

The Effect of E-Service Quality on E-Satisfaction and E-Loyalty with Perceived Value as a Mediating Variable: A Case Study of Millennial Women Consumers of Wardah Products on Shopee

Arindah Rahmadani Prasafitri^{1*}, Hajan Hidayat^{2*}

Batam State Polytechnic
Applied Business Administration Study Program
Parkway Street, Batam Center, Batam 29461, Indonesia
Email: rahmadaniarindah134@gmail.com
Email: hajan@polibatam.ac.id

Abstract

The purpose of this study is to determine the effect of e-service quality on e-satisfaction and e-loyalty with perceived value as a mediating variable on Wardah products for millennial women. The population of this study was Batam millennial women involving 100 respondents and using quantitative methods. Sample withdrawal using purposive sampling and analysis using PLS Structural Equation Modeling (SEM) approach. Furthermore, Smartpls version 4 for windows was used to process and analyze the data. The output of this study states that e-service quality has a positive influence on e-satisfaction, e-loyalty and perceived value in Wardah products on millennial women, in addition, the perceived value variable can mediate the influence of e-service quality on e-satisfaction, as well as mediate the influence of e-service quality on e-loyalty.

Keyword : E-Service Quality, E-Satisfaction, E-Loyalty, Perceived Value

1. Introduction

1.1 Background

Today's rapid technological advances are changing people's behavior, especially when it comes to shopping. This change in behavior is felt by a shift where people were previously enthusiastic about shopping in offline stores, but now more and more people are switching to shopping through online applications (Ardianti & Widiartanto, 2019). Easy internet access, time efficiency and innovative services encourage an increase in online shopping transactions which are increasingly in demand by consumers, especially Indonesians (Farasyi & Iswati, 2021). In addition, the advantage of competitive product prices compared to offline stores is also a major driving factor in the popularity of e-commerce (Hardiyanto et al., 2021).

An online platform is a place where people can shop for their daily needs online. Shopee, as one of the largest e-commerce platforms in Indonesia has managed to attract the attention of consumers with

various excellent features, such as fast delivery, various payment methods, and the presence of an official store that guarantees product quality, affordable prices and finally the quality of services provided.

TABLE 1
Most Visited E-Commerce Throughout 2023

Rank	Marketplace	Number of Visitor	
		Quartal 1	Quartal 2
1	Shopee	158 Million	167 Million
2	Tokopedia	117 Million	107,2 Million
3	Lazada	83,2 Million	74,5 Million
4	Blibli	25,4 Million	27,1 Million
5	Bukalapak	18,1 Million	15,6 Million

Source: Aditya (2023)

Based on the table, Shopee is one of the people's favorite platform that have the most of visitors during 2023. Nowadays, skincare is very popular especially for women. Skincare products are the top choice because consumers can compare prices, read reviews, and choose products that suit their needs through e-

commerce.

In online shopping, e-service quality plays an crucial part on increasing e-satisfaction and e-loyalty. E-service quality reflects the degree that an online shopping site able in order to satisfy customer through fast, secure and reliable services (Ulum & Mukhtar, 2018).

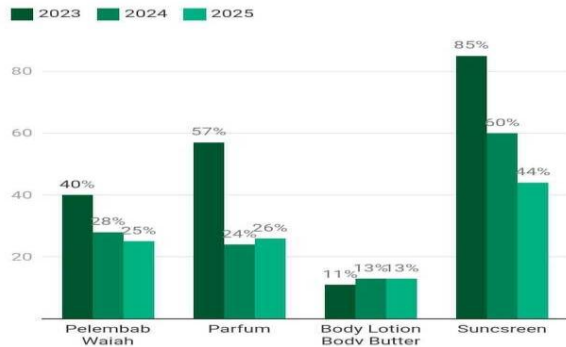


Figure 1. Increased Sales of Care and Beauty Products

Source: Emanuella, (2025)

Indonesia's beauty industry is experiencing significant growth, along with women's awareness of the importance of self-care and appearance. Products such as sunscreen, moisturizers, and serums are the most in-demand categories and dominate the e-commerce market. Sunscreen products alone recorded a significant growth of 60% by 2024 and is predicted to increase again by 44% by 2025. Activities such as flash sale campaigns (10.10 and 11.11) helped drive the contribution of this category more than 60% to total transactions. Generation Z and Millennials, especially women, are the most active and influential groups in online beauty product shopping activities. Millennials are known as technology users who are selective, careful, and prioritize quality (Rahayu, 2018). Batam City is dominated by the millennial generation. The number of Gen Z (born in 1995-2010) is 27.12% and Gen Millennial (born in 1981-1996) is 30.44% of the total population of Batam City. Based on data from (BPS) of Batam City, the population of millennial women in Batam City is 222,710 out of a total of 638,206 women in Batam City.

TABLE 2

Differences in Online Shopping Patterns of Beauty Products between Generation Z and Millennials

Category	Generation Z	Generation Milenial
Years	1995 - 2010	1981 - 1996
Transaction	48% transact less than Rp 150,000 for beauty products	28% are willing to transact more than Rp 300,000 for beauty products
Purchase Considerations	Focus on the latest trends, attractive packaging, and innovation	Prioritize quality, product benefits, and alignment with personal value
Reasons for Online Shopping	Interested in big discounts, viral trends, and social influence	Seeking convenience, time efficiency, and professional service, promotions

Attitude toward Price	More price-sensitive	More flexible toward price if the product is considered valuable and high-quality
Response to service	Tends to complain more quickly about poor servicebut also switches quickly	More loyal when service and product quality are consistent

Source: Trapulina, (2024)

Based on differences in shopping patterns, millennials are considered more relevant to the direction and objectives of this study. Millennials tend to consider aspects such as product quality, service, and added value more seriously than simply following trends. With these characteristics, millennial women are a potential segment that prioritizes comfort and consistency of service in online shopping activities.

Wardah is one of the local brands dominating the beauty product market, prioritizing quality and obtaining halal certification from the Indonesian Ulema Council (MUI). Wardah provides a range of goods, including skincare, makeup, perfume, and hair products to meet consumer needs (Naseri et al., 2021). Wardah's official store on Shopee has 191,100 followers, with the most popular products being Wardah UV Shield Sunscreen Gel and Wardah Lightening Powder. In 2020, Wardah's e-commerce sales ranked first among cosmetic brands, with total sales reaching 7.37 million. From July 1, 2021, to July 31, 2022, sales revenue on Shopee, Tokopedia, and BliBli amounted to Rp 380 billion, Rp 50 billion, and Rp 25 billion, respectively (Rukmana, 2025).

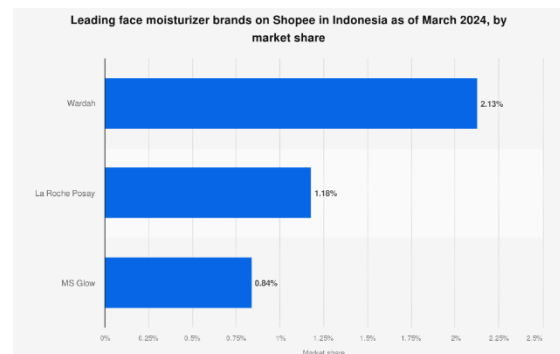


Figure 2. Leading Face Moisturizer Brand on Shopee in Indonesia as of March 2024, by Market Share

Source: Statista, (2024)

Based on this data, Wardah is the skincare category's most well-known face moisturizer brand on Shopee Indonesia, holding a 2.13% market share. And Wardah ranks 7th as the best-selling facial moisturizer brand on Shopee Indonesia, with sales of US\$609,550, competing with international brands such as L'Oréal Paris, Olay, and MS Glow. Meanwhile, according to data from the Kompas Market Insight Dashboard reported by CNBC Indonesia, Wardah ranks 3rd in beauty product sales value for 2024 (Rp20.31 billion) and 4th based on the number of products sold (456,781 units). In the first quarter of 2025, Wardah achieved a

market share of 2.97%, ranking second in the skincare and beauty category.

Although Wardah product sales on Shopee are relatively high, there are still many negative reviews from consumers regarding the quality of service and products received. Some consumers complain about discrepancies between the products received and the descriptions on the platform, damaged packaging, incomplete product quantities, and even allegations of counterfeit products despite purchases being made at the official Shopee store. These reviews indicate that high sales volumes do not always go hand in hand with adequate customer satisfaction levels. Field findings also reinforce this, based on interviews with Wardah Beauty Advisors (BA) at the official Moni Cosmetics store in Batam, it was found that women aged 28 and above, who are typically housewives, visit the store to try products or consult, but choose to transact via Shopee due to factors such as price, convenience, and promotions. However, some of them return to the store because they are disappointed with their online shopping experience, as the products received do not meet their expectations. This phenomenon reflects a mismatch between consumer expectations and actual experiences, underscoring the importance of improving service quality and product information clarity on e-commerce platforms.

The service at Wardah's official store on Shopee is not yet fully optimized. Complaints such as products that do not match the description, damaged packaging, and suspected counterfeit goods indicate a discrepancy between consumer expectations and the reality those who rendered services. This shows that e-service quality is a crucial component that shapes satisfaction and loyalty. E-satisfaction is an affective response that arises after consumers evaluate their online shopping experience. Satisfaction is achieved when services meet or even exceed expectations (Prasetyo & Purbawati, 2017). In this context, discrepancies between products and their descriptions lead to dissatisfaction, potentially resulting in consumers not making repeat purchases due to a disappointing shopping experience, indicating low satisfaction levels.

Good service quality also enhances customer loyalty toward the product or platform (Salmah et al., 2021). Some consumer reviews express concerns and lack of trust in Wardah's service on Shopee due to damaged packaging. This indicates that loyalty is not solely determined by product quality but is significantly influenced by service consistency and the overall shopping experience. When services fail to provide a sense of security and trust, customer loyalty will decline. Additionally, the aspect of perceived value, or the value perceived by consumers, is also an important factor. When service quality does not align with the time and cost sacrifices made by consumers, their perceived value also decreases, potentially weakening loyalty.

This study builds on previous research (Zubair, 2019) by adding perceived value as a mediating variable to understand how e-service quality influences e-satisfaction and e-loyalty among millennial women in Batam City the background on purchasing Wardah products on Shopee. Putri & Verinita (2019) emphasize that perceived value plays a crucial part in forming customers' opinions about the quality of the services, that outcomes satisfaction and loyalty.

According to this explanation, the researchers were interested in taking the title "The Effect of E-Service Quality on E-Satisfaction and E-Loyalty with Perceived Value as a Mediating Variable: A Case Study of Millennial Women Consumers of Wardah Products on Shopee".

1.2 Problem Specification

Considering the background mentioned, there are several problem formulations namely: First, how does e-service quality affect e-satisfaction with Wardah products on Shopee among millennial women. Second, how does e-service quality affect e-loyalty in purchasing Wardah products on Shopee among millennial women. Third, how does e-service quality influence perceived value in the purchase of Wardah products on Shopee among millennial women. Fourth, how does e-service quality impact e-satisfaction with perceived value as a mediated variable. Fifth, how does e-service quality influence e-loyalty with perceived value as a mediated variable.

2. Theory Review

2.1 E-Service Quality

E-service quality is consumer's review of how well they receive online services when shopping on e-commerce platforms. From searching for products, making payments, to receiving the items, all processes are evaluated. Thus, e-service quality is an assess of client comfort and satisfaction when shopping online (Kristiani, 2021). According Zeithaml (in Tobagus, 2018), e-service quality has four main dimensions, namely:

1. Efficiency is the ease with which the application can be accessed and used.
2. Fulfillment is satisfaction with administrative guarantees, product stock, application functionality, and timely delivery of goods.
3. System availability is the basic functionality of a site.
4. Privacy, which ensures that individual data and information or records dengan jaminan administrasi, stok produk, fungsionalitas aplikasi, dan pengiriman barang tepat waktu.

2.2 E-Satisfaction

According to Kotler & Keller (in Berliana & Sanaji, 2022), e-satisfaction is an individual's assessment of

whether the provision of assistance or goods has met expectations. Customers will feel disappointed if the product display or specialized cooperative falls short of expectations. Conversely, customers will feel satisfied and happy with products that function well. According to Rintasari & Farida (2020), quality e-service and trust are key drivers of electronic satisfaction. According to Tobagus (2018) there are five ways to measure e-satisfaction::

1. Convenience refers to comfort, peace of mind, and productivity, which are significant investments in utilizing the application, thereby making it simpler for clients to find the goods and offers they need.
2. Merchandising involves explaining the availability of goods and services on the website, which can enhance customer loyalty.
3. Site design is the fulfillment of simple user needs and the discovery of great applications, including good arrival points, simple requests, and quick reviews.
4. Security is how well users can rely on the application to provide satisfactory transaction security.
5. Serviceability is how much users trust the application to ensure transaction security.

2.3 E-Loyalty

According to Anderson & Srinivasan (2003), the main component of business profitability is customer loyalty. E-loyalty is a client positive attitude toward an online store that encourages loyalty. E-loyalty is the willingness and plan of a customer to make additional purchases from a supplier in the future. E-loyalty describes customers' willingness to speak positively about a particular company and recommend it to others (Parasuraman et al., 2005). As stated by Hur et al., (2011), e-loyalty can be assessed utilizing These are four indications:

1. Cognitive, which is preferring a particular application or service over others.
2. Affective, which is a positive attitude arising from desire.
3. Conative, which is the consumer's willingness to revisit the company's website.
4. Action, which is the highest level of loyalty.

2.4 Perceived Value

Ciputra & Prasetya (2020) define perceived value as the value consumers feel for various positive impacts received and how those values compare to the total costs incurred, including purchase price and other costs associated with the purchasing process. According to Sweeney and Soutar (dalam Hariyanto, 2021) perceived value can be assessed using the following two indicators:

1. Monetary Value, which refers to the monetary value of a product or service.
2. Functional Value, which is divided into two parts: first, price/monetary value is the positive impact received from goods that can reduce expenses in the short term and sustainably. Second, performance/quality is the positive impact received according the perceived quality and predicted performance of the items.

Framework

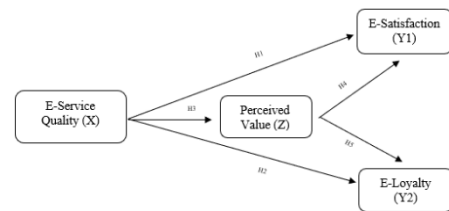


Figure 3 Conceptual Framework

Source: Research developed (2025)

3. Hypothesis

The most significant factor influencing e-satisfaction is the consumer's assessment of service quality. In the results of a study published by Purnamasari & Suryandari (2023), it is stated that e-service quality has a positive effect on e-satisfaction. Therefore, listed below hypothesis can be formulated:

H1: E-service quality has a positive effect on e-satisfaction with Wardah products on Shopee among millennial women

E-service quality is one of the elements that influence customer loyalty. In the studies by Ashiq & Hussain (2024) and Zubair (2019), it was shown that electronic service quality can have a positive contribution to online loyalty. Therefore, list bellow hypothesis can be formulated:

H2: E-service quality has a positive effect on e-loyalty toward Wardah products on Shopee among millennial women

One dimension of perceived value is functional value, which refers to the benefits obtained from a product in terms of cost reduction. Good service creates value for Shopee users, and that value supports the success of an online platform. The results of a study published by Sakinah (2021) demonstrate that e-service quality indicate a supportive and significant effect on perceived value. Therefore, the following hypothesis can be formulated:

H3: E-service quality has a positive effect on the perceived value of Wardah products on Shopee among millennial women.

Studies carried out by Husin (2023) states that perceived value has a positive effect in mediating e-service quality on e-satisfaction. Therefore, the

following hypothesis can be formulated:

H4: Perceived value can mediate the influence of e-service quality on e-satisfaction for Wardah products on Shopee among millennial women

Research conducted by Abdella & Indradewa (2024) states that perceived value has a positive effect in mediating e-service quality on e-loyalty. Therefore, the following hypothesis can be formulated:

H5: Perceived value can mediate the influence of e-service quality on e-loyalty for Wardah products on Shopee among millennial women

4. Research Methodology

This A quantitative methodology was utilized in this study with a Google Form questionnaires distributed to test the contribution of e-service quality on e-satisfaction and e-loyalty, with perceived value as a mediating variable among millennial women consumers in Batam who have purchased Wardah products on Shopee. The sample consists of 100 respondents, selected using purposive sampling, with criteria of women aged 28–43 years who have made at least two purchases of Wardah products on Shopee. To ensure representativeness, the research subjects were proportionally distributed across the 12 subdistricts of Batam City. The distribution of respondents was determined based on data from Dinas Kependudukan dan Pencatatan Sipil Kota Batam (the proportion of women in each district ÷ the total number of women) x the number of respondents, as follows: Belakang Padang ($10,518 \div 638,206 \times 100 = 1.65$ (2 respondents), Bulang ($6,002 \div 638,206 \times 100 = 0.94$ (1 respondent), Galang ($9,515 \div 638,206 \times 100 = 1.49$ (1 respondent), Sungai Beduk ($49,692 \div 638,206 \times 100 = 7.79$ (8 respondents), Nongsa ($47,986 \div 638,206 \times 100 = 7.52$ (8 respondents), Sekupang ($89,607 \div 638,206 \times 100 = 14.04$ (14 respondents), Lubuk Baja ($45,977 \div 638,206 \times 100 = 7.20$ (7 respondents), Batu Ampar ($30,678 \div 638,206 \times 100 = 4.81$ (5 respondents), Batam City ($103,164 \div 638,206 \times 100 = 16.17$ (16 respondents), Batu Aji ($71,149 \div 638,206 \times 100 = 11.15$ (11 respondents), Sagulung ($109,645 \div 638,206 \times 100 = 17.18$ (17 respondents), Bengkong ($64,273 \div 638,206 \times 100 = 10.07$ (10 respondents).

The research instrument used was a 7 point likert scale questionnaire, spanning of strongly disagree (1) to strongly agree (7) (Wibisono & Khasanah 2022). The variables utilized in this investigation were e-service quality (X), e-satisfaction (Y1), e-loyalty (Y2), and perceived value (Z). Both descriptive and inferential analyses were performed on the data using the PLS-SEM technique using the assistance of SmartPLS 4 software, through validity, reliability, model evaluation, and hypothesis testing with t-statistics and p-values ($\alpha = 0.05$). The indicators in this study are as follows.

TABLE 3
OPERATIONAL VARIABLE

Variable	Indicator	Items	Source
E-Service Quality (X)	Efficiency	<ol style="list-style-type: none"> 1. Shopee is easy to use to find Wardah products. 2. Shopee loads pages quickly. 3. Shopee allows me to complete the purchase transaction of Wardah products quickly. 4. Wardah product information on Shopee is well organized. 	(Zubair 2019)
E-service quality is a consumer perception of the quality of services obtained from the marketplace showing an assessment of the overall services received.	System availability	<ol style="list-style-type: none"> 1. Shopee can always be accessed at any time when I shop for Wardah propduk. 2. Shopee is easy to access. 3. Shopee rarely experiences interruptions or errors when I shop for Wardah products. 4. The Shopee page remains responsive and stable after entering Wardah product order information. 	
	Fulfillment	<ol style="list-style-type: none"> 1. Shopee provides promos as promised (such as discounts or cashback). 2. Shopee always maintains the security and convenience of my transactions. 3. Shopee provides the option to return/return the item according to the applicable regulations. 4. Shopee is honest with the products offered. 	
	Privacy	<ol style="list-style-type: none"> 1. Shopee protects about my online shopping behavior . 2. Can trust Shopee to take care of my personal information. 3. Shopee protects my payment data (e.g. credit/debit card, bank account). 4. Shopee always maintains the security and convenience of my transactions. 	
E-Satisfaction (Y1)	Convenience	<ol style="list-style-type: none"> 1. I am pleased with the ease of finding and buying Wardah products on Shopee. 	(Tobagus, 2018), (Zubair 2019)

Variable	Indicator	Items	Source
		<ol style="list-style-type: none"> I enjoy shopping for Wardah products on Shopee. I am pleased with the experience of shopping Wardah products while using Shopee 	
E-satisfaction is the emotional reaction of consumers after shopping online. Which is influenced by how the consumer experience from viewing the product to receiving the product, compared to previous expectations.	Merchandise	<ol style="list-style-type: none"> I am pleased with the number of offers (promotions) and services available on Shopee. I am pleased with the availability of Wardah products on Shopee. I feel that Shopee's service meets the needs in shopping for Wardah products. 	
	Site Design	<ol style="list-style-type: none"> I am satisfied with all the features provided on Shopee I am satisfied with the Shopee guide that makes it easier for me to find Wardah products I'm satisfied with the Shopee page view 	
	Security	<ol style="list-style-type: none"> I am satisfied that Shopee protects my privacy well (e.g. shopping information, personal data). I feel that transactions are safe when shopping for Wardah products on Shopee Shopee provides a sense of security in storing my payment data 	
	Serviceability	<ol style="list-style-type: none"> I am satisfied with the complaint service provided by Shopee for Wardah products I am pleased with the return policy of Wardah funds and products on Shopee Overall, I am very satisfied with Shopee's service when shopping for Wardah products 	
E-Loyalty (Y2)	Cognitive	<ol style="list-style-type: none"> I prefer Shopee to shop for Wardah products I feel that Shopee is the best platform for shopping for Wardah products Shopee provides a better shopping experience compared to other platforms 	(Hurt et al., 2011), (Zubair 2019), (Vallen & Antonio, 2022)
E-loyalty is a commitment	Affective	<ol style="list-style-type: none"> I feel happy every time I shop for Wardah products on 	

Variable	Indicator	Items	Source
Perceived Value (Z)	Conative	<ol style="list-style-type: none"> I intend to continue using Shopee to buy Wardah products Shopee will be my top choice for shopping for Wardah products I am committed to choosing Shopee as a shopping platform for Wardah products 	
	Action	<ol style="list-style-type: none"> I would recommend to others to buy Wardah products through Shopee I will continue to buy Wardah products through Shopee I always prioritize promotions or offers from Shopee for Wardah products 	
	Monetary Value	<ol style="list-style-type: none"> The price of Wardah products on Shopee is comparable to the quality of service I received I feel that the price of Wardah products on Shopee is quite affordable Shopee doesn't charge any additional fees other than the shipping cost and price of the product I ordered 	Sweeney dan Soutar (in Hariyanto, 2021)
	Functional Value	<ol style="list-style-type: none"> The Shopee application has a stable system and all the functions are running well Shopee is easy to access anywhere and anytime Shopee provides prices that are commensurate with the quality of service obtained 	
Perceived value or perceived value is perception consumers about the usability of the product based on what is received and what is Given			

5. Result and Discussion

5.1 Descriptive Statistics

Provide a general overview of the dissemination of data that has been carried out in the field.

TABLE 4
DESCRIPTIVE STATISTICS

	Mean	Median	Min	Max	Std. deviation
E-Service Quality (X)					
X.1	6,14	7	1	7	1,364
X.2	5,66	6	1	7	1,538
X.3	5,87	6	1	7	1,316
X.4	6	6	1	7	1,442
X.5	5,8	6	1	7	1,456
X.6	6,15	6	1	7	1,352
X.7	5,10	5	1	7	1,841
X.8	5,35	6	1	7	1,492
X.9	5,79	6	1	7	1,388
X.10	5,87	6	1	7	1,494
X.11	5,95	6	1	7	1,424
X.12	5,75	6	1	7	1,506
X.13	5,75	6	1	7	1,590
X.14	5,67	6	1	7	1,443
X.15	5,66	6	1	7	1,321
X.16	5,88	6	1	7	1,380
Average	5,77	6,00	1	7	1,459
E-Satisfaction (Y1)					
Y1.1	6,04	7	1	7	1,568
Y1.2	5,54	6	1	7	1,915
Y1.3	5,63	6	1	7	1,566
Y1.4	5,70	6	1	7	1,718
Y1.5	5,76	6	1	7	1,588
Y1.6	5,63	6	1	7	1,842
Y1.7	5,67	6	1	7	1,537
Y1.8	5,68	6	1	7	1,661
Y1.9	5,75	6	1	7	1,621
Y1.10	5,61	6	1	7	1,754
Y1.11	5,70	6	1	7	1,526
Y1.12	5,51	6	1	7	1,664
Y1.13	5,64	6	1	7	1,797
Y1.14	5,78	6	1	7	1,566
Y1.15	5,70	6	1	7	1,493
Average	5,69	6,07	1	7	1,654
E-Loyalty (Y2)					
Y2.1	5,07	6	1	7	2,233
Y2.2	4,72	6	1	7	2,316
Y2.3	4,84	6	1	7	2,369
Y2.4	5,01	6	1	7	2,216
Y2.5	4,83	6	1	7	2,196
Y2.6	4,84	7	1	7	2,208
Y2.7	4,89	6	1	7	2,227
Y2.8	4,66	6	1	7	2,233
Y2.9	4,92	6	1	7	2,415
Y2.10	4,86	6	1	7	2,388
Y2.11	4,94	6	1	7	2,199
Average	4,87	6,09	1	7	2,273
Perceived Value (Z)					
Z.1	5,51	6	1	7	1,706
Z.2	5,52	6	1	7	1,622
Z.3	5,21	6	1	7	1,951
Z.4	5,34	6	1	7	1,722
Z.5	5,87	6	1	7	1,514
Z.6	5,84	6	1	7	1,302
Average	5,55	6,00	1	7	1,636

Source: SmartPls Data Processing (2025)

According to Table 4, namely: The e-service quality variable (X1) have the highest average score of 6.14 and the lowest of 5.1, with a median of 6, indicating that respondents rate the quality of service as good. The standard deviation of 1.459 is lower than the average, indicating that respondents' perceptions

are consistent with the variation in responses. This show that the standard of online services is rated quite highly. The e-satisfaction variable (Y1) possesses the greatest average value of 6.04 and the lowest of 5.51, with a median of 6,07, indicating that respondents' satisfaction levels are quite good. The standard deviation of 1.654 is lower than the average, indicating no data deviation. This shows that respondents are satisfied with purchasing Wardah products on Shopee. The e-loyalty variable (Y2) possesses the greatest average value of 5.07 and the lowest of 4.66, with a median of 6,09, indicating that respondents' loyalty levels are quite good. The standard deviation of 2.273 is lower than the average, indicating that there are no significant data deviations. This shows that respondents remain loyal to purchasing Wardah products on Shopee. The perceived value variable (Z) has the highest average value of 5.87 and the lowest of 5.21, with a median of 6, indicating that respondents derive significant benefits or value from purchasing Wardah products on Shopee. The standard deviation of 1.636 is lower than the average, indicating no significant deviation in perceived value.

5.2 Respondent Characteristics

The presentation of data in Table 5 explains who the respondents are to dig into the background and better understand or see the reasons why the resource persons chose or answered the questionnaire. The characteristics of this study consist of age, work, last level of education, expenditure to buy Wardah products, and the category of Wardah products used by the respondents.

TABLE 5
RESPONDENT CHARACTERISTICS

Character	Category	Amount	Precentage
Age	28 - 31	36	36%
	32 - 35	35	35%
	36 - 39	23	23%
	40 - 43	6	6%
Total		100	100%
Place of Residence (Subdistrict)	Belakang Padang	2	2%
	Batu Ampar	5	5%
	Sekupang	14	14%
	Nongsa	8	8%
	Bulang	1	1%
	Lubuk Baja	7	7%
	Sungai Beduk	8	8%
	Galang	1	1%
	Bengkong	10	10%
	Batam Kota	16	16%
Sagulung	17	17%	
Batu Aji	11	11%	
Total		100	100%

Work	University Student	2	2%
	Enterpreneurs	27	27%
	PNS	31	31%
	Private sector employees	44	44%
	Theacers	1	1%
Total		100	100%
Final Education	High school/vocational school students	17	17%
	DI/D2/D3	38	38%
	S1 / S2 / S3	45	45%
Total		100	100%
Expenditure on buying Wardah products per month	< Rp 500.000	52	52%
	Rp 500.000 - 1.000.000	46	46%
	Rp 1.000.000 - 2.000.000	2	2%
Total		100	100%
Wardah Products used	Skincare	43	43%
	Makeup	84	88%
	Haircare	10	8%
	Bodycare	14	14%

Source: SmartPls Data Processing (2025)

5.3 Outer Model

The outer model is the first intervene testing the validity and a study's reliability indicator.

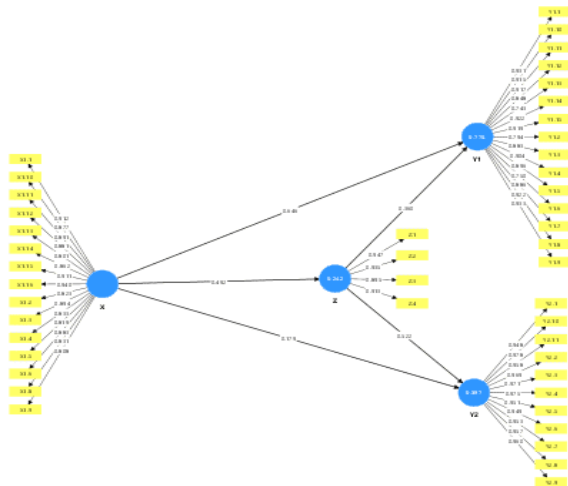


Figure 4 SmartPls Structural Model

Source: SmartPls Data Processing (2025)

Convergent Validity Test

The convergence testing uses outer loading values. Outer loading is the connection among item/factor scores and construct scores. If factor loading value is > 0.7 , the indicator is considered to have achieved convergent validity. The rule of thumb used is outer loading > 0.7 and average variance extracted (AVE) > 0.5 (Chin, 1998).

TABLE 6
OUTER LOADING

	X	Y1	Y2	Z	Significance $>0,7$
X.1	0.912				Valid
X.10	0.877				Valid
X.11	0.891				Valid
X.12	0.881				Valid
X.13	0.801				Valid
X.14	0.862				Valid
X.15	0.911				Valid
X.16	0.940				Valid
X.2	0.823				Valid
X.3	0.894				Valid
X.4	0.833				Valid
X.5	0.819				Valid
X.6	0.883				Valid
X.8	0.831				Valid
X.9	0.808				Valid
Y1.1		0.931			Valid
Y1.10		0.915			Valid
Y1.11		0.917			Valid
Y1.12		0.848			Valid
Y1.13		0.743			Valid
Y1.14		0.922			Valid
Y1.15		0.919			Valid
Y1.2		0.794			Valid
Y1.3		0.883			Valid
Y1.4		0.904			Valid
Y1.5		0.896			Valid
Y1.6		0.750			Valid
Y1.7		0.886			Valid
Y1.8		0.922			Valid
Y1.9		0.933			Valid
Y2.1			0.948		Valid
Y2.10			0.978		Valid
Y2.11			0.958		Valid
Y2.2			0.969		Valid
Y2.3			0.971		Valid
Y2.4			0.975		Valid
Y2.5			0.951		Valid
Y2.6			0.949		Valid
Y2.7			0.953		Valid
Y2.8			0.957		Valid
Y2.9			0.960		Valid
Z.1				0.947	Valid
Z.2				0.935	Valid
Z.3				0.895	Valid
Z.4				0.913	Valid

Source: SmartPls Data Processing (2025)

Based on Table 6, show that each indicator in each variable this study satisfies the convergence standard with a factor loading value > 0.7 , so the data can be said to be valid and meet the convergence criteria.

TABLE 7
AVERAGE VARIANCE EXTRACTED

Variable	Average Variance Extracted (AVE)	Criteria	Note
E-Service Quality (X)	0.749	$> 0,5$	Valid
E-Satisfaction (Y1)	0.774	$> 0,5$	Valid
E-Loyalty (Y2)	0.923	$> 0,5$	Valid
Perceived Value (Z)	0.852	$> 0,5$	Valid

Source: SmartPls Data Processing (2025)

Based on Table 7, this indicates that each variable obtained an AVE value >0.5 . Thus, all variables are considered valid and meet the criteria used to assess convergent validity.

Discriminant Validity Test

Using cross loading and the Fornell-Larcker criterion, the discriminant validity test. If the indicator value for a particular variable is higher than others, it is considered discriminant validity (Chin, 1998).

TABLE 8
FORNELL-LARCKER CRITERION

Construc	E-Service Quality	E-Satisfaction	E-Loyalty	Perceived Value
E-Service Quality (X)	0.865			
E-Satisfaction (Y1)	0.823	0.880		
E-Loyalty (Y2)	0.436	0.535	0.961	
Perceived Value (Z)	0.492	0.678	0.610	0.923

Source: SmartPls Data Processing (2025)

Based on Table 8, all AVE diagonal values are greater than the other construct values. Thus, all variables are considered valid and meet the convergent validity requirements.

TABLE 9
CROSS LOADING

	X	Y1	Y2	Z
X1.1	0.912	0.797	0.429	0.469
X1.10	0.877	0.754	0.401	0.509
X1.11	0.891	0.728	0.349	0.438
X1.12	0.881	0.683	0.335	0.354
X1.13	0.801	0.636	0.271	0.348
X1.14	0.862	0.716	0.404	0.470
X1.15	0.911	0.733	0.438	0.520
X1.16	0.940	0.758	0.415	0.433
X1.2	0.823	0.625	0.319	0.324
X1.3	0.894	0.786	0.421	0.490
X1.4	0.833	0.700	0.356	0.424
X1.5	0.819	0.660	0.404	0.401
X1.6	0.883	0.763	0.436	0.388
X1.8	0.831	0.599	0.271	0.340
X1.9	0.808	0.688	0.350	0.408
Y1.1	0.793	0.931	0.509	0.634
Y1.10	0.766	0.915	0.411	0.637
Y1.11	0.765	0.917	0.445	0.552
Y1.12	0.677	0.848	0.297	0.471
Y1.13	0.589	0.743	0.406	0.571
Y1.14	0.760	0.922	0.502	0.609
Y1.15	0.782	0.919	0.461	0.566
Y1.2	0.625	0.794	0.462	0.617
Y1.3	0.690	0.883	0.577	0.723
Y1.4	0.804	0.904	0.472	0.636
Y1.5	0.724	0.896	0.555	0.678
Y1.6	0.623	0.750	0.501	0.448
Y1.7	0.683	0.886	0.438	0.576
Y1.8	0.758	0.922	0.485	0.588
Y1.9	0.776	0.933	0.523	0.603
Y2.1	0.412	0.500	0.948	0.588
Y2.10	0.367	0.488	0.978	0.588

	X	Y1	Y2	Z
Y2.11	0.453	0.538	0.958	0.596
Y2.2	0.451	0.557	0.969	0.611
Y2.3	0.434	0.519	0.971	0.583
Y2.4	0.433	0.518	0.975	0.583
Y2.5	0.425	0.500	0.951	0.553
Y2.6	0.463	0.537	0.949	0.606
Y2.7	0.408	0.517	0.953	0.581
Y2.8	0.406	0.518	0.957	0.584
Y2.9	0.346	0.454	0.960	0.569
Z.1	0.386	0.603	0.625	0.947
Z.2	0.508	0.678	0.542	0.935
Z.3	0.405	0.574	0.452	0.895
Z.4	0.504	0.637	0.619	0.913

Source: SmartPls Data Processing (2025)

Based on Table 9, the cross-loading of every item's in its construction is greater compared to construction value of other variables. Thus, the indicators meet the requirements for discriminant validity.

Reliability Test

Reliability tests using composite reliability >0.7 and Cronbach's alpha >0.6 are considered reliable (Hair et al., 2021).

TABLE 10
COMPOSITE RELIABILITY

Variable	Composite Reliability	Criteria	Note
E-Service Quality (X)	0.978	$> 0,7$	Reliable
E-Satisfaction (Y1)	0.981	$> 0,7$	Reliable
E-Loyalty (Y2)	0.992	$> 0,7$	Reliable
Perceived Value (Z)	0.958	$> 0,7$	Reliable

Source: SmartPls Olahdata (2025)

Based on the composite reliability measurements in Table 10, all variables have values > 0.7 . Therefore, it is possible to concluded that the research variables are reliable.

TABLE 11
CRONBACH ALPHA

Variable	Cronbach's alpha	Criteria	Note
E-Service Quality (X)	0.976	$> 0,6$	Reliable
E-Satisfaction (Y1)	0.979	$> 0,6$	Reliable
E-Loyalty (Y2)	0.992	$> 0,6$	Reliable
Perceived Value (Z)	0.942	$> 0,6$	Reliable

Source: SmartPls Data Processing (2025)

According to Table 11, the Cronbach's alpha measurement results for all variables have values >0.6 . Consequently, it is possible to assumed that the research variables are reliable.

5.4 Inner Model

According to Ghozali (in Saputro, 2023), internal model testing shows the connection that exists between latent dependent and independent variables. The R-

squared coefficient for dependent variables and the path coefficient value for independent variables are used in this testing. The value of the t-statistic for every path is then used to determine significance. A good influence of endogenous factors on endogenous variables is indicated by an R-squared value of 0.67 or higher according to the structural model's endogenous latent variables. The result is classified as medium if it falls between 0.33 and 0.67. The result is classified as weak if it is less than 0.19. (Chin, 1998).

TABLE 12
R-SQUARE

Variable	R-square	R-square adjusted	Note
E-Satisfaction (Y1)	0.776	0.771	Good
E-Loyalty (Y2)	0.397	0.384	Moderate
Perceived Value (Z)	0.242	0.234	Weak to Moderate

Source: SmartPls Data Processing (2025)

Based on Table 12, in the calculations performed using SmartPLS, the e-satisfaction (Y1) variable have an R-Square value of 0.776, that's falls into the good category, meaning that 77.6% of consumer satisfaction variability will be clarified by e-service quality, whilst the remainder is impacted by external circumstances the scope of this study model. E-loyalty (Y2) has an R-Square value of 0.397, classified as moderate, indicating that e-service quality can explain 39.7% of customer loyalty variation, while the remainder is impacted by external circumstances the scope of this research model. And the perception value (Z) of 0.242, which is in the weak category, shows that 24.2% of electronic service quality still contributes significantly to shaping customer opinions regarding the worth of Wardah products on the Shopee platform. The remainder is impacted by external circumstances outside the scope of this study.

Hypothesis Test

In hypothesis testing, the analysis value is the P-Value acquired via acquisition PLS output used to test importance of the factors' correlation at the commonly used influence level, i.e., α 0.05. The testing was conducted using a t-test with the assistance of the bootstrapping technique (Hair et al., 2021).

1. The P-value is considered significant if < 0.05
2. The P-value is considered insignificant if > 0.05

The critical path coefficient value indicated by the t-value in this study is 1.96 (significance level of 5%). Path coefficient measurements among model may used to assess the significant and power of correlations and to test hypotheses. Path coefficient values differ from 1 to +1. The nearer the path coefficient value is to +1, the power the correlation among the two model. If the correlation is close to -1, then the correlation is negative (Hair et al., 2021). The path coefficient results can found in table 13 below:

TABLE 13
HYPOTHESIS OF PATH COEFFICIENTS

	Original sample (O)	Standard deviation (STDEV)	T statistics (O/STDEV)	P value	Note
E-Service Quality -> E-Satisfaction (Y1)	0.646	0.126	5.113	0.000	Valid
E-Service Quality -> E-Loyalty (Y2)	0.179	0.087	2.066	0.039	Valid
E-Service Quality -> Perceived Value (Z)	0.492	0.102	4.807	0.000	Valid
E-Service Quality -> Perceived Value -> E-Satisfaction (Y1)	0.177	0.074	2.396	0.017	Valid
E-Service Quality -> Perceived Value -> E-Loyalty (Y2)	0.257	0.071	3.632	0.000	Valid

Source: SmartPls Data Processing (2025)

Based on Table 13, we can conclude that:

1. The first hypothesis test found that electronic service quality positively impacts e-satisfaction. In light of findings of the internal model evaluation, electronic service quality has a t-statistic value of 5.113, it is more than 1.96, so the hypothesis is accepted. The hypothesis test shows that e-service quality has a positive effect on e-satisfaction with a path coefficient value of 0.646, which is close to +1, and is substantial when the P-value is less than 0.05, namely 0.000.
2. The second hypothesis test found that e-service quality has a positive impacts e-loyalty. Based on the findings of the internal model evaluation, e-service quality yields a t-statistic value of 2.066 (> 1.96), confirming that this hypothesis is accepted. The hypothesis test results indicate that electronic service quality has a positive effect with a path coefficient value of 0.179, approaching +1, and is substantial when the P-value is no more than 0.05, specifically 0.039, for electronic loyalty.
3. The third hypothesis test found that e-service quality has a positive impact on perceived value. Based on the findings of the internal model evaluation, electronic service quality has a t-statistic value of 4.807, it is more than 1.96, indicating that the hypothesis is approved. The hypothesis test results show that electronic service quality has a positive influence with a path coefficient value of 0.492, approaching +1, and is significant with a P-value less than 0.05, specifically 0.000, on perceived value.
4. The fourth hypothesis test shows that perceived value mediates the impact of e-service quality on

electronic satisfaction with Wardah products. Considering the outcomes of the internal model evaluation, perceived value yields a t-statistical score of 2.396, it is more than 1.96, indicating that this hypothesis is approved. The outcomes of the hypothesis test suggest that perceived value has a positive influence with a path coefficient value of 0.177, close to +1, and is significant with a p-value less than 0.05, namely 0.017, in mediating e-service quality to e-satisfaction for Wardah products.

5. The fifth hypothesis test shows that perceived value mediating the impact of e-service quality on e-loyalty for Wardah products. According to findings of the internal model evaluation, perceived value yields a t-statistical score of 3.632, it is more than 1.96, indicating that the hypothesis is approved. The hypothesis test outcomes found that perceived value has a positive influence with a path coefficient value of 0.257, approaching +1, and is significant with a P-value less than 0.05, namely 0.000, in mediating electronic service quality to electronic satisfaction for Wardah products.

5.5 Discussion

H1: E-service quality has a positive effect on e-satisfaction with Wardah products on Shopee among millennial women.

The first hypothesis is that e-service quality has a positive effect on e-satisfaction. The initial sample value of 0.646 indicates a positive orientation in the correlation among the two variables. The statistical value of 5.113, exceeding the threshold of 1.96, emphasizes that the observed relationship is significant. As a result, the first hypothesis is supported, confirming that e-service quality has played a crucial part in shaping satisfaction with Wardah products on Shopee, especially among millennial women in Batam City. This is further backed by earlier studies, namely Purnamasari & Suryandari, (2023), which explains that better e-service quality will increase e-satisfaction.

H2: E-service quality has a positive effect on e-loyalty toward Wardah products on Shopee among millennial women.

The second hypothesis examines the relationship among e-service quality and e-loyalty. With an initial sample value of 0.179, the two variables are positively related. The t-statistical score of 2.066 is above the threshold of 1.96, while the p-value of 0.000 is less than 0.039. As a result, the second hypothesis is confirmed, stating that e-service quality can impact customer loyalty. It can be concluded that e-service quality contribution to customer loyalty toward Wardah products on Shopee, particularly among millennial women in Batam City. This found is backed by earlier studies by Ashiq & Hussain (2024) dan Zubair (2019) which shows that e-service quality can positively impact e-loyalty.

H3: E-service quality has a positive effect on the

perceived value of Wardah products on Shopee among millennial women.

The third hypothesis examines the correlation among e-service quality and perceived value. With a sample value of 0.492, this indicates the influence of both factors. The t-statistical score of 4.807 is above the threshold of 1.96, while the p-value of 0.000 is less than 0.05. Therefore, the third hypothesis is confirmed: e-service quality positively influences consumers' perceived value of Wardah products on Shopee, particularly among millennial women in Batam City. This finding is supported by Sakinah (2021), which states that e-service quality positively and significantly influences perceived value. Therefore, it can be concluded that a good service experience can shape consumers' perceptions of the benefits and value of a product in the context of beauty products in e-commerce.

H4: Perceived value can mediate the influence of e-service quality on e-satisfaction for Wardah products on Shopee among millennial women.

The fourth hypothesis investigates the influence of perceived value on e-service quality and its implications for e-satisfaction. The sample value is 0.177, indicating a certain impact. The t-statistical score of 2.396 it is more than 1.96, and the p-value of 0.017 is less than 0.05. Therefore, the fourth hypothesis is accepted, implying that perceived value can mediate the influence of e-service quality on e-satisfaction. This means that good electronic service quality contributes to an increase in customers' perceived value, which ultimately enhances customer satisfaction with Wardah products on Shopee, particularly among millennial women in Batam City. This finding aligns with Husin (2023), who claims that perceived value mediates the correlation among e-service quality and e-satisfaction. Therefore, this hypothesis is validated that a good service quality experience can enhance perceived value, thereby making consumers feel satisfied.

H5: Perceived value can mediate the influence of e-service quality on e-loyalty toward Wardah products on Shopee among millennial women.

The fifth hypothesis investigates perceived value in e-service quality and its implications for e-loyalty. The sample value is 0.257, the t-statistical score is 3.632, it is more than 1.96, and the p-value is 0.000, less than 0.05. Consequently, the fifth hypothesis is accepted, indicating that perceived value can mediate the effect of e-service quality on customer loyalty. These results align with previous research, as Abdella & Indradewa (2024) stated that perceived value has a positive effect in mediating the correlation among e-service quality and e-loyalty. In regards to beauty in e-commerce, optimal e-service quality from Shopee can enhance the perceived value held by customers, thereby fostering e-loyalty toward a Wardah product, particularly among millennial women in Batam City.

6. Conclusion and Suggestion

6.1 Conclusion

The conclusions drawn from the research findings of “The Effect of E-Service Quality on E-Satisfaction and E-Loyalty with Perceived Value as a Mediating Variable: A Case Study of Millennial Women Consumers of Wardah Products at Shopee” are as follows:

1. E-service quality has a positive impact on e-satisfaction with Wardah products on Shopee among millennial women in Batam City.
2. E-service quality has a positive impact on e-loyalty toward Wardah products on Shopee among millennial women in Batam City.
3. E-service quality has a positive impact on the perceived value of Wardah products on Shopee among millennial women in Batam City.
4. Perceived value can mediate e-service quality on e-satisfaction for Wardah products on Shopee among millennial women in Batam City.
5. Perceived value can mediate the correlation among e-service quality and e-loyalty for Wardah products on Shopee among millennial women in Batam City.

6.2 Suggestion

This study is one of the few that examines the part of perceived value as a mediator within the framework of beauty products in e-commerce. The study was conducted in 12 districts of Batam City and was limited to millennial women, so there are limitations in generalizing the research results. Therefore, further studies are recommended to use a larger sample size in terms of both demographics and geography and to consider changes in context. Additionally, variables such as customer reviews and e-trust could be added to expand the research.

References

- Abdella, R. A., & Inradewa, R. (2024). Customer satisfaction in e-commerce : The role of service quality , product quality , and e-servicescape influences via perceived value. *Journal of Management and Digital Business*, 4(2), 368–382.
- Aditya, I. M. (2023). *E-Commerce Paling Banyak Dikunjungi Sepanjang 2023*. Retrieved from <https://goodstats.id/infographic/e-commerce-paling-banyak-dikunjungi-sepanjang-2023-aVFg5>
- Anderson, R. E., & Srinivasan, S. S. (2003). E-Satisfaction and E-Loyalty: A Contingency Framework. *Psychology and Marketing*, 20(2), 123–138. <https://doi.org/10.1002/mar.10063>
- Ardianti, A. N., & Widiartanto. (2019). Pengaruh Online Customer Review dan Online Customer Rating terhadap Keputusan Pembelian melalui Marketplace Shopee. (Studi pada Mahasiswa Aktif FISIP Undip). *Jurnal Ilmu Administrasi Bisnis*, 8(2), 1–11.
- Ashiq, R., & Hussain, A. (2024). Exploring the effects of e-service quality and e-trust on consumers' e-satisfaction and e-loyalty: insights from online shoppers in Pakistan. *Journal of Electronic Business & Digital Economics*, 3(2), 117–141. <https://doi.org/10.1108/jebde-09-2023-0019>
- Berliana, C., & Sanaji. (2022). Pengaruh E-Service Quality, E-Trust, Dan Commitment Terhadap E-Loyalty Dengan E_Satisfaction Sebagai Variabel Mediasi. *Management Studies and Entrepreneurship Journal*, 3(4), 2397–2413. <http://journal.yrpiiku.com/index.php/msej>
- Chin, W. W. (1998). The Partial Least Squares Approach to Structural Equation Modeling. In G. A. Marcoulides (Ed.), *Modern Methods For Business Research* (Issue January 1998, pp. 295-336.). Laurence Erlbaum Associates Publisher.
- Ciputra, W., & Prasetya, W. (2020). Analisis Pengaruh E-Service Quality, Perceived Value Terhadap Customer Satisfaction, Trust, dan Customer Behavioral Intention (Survei pada Customer Toko Online www.blibli.com). *COMMENTATE: Journal of Communication Management*, 1(2), 109. <https://doi.org/10.37535/103001220201>
- Dinas Kependudukan dan Pencatatan Sipil Kota Batam, B. (2024). *Statistik Jumlah Penduduk Menurut Jenis Kelamin Dan Kecamatan Di Kota Batam Tahun 2024 Semester I*. Satu Data Kota Batam. Retrieved from <https://satudata.batam.go.id/satu/detail/statistik-jumlah-anak-berjenis-kelamin-laki-laki-dan-perempuan-yang-memiliki-kia-menurut-kecamatan-di-kota-batam-tahun-2024-semester-1-dj7dgs>

- Emanuella. (2025). *Penjualan Produk Kecantikan Tembus 30 T, Ini Trik Gaet Pembeli*. Retrieved from <https://www.cnbcindonesia.com/research/20250108111952-128-601595/penjualan-produk-kecantikan-tembus-rp-30-t-ini-trik-gaet-pembeli>
- Farasyi, F. Al, & Iswati, H. (2021). Pengaruh Media Sosial, E-Lifestyle Dan Budaya Digital Terhadap Perilaku Konsumtif. *Jurnal Syntax Idea*, 75(17), 399–405.
- Hair, J. F., Hult, G. T. M., Ringle, C. M., Sarstedt, M., Danks, N. P., & Ray, S. (2021). *Partial least squares structural equation modeling (PLS-SEM) using R: A workbook*. Springer Nature Switzerland. https://doi.org/10.1007/978-3-030-80519-7_7
- Hardiyanto, N., Indra Gunawan, A., Rafdinal, W., & Afif, N. C. (2021). Analisis Perilaku Belanja Online Selama Masa Pandemi COVID-19. *Jurnal Riset Bisnis Dan Investasi*, 6(3), 120–130. <https://doi.org/10.35313/jrbi.v6i3.2246>
- Hariyanto, A. (2021). Pengaruh Online Promotion Dan E-Service Quality Terhadap Post Purchase Behaviour Pada Platform Layanan Pesan Antar Makanan Go-Food: Efek Mediasi Perceived Value. *Jurnal Strategi Pemasaran*, 8, 1–11.
- Hur, Y., Ko, Y. J., & Valacich, J. (2011). A Structural model of the relationships between sport website quality, e-satisfaction, and e-loyalty. *Journal of Sport Management*, 25(5), 458–473. <https://doi.org/10.1123/jsm.25.5.458>
- Husin. (2023). Role of Perceived Value on Customer Loyalty Through Optimization of Service Quality and Innovation. *Jurnal Aplikasi Manajemen*, 21(2), 308–318.
- Kotler, P., & Keller, K. L. (2016). Marketing Management. In *Journal of Marketing* (Vol. 37, Issue 1). <https://doi.org/10.2307/1250781>
- Kristiani, P. (2021). Pengaruh E-Service Quality, Perceived E-Word of Mouth, Dan E-Satisfaction Terhadap Purchase Intention Produk Kecantikan DiWebsite Beauty E-Commerce. In *Jurnal Manajemen Bisnis Dan Kewirausahaan* (Vol. 6, Issue 5, pp. 536–541).
- Naseri, R. N. N., Esa, M. M. E., Abas, N., Ahmad, N. Z. A., Azis, R. A., & Nordin, M. N. Bin. (2021). An Overview Of Online Purchase Intention Of Halal Cosmetic Product: A Perspective From Malaysia. *Turkish Journal of Computer and Mathematics Education (TURCOMAT)*, 12(10), 7674–7681. <https://doi.org/10.17762/turcomat.v12i10.5679>
- Parasuraman, A., Zeithaml, V. A., & Malhotra, A. (2005). E-S-QUAL a multiple-item scale for assessing electronic service quality. *Journal of Service Research*, 7(3), 213–233. <https://doi.org/10.1177/1094670504271156>
- Prasetyo, H. D., & Purbawati, D. (2017). Pengaruh E-Service Quality dan E-Security Seals terhadap E-Satisfaction melalui Keputusan Pembelian Konsumen E-Commerce (Studi Kasus pada Konsumen Lazada Indonesia). *Jurnal Ilmu Administrasi Bisnis*, 1, 164–173.
- Purnamasari, I., & Suryandari, R. T. (2023). Effect of E-Service Quality on E-Repurchase Intention in Indonesia Online Shopping: E-Satisfaction and E-Trust as Mediation Variables. *European Journal of Business and Management Research*, 8(1), 155–161. <https://doi.org/10.24018/ejbmr.2023.8.1.1766>
- Putri, A. E., & Verinita, V. (2019). Analisis Pengaruh E-Service Quality, E-Recovery Service Quality Terhadap Loyalitas Melalui Perceived Value Sebagai Variabel Mediasi (Studi Pada Pelanggan Shopee Di Kota Padang). *Jurnal Ilmiah Mahasiswa Ekonomi Manajemen*, 4(4), 733–752. <http://jim.unsyiah.ac.id/ekm%0Ahttps://jim.usk.ac.id/EKM/article/view/12741>
- Rahayu, N. (2018). *Survei Ini Sebut 55 Persen Wanita Pilih Belanja Kosmetik Secara Online*. Retrieved from <https://wartaekonomi.co.id/read174626/survei-ini-sebut-55-persen-wanita-pilih-belanja-kosmetik-secara-online>

- Rintasari, D., & Farida, N. (2020). Pengaruh E-Trust dan E-Service Quality terhadap E-Loyalty melalui E-Satisfaction (Studi pada Pengguna Situs E-Commerce C2C Shopee di Kabupaten Sleman). *Jurnal Ilmu Administrasi Bisnis*, 9(4), 539–547.
<https://doi.org/10.14710/jiab.2020.28803>
- Rukmana, I. D. (2025). *Data Penjualan Wardah 1 Tahun Terakhir*. Retrieved from <https://compas.co.id/article/data-penjualan-wardah-1-tahun-terakhir/>
- Sakinah. (2021). The influence of e-service quality on customer's e-loyalty: e-perceived value and e-satisfaction as mediating variable. *Marketing Management*, 2(1), 27–35.
<https://doi.org/10.24036/jkmp.v1i1>
- Salmah, N. N. A., Suhada, S., & Damayanti, R. (2021). Peran E-satisfaction dalam Memediasi Pengaruh E-service Quality Terhadap E-loyalty Pelanggan pada Toko Online Cilufio. *Ekonomis: Journal of Economics and Business*, 5(1), 132.
<https://doi.org/10.33087/ekonomis.v5i1.191>
- Saputro, A. W. (2023). Pengaruh E-Service Quality Terhadap E-loyalty dengan Brand Image dan E-Satisfaction Sebagai Variabel Mediasi. *Jurnal Ilmiah Manajemen Kesatuan*, 11(2), 203–212.
<https://doi.org/10.37641/jimkes.v11i2.1750>
- Statista. (2024). *Leading face moisturizer brands on Shopee in Indonesia as of March 2024, by market share*. Statista. Retrieved from <https://www.statista.com/statistics/1466008/indonesia-shopee-leading-face-moisturizer-brands-by-market-share/>
- Tobagus, A. (2018). Pengaruh E-Service Quality Terhadap E-Satisfaction Pada Pengguna di Situs Tokopedia. *AGORA*, 6(1), 1–10.
- Trapulina, E. (2024). *Perbedaan Gen Z dan Milenial Ketika Belanja Produk Kcantikan*. Just Kids For Kids Magazine. Retrieved from <https://justforkids.okezone.com/read/perbedaan-gen-z-dan-milenial-ketika-belanja-produk-kcantikan-moms-termasuk-yang-mana-81ouH1>
- Ulum, F., & Muchtar, R. (2018). Pengaruh E-Service Quality Terhadap E-Customer Satisfaction Website Start-Up Kaosyay. *Jurnal Tekno Kompak*, 12(2), 68.
<https://doi.org/10.33365/jtk.v12i2.156>
- Vallen, P. U., & Antonio, F. (2022). Antecedents of E-Loyalty and its Impact to Online Repurchase Intention. *Jurnal Manajemen Bisnis*, 9(1), 183–195.
<https://doi.org/10.33096/jmb.v9i1.77>
- Wibisono, H. D., & Khasanah, I. (2022). Analisis Pengaruh Brand Experience Terhadap Brand Loyalty Dengan Brand Resonance dan Brand Reputation Sebagai Variabel Intervening. *Jurnal Studi Manajemen Organisasi*, 17(2), 27–38.
<https://doi.org/10.14710/jsmo.v17i2.39177>
- Zubair, M. A. K. and S. S. (2019). An assessment of e-service quality, e-satisfaction and e-loyalty Case of online shopping in Pakistan. *South Asian Journal of Business Studies*, 8(3), 283–302.