* among consumers. A consumer who is loyal to an e-commerce platform usually considers the service quality to be very good, so that they will not experience disappointment or, in other words, there will be a match between consumer expectations regarding the expected service quality and what they experience after making a purchase ( Devi & Yasa, 2021).

Perceived service quality has been proven to have a significant positive influence on *e-loyalty* in previous research (Njeru, 2019) and (Pham et al., 2020). This shows that when a consumer has the perception that the quality of e-commerce services is very good, they tend to become more loyal after feeling satisfaction from the service. However, other findings show different results, where perceived service quality does not have a significant influence on customer loyalty (Rico *et al.*, 2019), and (Mehta & Tariq, 2020). Apart from that, perceived service quality has also been found to have a direct effect on customer satisfaction (Boakye *et al.*, 2017), (Lee *et al.*, 2018); and (Clemes *et al.*, 2020) , however, other findings show that perceived service quality has no effect on customer satisfaction, (Hasan *et al.*, 2020) ; and (Hwang *et al.*, 2021).

For consumers, the decision to make repeat purchases is often influenced by their perception of the value they receive from products and services, which is called perceived value. This perceived value is formed from two aspects, namely the benefits received (including economic, social and relationship benefits) and the sacrifices they have to make (including price, time, energy, risk and comfort) (Devi & Yasa, 2021) . The existence of a significant positive influence of *perceived value* on *e-loyalty* has been proven in previous research (Marcos & Coelho, 2021) , but the findings are different

that *perceived value* cannot have a significant effect on *customer loyalty*. (Hasfar *et al.*, 2020) . Then there is also a direct influence of *perceived value* on *customer loyalty* (Slack *et al.*, 2021) ; (Marcos & Coelho, 2021) ; (Palazzo *et al.*, 2021) , and (Boakye *et al.*, 2017) , However, there is also research which finds that *perceived value* is unable to influence *customer satisfaction* (Hasan *et al.*, 2020) .

*Customer satisfaction* has a direct impact on the level of consumer loyalty, which means that consumers who are satisfied with an *e-commerce platform* are less likely to switch to another platform because they have formed loyalty to that platform. The influence of *customer satisfaction* on *e-loyalty* has been found in several previous studies (Marcos & Coelho, 2021); However, other findings show different results, where *customer satisfaction* has no influence on *e-loyalty* (Hasan *et al.*, 2020). There are also studies that do not find the effect of *customer satisfaction* on consumer loyalty behavior in the context of the aviation industry in Hong Kong (Lee *et al.*, 2018).

Another factor that can influence the level of consumer loyalty is *customer trust*, which refers to consumer trust in an *e-commerce platform* and the belief that the platform can be relied upon to fulfill its promises (Resika *et al.*, 2019). The positive influence of *customer trust* on *e-loyalty* has been proven by previous research (Giao *et al.*, 2020). However, there is also research which finds that *customer trust* does not have a significant influence on *e-loyalty* (Al-dweeri *et al.*, 2018).

The existence of a research *gap* regarding the factors of *perceived service quality*, *perceived value*, and *customer trust* in relation to *e-loyalty* encourages researchers to conduct further research in order to achieve more consistent results. In this context, *perceived service quality* and *perceived value* in influencing *e-loyalty* can be strengthened by *customer satisfaction* (Hwang *et al.*, 2021). Therefore, this research will use *customer satisfaction* as an intermediary variable that strengthens the influence of *perceived service quality* and *perceived value* on *e-loyalty*, and will also use *customer trust* as an intervening variable that strengthens the influence of *customer satisfaction* on *e-loyalty*.

## B. METHOD

Researchers determined that the research population was all consumers who purchased Wardah products online through the 5 largest e-commerce sites in Indonesia. Guidelines for determining sample size in multivariate data analysis, namely: the number of samples can be calculated from the number of parameters estimated, but there is a general rule that the sample size is between 5 to 10 times the number of parameters (Hair, Black, Babin, & Anderson, 2010). Based on the provisions above, in this study the sample was determined using the estimated number of parameters, namely  $5 \times 20$  (the number of variable indicators). Based on these provisions, this research determined a sample of 100 consumers. In this research, researchers have determined 100 consumers as samples with the following criteria: (1) consumers from all walks of life and female; (2) the consumer has purchased Wardah products via e-commerce (via the 5 largest e-commerce sites in Indonesia); (3) the consumer uses a smartphone to make purchases via e-commerce; and (4) the consumer has had the e-commerce application for more than 3 months.

**Table 1. Research Operational Variables and Definitions**

<b>Research Variable Name</b>	<b>Variable Definition</b>	<b>Variable Forming Indicators</b>
<b><i>e-Loyalty (Y)</i></b>	Form customers' willingness to continuously visit virtual websites and attitude behavior to make repeat purchases on the website and not move to other <i>e-commerce</i> (A. Manaf, Rachmawati, Witanto, & Nugroho, 2018) .	<ol style="list-style-type: none"> <li>1. <i>Referral od number</i></li> <li>2. <i>Decision to purchase again</i></li> <li>3. <i>Customer retention and defection rates</i></li> <li>4. <i>Decision to increase purchase size</i></li> <li>5. <i>Decision to purchase different products</i></li> </ol> Source: (Kevin & Anandya, 2021)
<b><i>Perceived Service Quality (X1)</i></b>	Consumers' perceptions of an <i>e-commerce product or service</i> can change with the hope that it will always exceed their expectations (Devi & Yasa, 2021) .	<ol style="list-style-type: none"> <li>1. <i>Reliability</i></li> <li>2. <i>Tangibles</i></li> <li>3. <i>Responsive</i></li> <li>4. <i>Assurance</i></li> <li>5. <i>Empathy</i></li> </ol> Source: (Kevin & Anandya, 2021)
<b><i>Perceived Value (X2)</i></b>	perceptions of value that companies must consider in developing products and services so that they match what customers expect (Novela & Ronaldy, 2018) .	<ol style="list-style-type: none"> <li>1. <i>Emotional value</i></li> <li>2. <i>Social values</i></li> <li>3. <i>Quality or performance value</i></li> <li>4. <i>Price or value of money</i></li> </ol> Source: (Kevin & Anandya, 2021)
<b><i>Customer Satisfaction (Z1)</i></b>	<i>Customer satisfaction</i> is the extent to which the perceived benefits of a product are in accordance with what consumers expect (Hasfar et al., 2020) .	<ol style="list-style-type: none"> <li>1. <i>Perceived enjoyment of a transaction</i></li> <li>2. <i>Perceived conformity of expectations</i></li> <li>3. <i>Perceived suitability of the service</i></li> </ol> Source: (Hendrawan & Agustini, 2021)
<b><i>Customer Trust (Z2)</i></b>	Customers' willingness to position themselves for the possibility of experiencing losses when carrying out shopping transactions via the internet based on the hope that the seller promises a transaction that will satisfy the customer (Wiwiek, 2020) .	<ol style="list-style-type: none"> <li>1. <i>Honesty</i></li> <li>2. <i>Benevolence</i></li> <li>3. <i>Competence</i></li> </ol> Source: (Hendrawan & Agustini, 2021)



The researcher determined the data analysis method in the form of path analysis with Partial Least Square (PLS). PLS is a type of component-based SEM with formative construct properties. The relationships formed in PLS are causal from indicators to constructs so that they can be used to predict the relationship between dependent variables that have many independent variables. Existing indicators must not correlate with each other so that the testing required is internal consistency or reliability (Mustafa & Wijaya, 2012). The steps in the Partial Least Square (PLS) analysis that the researcher carried out included: (1) Developing a theory-based model or inner model; and (2) Developing a path diagram. Then, an evaluation of the Measurement Model (Outer Model) is carried out which can be determined from the values of convergent validity, discriminant validity and reliability. After that, an evaluation of the structural model (Inner Model) was carried out to describe the relationships formed between latent variables in the research model. This structural model evaluation test can be seen from the R-Square value of the PLS output results. This R-Square value reflects the magnitude of influence or accuracy of the variable or indicator on the dependent variable. The R-Square value in PLS is also called Q-square predictive relevance, where the greater the value, the greater the influence and the better the research model formed.

## C. RESULTS AND DISCUSSION

### 1. Demographics

The general description of respondents is an analysis of the characteristics of respondents to find out who are the respondents in this research, including identification according to occupation, marital status, age, last education, *e-commerce* used, last time buying a product on *e-commerce*, and type of product used bought.

**Table 2. Respondent Identification**

Criteria	Information	Amount	Percentage
Work	Student	5	5.0%
	Student	23	23.0%
	Self-employed	9	9.0%
	Government employees	5	5.4%
	Teacher/Lecturer	14	14.0%
	Employee	27	27.0%
	Other	17	17.0%
Marital status	Married	29	29.0%
	Not married yet	71	71.0%
Age	17 to 20 Years	7	7.0%
	21 to 30 Years	84	84.0%
	31 to 40 Years	6	6.0%
	41 to 50 Years	1	1.0%
	Over 50 Years	2	2.0%

Education	Masters/S2	7	7.0%
	Bachelor degree	62	62.0%
	Diploma	1	1.0%
	High School/Equivalent	28	28.0%
	Middle School/Equivalent	1	1.0%
	other	1	1.0%
Types of <i>e-commerce</i>	Lazada	11	11.0%
	Shopee	71	71.0%
	Tokopedia	12	12.0%
	Other	6	6.0%
Last time shopping	1 month	31	31.0%
	2 months	14	14.0%
	More than 3 months	55	55.0%

This research was dominated by respondents who had professions as employees, namely 27.0% and students as many as 23%. The status of the majority of respondents is unmarried, 71%, aged 21 to 30 years, 84% and 62% are Bachelor/S1 graduates. The type of e-commerce that is most widely used for shopping is Shopee at 71% with the last time shopping for 55% more than 3 months.

## 2. Descriptive Data for Research Variables

The respondents' assessment with an average score of 77.41% shows that women who buy Wardah products, especially in *e-commerce* and *official* Wardah stores, have a perception of service quality in the good category. There were 44 respondents (44%) who had very good perceptions, 35 respondents (35%) had good perceptions and 11 respondents (11%) had quite good perceptions. In this study, it was also found that 5 respondents (5%) had bad and very bad perceptions.

The respondents' assessment with an average score of 77.30% shows that women who buy Wardah products, especially in *e-commerce* and *official* Wardah stores, have a value perception in the good category. There were 55 respondents (55%) who had very good perceptions, 23 respondents (23%) had good perceptions and 10 respondents (10%) had quite good perceptions. In this study, it was also found that 5 respondents (5%) had a bad perception and 7 respondents (7%) had a very bad perception. The respondents' assessment with an average value of 72.09% shows that women who buy Wardah products, especially in *e-commerce* and *official* Wardah stores, have high loyalty. There are 32 respondents (32%) who have very high and high loyalty, 25 respondents (25%) have quite high loyalty. In this research, it was also found that 8 respondents (8%) had low loyalty and 3 respondents (3%) had very low loyalty.

The respondents' assessment with an average score of 78.32% shows that women who buy Wardah products, especially in *e-commerce* and *official* Wardah stores, have a high level of satisfaction. There were 51 respondents (51%) who had very high satisfaction, 27 respondents (27%) had high loyalty and 16 respondents (16%) had sufficient satisfaction. In this study, it was also found that 4 respondents (4%) had low satisfaction and 2 respondents (2%) had very low satisfaction. The respondents' assessment with an average score of 81.36% shows that women who buy Wardah products, especially in *e-commerce* and *official* Wardah stores, have a high level of trust. There were 58 respondents (58%) who had very high trust, 28 respondents (28%) had high trust and 10 respondents (10%) had sufficient trust. In this study, it was also found that 3 respondents (3%) had low trust and 1 respondent (1%) had very low trust.

#### 4. Validity test

Validity was tested using the Smart PLS program involving an assessment of convergent validity and discriminant validity. The convergent validity of the measurement model, evaluated through the correlation between several item/component scores with the construct scores calculated by Smart PLS, is the main focus. An individual measure that reflects validity is considered high if its correlation exceeds 0.70 with the construct to be measured. However, in the context of initial research in developing measurement scales, loading values between 0.5 and 0.6 were considered adequate (Ghazali, 2011). Based on this validity test, the values obtained for each indicator for each variable are as follows:

**Table 3. Validity Test Results of Research Variables**

Variable	( Cross Loading Value )	Information
<b><i>Perceived Service Quality</i></b>		
X 1.1 ( <i>Reliability</i> )	0.873 _	> 0.7 (Valid)
X 1.2 ( <i>Tangibles</i> )	0.90 1	> 0.7 (Valid)
X 1.3 ( <i>Responsive</i> )	0.8 32	> 0.7 (Valid)
X 1.4 ( <i>Assurance</i> )	0.8 95	> 0.7 (Valid)
X 1.5 ( <i>Empathy</i> )	0.816 _	> 0.7 (Valid)
<b><i>Perceived Value</i></b>		
X2.1 ( <i>Emotional value</i> )	0.9 12	> 0.7 (Valid)
X2.2 ( <i>Social value</i> )	0.943 _	> 0.7 (Valid)
X2.3 ( <i>Quality or performance value</i> )	0.906 _	> 0.7 (Valid)
X2.4 ( <i>Price or value of money</i> )	0.9 07	> 0.7 (Valid)
<b><i>E-Loyalty</i></b>		
Y.1 ( <i>Number of referral</i> )	0.8 71	> 0.7 (Valid)
Y.2 ( <i>Decision to purchase again</i> )	0.893 _	> 0.7 (Valid)
Y.3 ( <i>Customer retention and defection rates</i> )	0.883	> 0.7 (Valid)
Y.4 ( <i>Decision to increase purchase size</i> )	0.8 76	> 0.7 (Valid)
Y.5 ( <i>Decision to purchase different product</i> )	0.903 _	> 0.7 (Valid)
<b><i>Customer Satisfaction</i></b>		



Z 1 .1 ( <i>Perceived enjoyment of a transaction</i> )	0.916 _	> 0.7 (Valid)
Z 1 .2 ( <i>Perceived conformity of expectations</i> )	0.922 _	> 0.7 (Valid)
Z 1 .3 ( <i>Perceived suitability of the service</i> )	0.966 _	> 0.7 (Valid)
<b>Customer Trust</b>		
Y.1 ( <i>Honesty</i> )	0.9 33	> 0.7 (Valid)
Y.2 ( <i>Benevolence</i> )	0.924 _	> 0.7 (Valid)
Y.3 ( <i>Competence</i> )	0.906 _	> 0.7 (Valid)

Source: processed primary data, 2023

Table 3, above, shows that the validity test obtained a *cross loading value* that was above or more than 0.7. From these results it can be concluded that valid indicators or items in this research mean that they are able to measure research variables and can reveal data from the variables studied accurately.

Discriminant validity is a method for assessing the extent to which data has validity. Discriminant validity was assessed by comparing the root mean variance extraction (AVE) with the correlations between latent constructs. The requirement is that the root value of AVE must exceed the correlation between latent constructs, so that it can be considered an indicator of reliability. The results of the comparison between the AVE root value and the correlation between latent constructs are as follows:

**Table 4. Average Variance Extracted Value**

Variable	Average Variance Extracted (AVE)	AVE Root	Information
<i>Perceived Service Quality</i> (X1)	0.747 _	0.8 64	> 0.50 (Reliable)
<i>Perceived Value</i> (X2)	0.841 _	0.917 _	> 0.50 (Reliable)
<i>E-Loyalty</i> (Y)	0.784	0.885 _	> 0.50 (Reliable)
<i>Customer Satisfaction</i> (Z 1)	0.874 _	0.935 _	> 0.50 (Reliable)
<i>Customer Trust</i> (Z2)	0.849 _	0.921 _	> 0.50 (Reliable)

Source: processed primary data, 202 3

Based on Table 4, it can be seen that the root of AVE is the *Perceived Service Quality* construct (X1) of 0.8 64; *Perceived Value* (X2) of 0.917 ; *E-Loyalty* ( Y ) of 0.885 , *Customer Satisfaction* (Z 1 ) of 0.935 and *Customer Trust* of 0.921 . In the results of this test, the AVE root value has exceeded the highest threshold, namely 0.50, thus indicating that the results meet the high reliability criteria because the AVE root value is greater.

## 5. Reliability Test (*Composite Reliability*)

Reliability testing is carried out by evaluating composite reliability, and if the composite reliability value between the construct and its indicators exceeds 0.7, then it can be considered good. The *composite reliability* results between the construct and the indicators are as follows:

**Table 5. Composite Reliability Values**

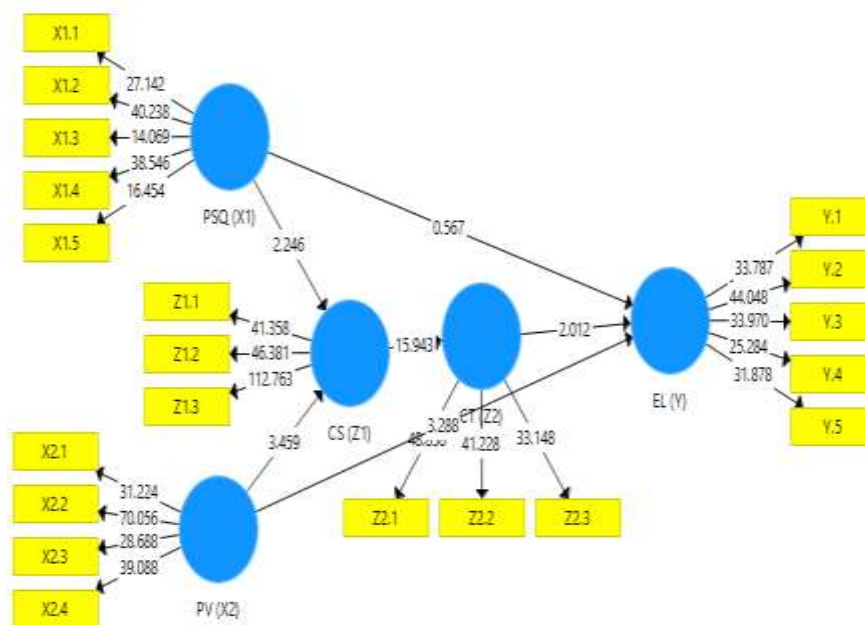
Variable	Composite Reliability	Information
<i>Perceived Service Quality (X1)</i>	0.9 36	>0.7 (Reliable)
<i>Perceived Value (X2)</i>	0.9 55	>0.7 (Reliable)
<i>E-Loyalty ( Y )</i>	0.9 48	>0.7 (Reliable)
<i>Customer Satisfaction (Z 1 )</i>	0.954 _	>0.7 (Reliable)
<i>Customer Trust ( Z2 )</i>	0.9 44	>0.7 (Reliable)

Source: processed primary data, 2023

Based on Table 5 , it can be seen that the *composite reliability value Perceived Service Quality (X1)* of 0.9 36; *Perceived Value (X2)* of 0.9 55; *E-Loyalty ( Y )* of 0.9 48; *Customer Satisfaction (Z 1 )* of 0.954 and *Customer Trust* of 0.9 44. All *composite reliability values* for each variable exceed 0.7, so it can be concluded that these results show high reliability. The instruments for all variables in this study were proven to be reliable for use as data collection tools.

## 6. Research Model

This research model is the result of data processing using Smart PLS. This model explains the relationship between each construct of the variables *perceived service quality (x1)*, *perceived value (x2)*; *e-loyalty (y)*, *customer satisfaction (z 1)*, *customer trust*. The appearance of the *full model* formed from the relationships between the constructs of this research variable is as follows:

**Figure 2. Full Research Model**

Source: PLS Output, 2023

## 7. Regression Equations

Based on Table 6 , the equation formed is as follows:

**Table 6. Regression Equation**

No	Variable	Original Sample estimate	Sample Mean
1	PSQ (X1)→ EL (Y)	0.172	0.165
2	PV (X2)→ EL (Y)	0.608	0.619
3	CS (Z 1)→ EL (Y)	0.213	0.211
4	CT (Z2)→ EL (Y)	0.260	0.259
5	CS (Z 1)→ CT (Z2)	0.819	0.819
6	PSQ (X1)→ CS (Z1)	0.359	0.342
7	PV (X2)→ CS (Z1)	0.515	0.533
8	PSQ (X1)→ CS (Z1) →EL (Y)	0.178	0.168
9	PV (X2)→ CS (Z 1) →EL (Y)	0.255	0.258
10	CS (Z 1)→ CT (Z2) →EL (Y)	0.213	0.211

Source: Data Processing Results, 2023

Equation 1 = influence of *perceived service quality* (X1) and *perceived value* (X2) on *customer satisfaction* (Z1)

$$Z_1: 0.359 X_1 + 0.515 X_2$$

- 1) Coefficient \_\_\_\_\_ increases by one point while the variable X2 remains constant, it will cause *customer satisfaction* to increase by 0.359.
- 2) Coefficient X2 (*perceived value*) = 0.515, which means that the variable is *perceived value* increases by one point while variable X1 remains constant, which will cause *customer satisfaction* to increase by 0.515.

Equation 2 = influence of *perceived service quality* (X1), *perceived value* (X2), *customer satisfaction* (Z1) , *customer trust* (Z2) on *e-loyalty*

$$Y = 0.172 X_1 + 0.608 X_2 + 0.213 Z_1 + 0.260 Z_2$$

- 1) Coefficient \_\_\_\_\_ increases by one point while the variables X2, Z1 and Z2 remain constant, which will cause *e-loyalty* to increase by 0.172.
- 2) Coefficient X 2 (*perceived value*) = 0.608, meaning that the variable is *perceived value* increases by one point while the variables X1, Z1 and Z2 remain constant, which will cause *e-loyalty* to increase by 0.608
- 3) Coefficient Z1 (*customer satisfaction*) = 0.213, which means that *the customer satisfaction* variable increases by one point while the *variables* X1
- 4) Coefficient Z2 (*customer trust*) = 0.260, which means that *the customer trust* variable increases by one point while the *variables* X1

## 8. Hypothesis Test

**Table 7. Hypothesis Testing ( Direct and Indirect Effects )**

No	Variable	Original Sample estimate	Sample Mean	Standard deviation	T- Statistics	P Values
1	PSQ (X1)→ EL (Y)	0.172	0.165	0.178	0.966	0.334
2	PV (X2)→ EL (Y)	0.608	0.619	0.158	3,838	0,000**
3	CS (Z1)→ EL (Y)	0.213	0.211	0.105	2,020	0.044*
4	CT (Z2)→ EL (Y)	0.260	0.259	0.105	2,020	0.045*
5	CS (Z1)→ CT (Z2)	0.819	0.819	0.051	15,943	0,000**
6	PSQ (X1)→ CS (Z1)	0.359	0.342	0.160	2,246	0.025*
7	PV (X2)→ CS (Z1)	0.515	0.533	0.149	3,459	0.001*
8	PSQ (X1)→ CS (Z1) →EL (Y)	0.178	0.168	0.077	2,301	0.022*
9	PV (X2)→ CS (Z1) →EL (Y)	0.255	0.258	0.108	2,362	0.019*
10	CS (Z1)→ CT (Z2) →EL (Y)	0.213	0.211	0.105	2,020	0.044*

Source: Data Processing Results, 2023

The results of this research found that there is no influence of *perceived service quality* on *e-loyalty* among consumers who purchase Wardah products online with a calculated t value of  $0.966 < t \text{ table } 1.661$  and a sig p value of  $0.334 > 0.05$ . This finding is in line with previous researchers that *perceived service quality* has no effect on *customer loyalty* (Rico *et al.* , 2019) , and (Mehta & Tariq, 2020) but differ from previous research (Njeru, 2019) and (Pham *et al.*, 2020) which found that *perceived service quality* has been proven to have a significant positive influence on *e -loyalty*.

The absence of influence of *perceived service quality* on *e-loyalty* in this research shows that for a Wardah consumer who makes purchases online, good service quality by *e-commerce* does not have an impact on consumer emotions which trigger a feeling of wanting to buy and make purchases through *e-commerce* the. Therefore, *e-commerce* needs to implement certain programs while always paying attention to service sectors in order to influence consumer loyalty. The absence of influence in this research also shows that consumer perceptions of quality service are not the most important factor in maintaining consumer loyalty in the long term.

The results of this research found that there is an influence of *perceived value* on *e-loyalty* among consumers who purchase Wardah products online with a calculated t value of  $03.838 > t \text{ table } 1.661$  and a sig p value of  $0.000 < 0.05$ . This means that the better the consumer's *perceived value*, the more their loyalty will increase, conversely, if the consumer's *perceived value* is worse, their loyalty will decrease. This finding is in line with previous researchers that the significant positive influence of *perceived value* on *e-loyalty* has been proven in previous research (Marcos & Coelho, 2021) .

There is an influence of *perceived value* on *e-loyalty* shows that *e-commerce* in delivering value to consumers is an effort to get new loyal consumers and maintain the loyalty of old consumers so that the frequency and duration of consumer purchases will increase and prevent consumers from switching to other *e-commerce*.

Perceived value is a construct that can be used to predict purchasing behavior . It is identified as one of the most important factors for organizational success because of its great influence on customer commitment, which in turn has a *positive* impact on consumer loyalty, especially in the aspects of WOM referrals and repurchase intentions. (Mahadin & Akroush, 2019) .

The results of this research found that there is an influence of *customer satisfaction* on *e-loyalty* among consumers who purchase Wardah products online with a calculated t value of  $2.020 > t \text{ table } 1.661$  and a sig p value of  $0.044 < 0.05$ . This means higher *customer satisfaction* the more loyalty will increase, conversely, if *customer satisfaction* is lower, loyalty will decrease. This finding is in line with previous researchers that there is an influence of *customer satisfaction* on *e-loyalty* (Marcos & Coelho, 2021) .

The influence of *customer satisfaction* on *e-loyalty* in this research shows that consumer satisfaction is one of the factors that can influence consumer loyalty. The sense of satisfaction felt by a consumer repeatedly causes that consumer to experience it too. Consumers will generally be reluctant to switch to another *e-commerce site* when they have demonstrated their loyalty to the satisfying experience they have received.

This research found that there is an influence of *customer trust* on *e-loyalty* among consumers who purchase Wardah products online with a calculated t value of  $2.020 > t \text{ table } 1.661$  and a sig p value of  $0.045 < 0.05$ . This means higher *customer trust* then *e-loyalty* will increase, conversely if *customer trust* becomes lower then *e-loyalty* will decrease further. This finding is in line with previous researchers' findings that there is a positive influence of *customer trust* on *e - loyalty* (Giao et al ., 2020) .

*Trust* can be interpreted as consumer confidence in *e-commerce*, where consumers have hopes regarding things promised by *e-commerce* that *e-commerce* can be relied on (Resika et al ., 2019) . The influence of *customer trust* on *e-loyalty* shows that if consumers trust the goods that *e-commerce* has, then customers will return to buy from *e-commerce*. In this way, a sense of consumer loyalty will arise towards *e-commerce* and they will not switch to buying from competing *e-commerce*.

The results of this research found that there is an influence of *customer satisfaction* on *customer trust* for consumers who purchase Wardah products online with a calculated t value of  $15.943 > t \text{ table } 1.661$  and a sig p value of  $0.000 < 0.05$ . This means the higher *customer trust* the more *customer satisfaction* will increase, conversely the lower *customer trust* will be then *customer satisfaction* will decrease further.

Customer satisfaction is the result of positive perceptions that consumers have regarding the products or services they use. When a customer believes that a service provider is reliable and trustworthy, then they are likely to be satisfied with the service. Conversely, if consumers have had negative experiences with a service provider in the past that make them doubt the provider's reliability, then they will likely feel dissatisfied. When the level of trust between consumers and companies is strong, both have a greater chance of achieving their goals. In addition, when consumers see positive value in the products or services they receive, their level of satisfaction will also increase.



The results of this research found that there is an influence of *perceived service quality* on *customer satisfaction* for consumers who purchase Wardah products online with a calculated t value of  $2.246 > t \text{ table } 1.661$  and a sig p value of  $0.025 < 0.05$ . This means the higher the *perceived service quality* the more *customer satisfaction* will increase, conversely the lower the *perceived service quality* then *customer satisfaction* will decrease further. This finding is in line with the results of previous researchers who found that *perceived service quality* also has a direct effect on *customer satisfaction* (Boakye *et al.*, 2017) , (Lee *et al.*, 2018) ; and (Clemes *et al.*, 2020) .

*Perceived value* is the overall cognitive response to a service experience, while satisfaction is an emotional response and according to cognition influences the causal sequence, the cognitive response precedes the emotional response (Marcos & Coelho, 2022) . Customer satisfaction and service quality are positively and directly related to customer loyalty as hypothesized. Every satisfied customer can become a loyal customer if they feel the service is quality (Ozkan, Suer, Keser, & Kocakoc, 2020) . The findings of a significant positive influence in this research indicate that consumer perceptions of the service quality of *e-commerce* are able to positively influence their level of satisfaction. Therefore, every *e-commerce company* needs to strive for quality services that meet consumer expectations or even exceed their expectations in order to form a positive perception in the minds of consumers.

The results of this research found that there was an influence *perceived value* on *customer satisfaction* who purchased Wardah products online with a calculated t value of  $3.459 > t \text{ table } 1.661$  and a sig p value of  $0.001 < 0.05$ . This means the higher the *perceived value* the more *customer satisfaction* will increase, conversely the lower the *perceived value* then *customer satisfaction* will decrease further.

The influence of *perceived value* on *customer satisfaction* in this research shows that *Customer satisfaction* is not only obtained from service quality, in such competitive competition it is also required to create customer value, value that is felt directly by consumers (*perceived value*). There is a perception that is formed from the perceived value when consumers pay a high price for services so they expect good service for them so it can be said that providing superior consumer value and also adjusting prices according to consumer expectations makes it possible to benefit the service provider and create customer satisfaction. (Novela & Ronaldy, 2018) .

The results of this research found that there is an indirect influence of *perceived service quality* on *e-loyalty* through *customer satisfaction* as a mediating variable for consumers who purchase Wardah products online with a calculated t value of  $2.301 > t \text{ table } 1.661$  and a sig p value of  $0.022 < 0.05$ . This shows that consumer satisfaction is able to strengthen or the indirect influence between perceptions of service quality and loyalty is higher than the direct influence.

Customer satisfaction is a consumer assessment after making a purchase, where the consumer feels something is beyond his expectations or exceeds his expectations. For this reason, every *e-commercer* must maintain consumer satisfaction. Customer satisfaction can function as a link between service quality and customer loyalty. This means that before consumers decide to become loyal customers, they will



assess whether the quality of service they receive meets their expectations. High satisfaction will encourage consumers to become loyal and loyal customers.

The results of this research found that there is an indirect influence of *perceived value* on *e-loyalty* through *customer satisfaction* as a mediating variable for consumers who purchase Wardah products online with a calculated  $t$  value of  $2.362 > t$  table  $1.661$  and a sig  $p$  value of  $0.019 < 0.05$ . This indicates that consumer satisfaction can act as an intermediary factor in the relationship between perceived value and customer loyalty. In other words, before consumers decide to become loyal customers, they will evaluate whether they have a positive perception of the value provided by e-commerce, and this will encourage the formation of customer loyalty.

Consumers who have positive value perceptions resulting from good experiences when using *e-commerce* and purchasing products online will give consumers satisfaction, and have a great opportunity for consumers to have the intention and interest in repurchasing. The existence of consumer satisfaction will determine customer loyalty. Therefore, it is important for companies to have good marketing activities because it will be fundamental to customer value, which can influence customer satisfaction and intention to use the same *e-commerce* in subsequent product purchases.

The results of this research found that there is an indirect influence of *customer satisfaction* on *e-loyalty* through *customer trust* as a mediating variable in consumers who purchase Wardah products online with a calculated  $t$  value of  $2.020 > t$  table  $1.661$  and a sig  $p$  value of  $0.044 < 0.05$ . This shows that high consumer trust will be able to mediate the influence of consumer satisfaction on loyalty.

Consumer trust can function as an intermediary factor in the relationship between consumer satisfaction and their loyalty. This means that before consumers decide to become loyal customers, they will evaluate whether the purchasing experience meets their expectations and whether their satisfaction is high, and this will encourage the formation of consumer loyalty. The importance of consumer trust is one aspect that is really needed by *e-commerce* in maintaining and building relationships with consumers. Building trust is not an easy thing, because this is related to consumer confidence that *e-commerce* can be trusted to fulfill the promises made to consumers. The higher the level of consumer trust in a product or service, the greater the possibility of forming customer loyalty.

#### D. CONCLUSION

Based on the results of the research and discussions that have been carried out, conclusions can be drawn, namely (1) there is no influence of perceived service quality on e-loyalty among consumers who purchase Wardah products online; (2) There is an influence of perceived value on e-loyalty among consumers who purchase Wardah products online; (3) There is an influence of customer satisfaction on e-loyalty among consumers who purchase Wardah products online; (4) There is an influence of customer trust on e-loyalty among consumers who purchase Wardah products online; (5) There is an influence of customer satisfaction on customer trust in consumers who

purchase Wardah products online; (6) There is an influence of perceived service quality on customer satisfaction among consumers who purchase Wardah products online; (7) There is an influence of perceived value on customer satisfaction among consumers who purchase Wardah products online; (8) There is an indirect influence of perceived service quality on e-loyalty through customer satisfaction as a mediating variable on consumers who purchase Wardah products online; (9) There is an indirect influence of perceived value on e-loyalty through customer satisfaction as a mediating variable for consumers who purchase Wardah products online; (10) There is an indirect influence of customer satisfaction on e-loyalty through customer trust as a mediating variable for consumers who purchase Wardah products online.

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