

## **The Effect of Self-Service Technology Service Quality on Customer Loyalty and Behavioral Intention**

**Yokie Radnan<sup>1</sup> and Velencia Christin<sup>2\*</sup>**

**<sup>1,2</sup>Department of Management, Pelita Harapan University**

**[01011190211@student.uph.edu](mailto:01011190211@student.uph.edu)**

### *Abstract*

*The purpose of this research is to know the effect of self-service technology service quality on customer loyalty, behavioral intention, and customer satisfaction, the effect of self-service technology service quality on customer loyalty and behavioral intention mediated by customer satisfaction, and the effect of self-service technology service quality on customer loyalty mediated by brand image. This study uses a quantitative approach using an online questionnaire data collection method (Google Form) and will be disseminated via social media (Line, WhatsApp, and Instagram). The sampling technique used in this study is non-probability sampling – purposive sampling with 218 respondents. The results of the research conducted prove that all hypotheses in the study are supported, including service quality self-service technology has a positive effect on customer loyalty, service quality self-service technology has a positive effect on behavioral intention, service quality self-service technology has a positive effect on customer satisfaction, customer satisfaction mediates the relationship between service quality self-service technology on customer loyalty positively, customer satisfaction mediates the relationship service quality self-service technology positively on behavioral intention, brand image mediates the relationship service quality self-service technology positively on customer loyalty.*

*Keywords: self-service technology service quality, customer loyalty, behavioral intention, customer satisfaction*

---

JEL : M31

DOI : 10.24002/kinerja.v27i1.6642

Received : 12/08/2022      Reviewed: 01/11/2023      Final Version: 03/08/2023

---

### **1. INTRODUCTION**

The world evolves and changes continuously to keep up with the times, which is entering industry 4.0 or the digital revolution. Technological developments and advances have moved to all parts of human life, and this has been utilized in various fields, especially economics. The influence of technology on a business is enormous for a business to survive in an increasingly tight market (Rosyidah & Andjarwati, 2021). Advances in Information and Communication Technology have changed the

interaction between service companies and customers by introducing self-service technology (SST), which can provide convenient services for customers in achieving better productivity and customer satisfaction (Shahid Iqbal et al., 2018). Self-service technology refers to interface technology through which customers access services independently (Narteh, 2015). Service providers adopt self-service technology to be able to provide better service quality and be able to attract more customers (Boonitt, 2015).

The higher quality that e-service companies provide customers can lead to customer satisfaction and has a long-term impact, namely customer loyalty (Irwansyah & Mappadeceng, 2018). The level of success of a business is customer satisfaction, where there is a feeling of satisfaction that can make customers plan to have the intention to repurchase. And when customers are dissatisfied, they will cause complaints or ignore them (Fauzi & Mandala, 2019). Indications for measuring customer satisfaction can be seen through the behavioral intentions of customers willing to provide recommendations and revisit (Wahab et al., 2018). The service quality provided by the company has an effect or influence on the company's brand image. In digital services, companies must create a positive brand image in customers' eyes (Kurniawan & Chandra, 2020). Various self-service technology (Shahid Iqbal et al., 2018), that as online shopping, ATMs, internet/mobile banking, electronic kiosks, self-service kiosks (digital photo kiosks, information kiosks, cinema ticket purchase kiosks, self-fuelling).

In addition, the world is facing the Covid-19 pandemic, which impacts changes in people's behavior due to the many procedures that limit people's activities in Indonesia. This situation has made many traditional trading sectors switch to online trading, leading to online business trends (Nurlela, 2021). And can be seen from the number of e-commerce users (online shopping) in Indonesia, which Statista estimates will reach 221 million users in 2025 (Statista, 2020b). Judging from a survey conducted by Statista (Statista, 2020a) regarding the impact of the Covid-19 pandemic on consumer behavior in Indonesia shows that 55% chose "I purchased more online." For this reason, in running a business during a pandemic, every company must pay attention to several things so that businesses can survive, namely fast response to external pressures in maintaining their company, reformulating business strategies during a pandemic, updating norms and culture in organizations related to social distancing and strength in technology that can support business operations (Nurhidayati & Anam, 2019, pp. 4–5).

E-commerce is a potential target market that has caused much e-commerce to emerge in Indonesia. This creates intense competition in getting and retaining customers (Rahman et al., 2022). However, Tokopedia ranks first on the most clicked e-commerce site, reaching 157 million clicks, followed by Shopee with 132 million clicks (Statista, 2022). A very high number of e-commerce users have caused more and more business people to engage in online sales through e-commerce that is available from large companies to online home shops (Rehatalanit, 2016). The speedy growth of e-commerce can be caused by various things, namely, e-commerce can be accessed without time and place restrictions, can reach customers globally, is universal, can provide complete information, can interact between sellers and customers, information density, and able to target its marketing at the appropriate target market (Ayu & Lahmi, 2020).

But behind all this, there are still related problems, seen from SurveySensum data regarding e-commerce trends in 2022 in Indonesia (SurveySensum, 2022). It was found that as many as 42% of e-commerce users have low loyalty to e-commerce commerce. This is supported by a survey in the last three months on the behavior of e-commerce users who switch between one e-commerce and another. For the results of a survey of e-commerce users, customers who only use one e-commerce obtained data from 31%, and as many as 27% switched only for some reason or only in the transaction process. Therefore, the average visitor instability in e-commerce still occurs. And judging from the Ministry of Trade's news, there were 3,692 complaints and 86.1% related to e-commerce in the first six months of 2022 (Rosana, 2022). It can also be seen in the Tokopedia application in the AppStore, and there are still many complaints and a low rating for e-commerce Tokopedia. Judging from the data obtained from Top Brand in 2022 (Top Brand, 2022), Tokopedia ranks second with a brand index of 14.9%, below Shopee with a brand index of 43.7%. So it can be concluded that Tokopedia is not the first choice for customers in doing online shopping on e-commerce sites calculated from three parameters, namely top of mind (a brand that customers think of for the first time in a certain category), last usage (a brand that a customer last used), and future intention (a brand that will be used again in the future).

Service quality has been a topic of extensive investigation for decades. It has emerged as self-service technologies (SST) that impact how companies and customers interact to create positive service outcomes, namely customer satisfaction, loyalty, and behavioral intentions. Shahid Iqbal researched to examine how the impact of technology-based services, namely SST, on customer satisfaction, loyalty, and behavioral intentions in the service sector of Pakistan (Shahid Iqbal et al., 2018). Similar research was carried out by Rahman, who conducted research to develop new knowledge related to innovation in e-commerce, and how this affects customer satisfaction and loyalty, as well as the quality of electronic services, in the context of online stores in Indonesia (Rahman et al., 2022).

From the research that has been done before, the researcher will conduct the research to examine how the influence of SST service quality on e-commerce on customer satisfaction, customer loyalty, behavioral intention, and brand image. Future studies from Shahid Iqbal incorporated brand image variables as a mediating or moderating variable. After researching journals, researchers determined brand image as a mediating variable in the relationship between SST service quality variables and customer loyalty. The research limitation of this study is that this research focuses on e-commerce customers Tokopedia. The respondents in this study are Indonesian citizens in the Jabodetabek area who have been customers or users of e-commerce Tokopedia for more than one year. Based on the existing problems, the researcher wants to test the research model of whether service quality of self-service technology influences customer loyalty and behavioral intention through the mediation of customer satisfaction and brand image by asking research questions and research objectives as follows:

### **Research Questions:**

1. Does self-service technology service quality positively affect customer loyalty?
2. Does self-service technology service quality positively affect behavioral intentions?

3. Does self-service technology service quality positively affect customer satisfaction?
4. Does customer satisfaction positively mediate the relationship between self-service technology service quality and customer loyalty?
5. Does customer satisfaction positively mediate the relationship between self-service technology service quality and
6. Does brand image positively mediate the relationship between self-service technology service quality and customer loyalty?

### **Research Objectives**

1. Analyze the positive influence of self-service technology service quality on customer loyalty.
2. Analyze the positive influence of service quality on behavioral intentions.
3. Analyze the positive influence of self-service technology service quality on customer satisfaction.
4. Analyze customer satisfaction that mediates a positive relationship between the service quality of self-service technology and customer loyalty.
5. Analyze customer satisfaction that mediates a positive relationship between the service quality of self-service technology and behavioral intention.
6. Analyze brand image that mediates a positive relationship between the service quality of self-service technology and customer loyalty.

## **2. LITERATURE REVIEW**

### **2.1. Self-service Technology Service Quality**

Quality (Kotler & Keller, 2012, p. 131) is the totality of a feature or characteristic of a product or service based on its ability to fulfill stated needs. Every seller will provide quality products or services to exceed or meet customer expectations. Self-service technology provides service quality through interface technology that allows customers to get services without direct employee involvement to achieve company productivity and customer satisfaction (Shahid Iqbal et al., 2018). Self-service technology (SST) is an intermediary technology that enables customers to obtain services from service providers themselves without relying on employees or replacing the service process between customers and service providers. Measuring the quality of self-service technology services is important because more and more customers use them to fulfill their needs (Rosyidah & Andjarwati, 2021).

### **2.2. Customer Loyalty**

Customer loyalty (Rahman et al., 2022) has two approaches: an approach through behavior and attitude. The behavioral approach means making customers loyal or loyal so that they will buy back the products/services of a company. The attitude approach means that customers are willing to provide product/service recommendations to others and reject competitors. Customer loyalty is a customer who is satisfied and continues to purchase products/services with the same brand, provides positive feedback or information through word of mouth, and becomes a customer for life (Schiffman & Wisenblit, 2015, p. 44). Customer loyalty is a customer action that arises because of satisfaction with product quality and service quality which causes customers to be loyal for a long time. It will make repeated and

consistent purchases of products/services from the company even though some influences or situations make customers disloyal (Fauzi & Mandala, 2019).

### **2.3. Behavioral Intention**

A person's intention to take action, commonly called behavioral intention, is a situation in which a person is willing to act according to external objects or influences so that situations that support this action will produce a condition to maintain that behavior (Cahyani & Widati, 2021). If the customer has a behavioral intention, then the customer will take action related to seeking information related to the company, receiving services from a company, telling or informing others about their experiences, avoiding services/products, or even throwing them away (Sari, 2020). One indication that can show whether customers will stay with the company, support the company's products/services, make positive comments, and are willing to pay high prices is behavioral intention (Shahid Iqbal et al., 2018).

### **2.4. Brand Image**

Brand image is an accumulation of all customer experiences about a brand that forms a customer's perspective on a brand (Rahi & Abd Ghani, 2018). Brand image (Machfiroh, 2018) tends to be used as a reference for customers before buying a product or service, so companies must have an image that represents the advantages of products/services that match the needs and desires of customers to create a positive image of the company's brand. The image is based on reality or fiction that depends on that perception. Perception of the brand can be formed through previous experience or information, which then creates a representation of the brand's perception. With a brand that has a positive image, customers tend to buy that brand. Brand image (Sukma Wijaya, 2013) is the company's saving value as a result of investment in advertising and an increase in the quality of the products offered, which can be used as a capital advantage for the company in the long term.

### **2.5. Customer Satisfaction**

Customer satisfaction depends on the performance of a product or service that is perceived and expected by the customer, so it will result in customer satisfaction if the perceived performance is in line with customer expectations and will result in dissatisfied customers if the perceived performance is not in line with customer expectations (Kotler & Armstrong, 2015, p. 38). Customer satisfaction is defined as a feeling of satisfaction or pleasure from the customer towards the perceived shopping experience or post-consumption customer experience of the product/service by comparing the customer's expectations and perceived quality. There are two aspects that indicate customer loyalty, namely behavior, and attitude. The behavioral aspect means that customers are loyal and buy products/services continuously, and the attitude aspect means the customer's commitment to a product/service. Satisfaction felt by customers is an asset for companies that can provide benefits (Saricam, 2022). Customer satisfaction can affect the level of loyalty from customers, being able to maintain market share from competitors, efforts to reduce opportunities for price elasticity, reduce costs for marketing, and improve reputation in the eyes of customers (Ciputra & Prasetya, 2020).

## 2.6. Hypothesis and Model

Customer loyalty can be created from customers' mindset towards companies with an advantage in this approach, so they are willing to buy products/services and recommend them to others. Based on the literature, service quality is important to creating customer loyalty. And from the results of the study proves that there is a positive and significant relationship between the service quality of self-service technology and customer loyalty (Shahid Iqbal et al., 2018). Previous studies have found an influence between service quality and customer loyalty. However, the concept of service quality electronically formulates a hypothesis that e-service quality positively influences customer loyalty. The results of this study indicate that the fourth hypothesis is supported and accepted (Rahman et al., 2022). Based on several previous literature studies, the hypothesis in this study is:

**H1: Service quality of self-service technology has a positive effect on customer loyalty.**

In uncovering customer behavior, a customer assessment of service quality of self-service technology is carried out on customer satisfaction and behavioral intention. This assessment will produce indications that indicate subsequent customer behavior, such as whether the customer will stay with the company or switch to a competitor, whether the customer will make positive or negative comments about the company, and so on. This research is supported by research results showing a positive and significant effect between service quality of self-service technology and behavioral intention (Shahid Iqbal et al., 2018). Another study was also conducted on online database users who hypothesized that e-service quality positively impacts the behavioral intentions of these users. This is supported by research results showing that the second hypothesis is accepted and that e-service quality positively impacts behavioral intention (Zeglat et al., 2016). Based on several previous literature studies, the hypothesis in this study is:

**H2: Service quality of self-service technology has a positive effect on behavioral intention.**

The characteristics of customers served online are different from customers served traditionally because online customers are more sensitive and can directly compare between online service providers. Therefore, it takes success in the service process used by online customers and feeling satisfied with the service. So the third hypothesis was formulated in the research by Rahman et al. that e-service quality positively affects customer satisfaction. And from the results of the research conducted, the third hypothesis is accepted, and it can be proven that e-service quality is an antecedent of customer satisfaction in the concept of e-commerce (Rahman et al., 2022). Furthermore, research conducted at the online shop Bukalapak also hypothesized that the quality of e-service positively affects customer satisfaction. And the hypothesis testing shows that the hypothesis is accepted, and it is concluded that e-service positively affects customer satisfaction of Bukalapak users in Indonesia (Irwansyah & Mappadeceng, 2018). Based on several previous literature studies, the hypothesis in this study is:

**H3: Service quality of self-service technology has a positive effect on customer satisfaction.**

The relationship between customer satisfaction and customer loyalty is very close, so the two constructs become one unit. Because customers must be satisfied first, the chances of customer loyalty are higher. The researcher proposes that customer satisfaction mediates the antecedents of the loyalty variables studied, including service quality. And this statement is supported by the mediation test results, which support the seventh hypothesis that e-service quality indirectly affects customer loyalty mediated by customer satisfaction (Rahman et al., 2022). Using the services of a company will trigger resistance to competitors and a desire to provide recommendations for a company to others. This study's results show that customer satisfaction is a mediating variable between service quality and customer loyalty (Familiar & Maftukhah, 2015). Based on several previous literature studies, the hypothesis in this study is:

**H4: Customer satisfaction positively mediates the relationship between self-service technology service quality and customer loyalty.**

A positive correlation is obtained from the research results on online convenience dimensions and customer satisfaction on behavioral intentions. This is evidenced by the research results obtained when online stores have a good commitment to providing aspects customers need, such as easy access, transactions, and search, which can increase convenience in online shopping. The convenience felt by customers will affect customer satisfaction, and customer satisfaction with online shopping will affect customer behavioral intentions (Nurdianasari & Indriani, 2021). Research on Netflix users in DKI Jakarta formulates a hypothesis that user satisfaction mediates the effect of e-service quality on behavioral intentions. The results of regression testing support this that customer satisfaction has a partial mediator role in the relationship between e-service quality and the behavioral intentions of users (Zeglat et al., 2016). Based on several previous literature studies, the hypothesis in this study is:

**H5: Customer satisfaction positively mediates the relationship between self-service technology service quality and behavioral intention.**

Research on the OVO e-wallet application formulates the seventh hypothesis: the effect of e-service quality on e-loyalty is mediated by brand image. And the result is that e-service quality significantly affects e-loyalty mediated by brand image. So, it can be concluded that the quality of e-service can increase e-loyalty by building a positive brand image (Pratiwi et al., 2021). This is also supported by research conducted by Chen & Liu, who proposed the formulation of the fourth hypothesis: brand image mediates the quality relationship. And the mediation test results obtained show that brand image can be validated as a mediator between service quality and customer loyalty (Chen & Liu, 2017). Therefore, based on several previous literature studies, the hypothesis in this study is:

**H6: Brand image positively mediates the relationship between self-service technology service quality and customer loyalty.**

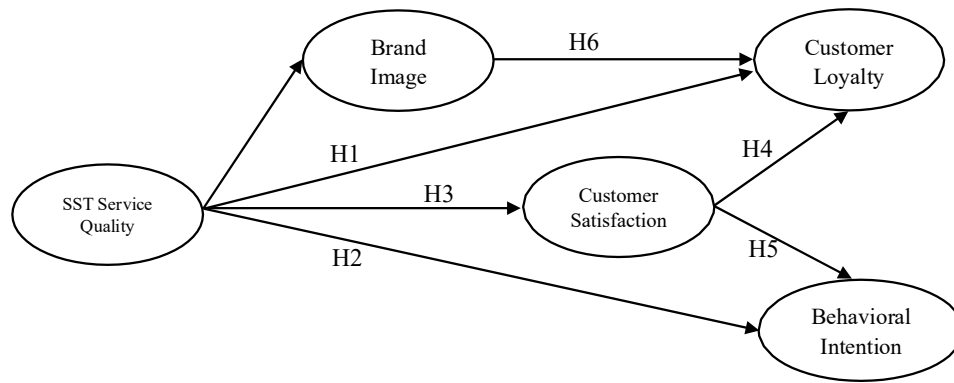


Figure 1. Conceptual Model.

### 3. METHODOLOGY

Quantitative research is systematic research on a phenomenon through statistical data or numerical data processing and analysis in the form of numbers. In quantitative research, the questions posed by researchers are closed and are identical to numerical/numeric data processing (Basias & Pollalis, 2018). The research method used in this study was quantitative research by distributing questionnaires with closed questions. That way, the results obtained by researchers can be considered objective and will produce numerical data. The numerical data will be processed by conducting comparisons and statistical analysis. The research object is a value, attribute, or characteristic of a person, an activity, or an object that has several variations determined by the researcher to conduct research and draw conclusions from the research (Tanujaya, 2017). The research object used by researchers in this study is service quality of self-service technology, customer loyalty, behavioral intention, customer satisfaction, and brand image, and for the research subject in this study is e-commerce Tokopedia.

Table 1. Indicator of Variables

Variable	Indicators	Source
Service Quality of Self-service Technology	<ol style="list-style-type: none"> <li>1. By using e-commerce Tokopedia, I find what I need quickly and easily.</li> <li>2. By using e-commerce Tokopedia, I got what I ordered.</li> <li>3. E-commerce Tokopedia provides services according to the information contained in the application.</li> <li>4. E-commerce Tokopedia protects my personal information.</li> <li>5. By using e-commerce Tokopedia, I get a good and fast response when I contact the seller.</li> <li>6. E-commerce Tokopedia guarantees me transaction problems.</li> <li>7. Customer service at e-commerce Tokopedia is always available when contacted.</li> </ol>	Rahman, et al. (2022)
Customer Loyalty	<ol style="list-style-type: none"> <li>1. I always use e-commerce Tokopedia for my next purchase.</li> <li>2. I would recommend e-commerce Tokopedia to others.</li> </ol>	Rahman et al. (2022); Shahid Iqbal et al. (2018)



	3. I will talk about positive things about e-commerce Tokopedia to others.	
	4. I will not be influenced by other ecommerce promotions.	
Behavioral Intention	1. I have a very high inclination to use e-commerce Tokopedia.	Shahid Iqbal et al. (2018)
	2. I have a very high probability of recommending e-commerce Tokopedia to friends.	
	3. If I want to shop, I will choose e-commerce Tokopedia.	
Brand Image	1. Services in e-commerce Tokopedia can be used according to their function.	Rahi & Abd Ghani (2018)
	2. E-commerce Tokopedia's services are symbolically very positive.	
	3. E-commerce Tokopedia's services can create a pleasant experience.	
Customer Satisfaction	1. Overall, I am satisfied with the services offered by e-commerce Tokopedia.	Shahid Iqbal et al. (2018)
	2. The services offered by e-commerce Tokopedia exceed my expectations.	
	3. The services offered by e-commerce Tokopedia are close to what I thought.	

Source: Data processed (2022).

The unit of analysis (Sekaran & Bougie, 2016, pp. 102–103) refers to the level of aggregation of the data obtained through data collection when conducting data analysis. The unit of analysis is divided into five types: individuals, dyads, groups, organizations, and culture. In the research, the researcher decided to use an individual analysis unit where data would be collected and distributed to individuals selected to be respondents in this study. According to Sekaran & Bougie (2016, pp. 72–73), measurement is defined as a number that has been determined based on the characteristics of an object related to all the rules that apply to research. Variables are anything that can draw a value that varies or is different from the others. In the research conducted, the dependent variable in this study is customer loyalty and behavioral intention. The independent variable that is thought to influence the dependent variable is the service quality of self-service technology. And the mediating variables used are customer satisfaction and brand image. The scale is a mechanism or tool used to differentiate between individuals against these differences in the variables used in research (Sekaran & Bougie, 2016, p. 207). The scale used by researchers in this study is the Likert Scale or Likert Scale, which will indicate whether the respondents agree or disagree with the statements on the object in the study.

Data collection methods can be divided into two methods of collection, namely primary data and secondary data. Primary data is a method that involves collecting data from sources with specific research objectives, such as the results of interviews, observations, and questionnaires (Sekaran & Bougie, 2016, p. 111). The data collection method used in this study will be primary data with the questionnaire method, which will be distributed to respondents. The type of questionnaire chosen is a questionnaire that will be distributed electronically, which will be compiled via Google Forms and will be directly accessed and answered by respondents via the questionnaire link that will be distributed.

The sampling technique used In this study was purposive sampling, where the sampling was limited by the type of research subject desired by the researcher. In

this study, the population of the study was e-commerce Tokopedia users in Indonesia, and the sample in this study were individuals who used e-commerce Tokopedia for at least one year in the Jabodetabek area. The sample collection technique to be used is non-probability sampling, namely purposive sampling. The sample size used by researchers must be adequate with accuracy and precision and equipped with appropriate sampling techniques (Sekaran & Bougie, 2016, p. 261). In determining the sample size (Memon et al., 2020), recent developments suggest using power analysis, and business researchers make the G\*Power program the first choice for conducting power analysis. From the results calculated in the G\*Power program, the sample size for the research to be conducted is at least 92 respondents. And researchers will get 218 respondents for actual testing.

The structural equation model is a multivariate statistical technique formed from two models, namely the measurement and structural models. The measurement model for determining how well the studied variables can measure latent variables and confirm reliability and validity (Tripathi & Jha, 2018). PLS is a structural equation model (SEM) technique based on an iterative approach by maximizing the variance described in endogenous constructs. PLS is intended for research consisting of data and a theoretical framework (Hair et al., 2014). Based on the explanation above, the researcher used PLS-SEM through the Smart PLS software.

## 4. RESULT AND DISCUSSION

### 4.1. Respondents Profile

**Table 2.** Demographic Profiles of Respondents

Demographic Variables	Category	Frequency	Percentage
<b>Gender</b>	Male	87	39,9%
	Female	131	60,1%
	<b>Total</b>	<b>218</b>	<b>100%</b>
<b>Age</b>	21 – 30 tahun	218	100%
	<b>Total</b>	<b>218</b>	<b>100%</b>
<b>Occupation</b>	Student	172	78,9%
	Businessman	16	7,3%
	Private employees	25	11,5%
	Other	5	2,3%
	<b>Total</b>	<b>218</b>	<b>100%</b>
<b>Domicile</b>	Jakarta	71	32,6%
	Bogor	10	4,6%
	Depok	11	5,0%
	Tangerang	93	42,7%
	Bekasi	33	15,1%
	<b>Total</b>	<b>218</b>	<b>100%</b>
<b>Monthly household income</b>	< Rp1.000.000	25	11,5%
	Rp1.000.001 - Rp3.000.000	68	31,2%
	Rp3.000.001 - Rp5.000.000	54	24,8%
	Rp5.000.001 - Rp7.000.000	37	17%
	Rp7.000.001 - Rp10.000.000	20	9,2%
	> Rp10.000.000	14	6,4%
	<b>Total</b>	<b>218</b>	<b>100%</b>
<b>Transaction frequency in e-</b>	< 2 times	69	31,7%
	3 - 5 times	113	51,8%
	6 - 10 times	30	13,8%

<b>commerce in one month</b>	> 10 times	6	2,8%
	<b>Total</b>	<b>218</b>	<b>100%</b>
<b>The most frequently purchased product types through e-commerce</b>	Electronic	23	10,6%
	Electronic accessories	20	9,2%
	Fashion	77	35,3%
	Fashion accessories	3	1,4%
	Health & Beauty	43	19,7%
	Household appliances	15	6,9%
	Others	37	17%
	<b>Total</b>	<b>218</b>	<b>100%</b>
<b>Funds issued for transactions in e-commerce in one month</b>	< Rp500.000	97	44,5%
	Rp500.001 - Rp1.500.000	91	41,7%
	Rp1.500.001 - Rp3.000.000	23	10,6%
	Rp3.000.001 - Rp4.500.000	5	2,3%
	> Rp4.500.000	2	0,9%
	<b>Total</b>	<b>218</b>	<b>100%</b>

Source: Data processed (2022).

## 4.2. Validity Test

The validity test on the actual test will be carried out by conducting convergent and discriminant validity tests. Convergent validity (Hair, Hult, et al., 2017, pp. 112–113) is performed to see how an indicator (measure) is correlated or positively related to an alternative measure in the same construct. In analyzing convergent validity (Sarstedt et al., 2022), redundancy analysis will be used to measure the value of convergent validity with a construct limit of  $\geq 0.7$ . And on the interpretation of the average variance extracted (AVE) results, it has a limit, namely  $> 0.5$ . Discriminant validity is carried out to measure the extent to which an indicator or construct is very different from other constructs according to empirical standards (Hair, Hult, et al., 2017, p. 115). The HTMT requirement for the same construct is  $< 0.9$ , and for a different construct, it is  $< 0.85$  (Sarstedt et al., 2022). However, another opinion (Henseler et al., 2015) regarding the HTMT threshold is that discriminant validity is still acceptable and established if the HTMT value is  $< 1$ .

**Table 3.** Convergent Validity – Outer Loadings

Indicator	Blm	CS	SST	CL	Blnt
<b>Blm1</b>	0,839				
<b>Blm2</b>	0,806				
<b>Blm3</b>	0,781				
<b>CS1</b>		0,800			
<b>CS2</b>		0,841			
<b>CS3</b>		0,836			
<b>CL1</b>				0,782	
<b>CL2</b>				0,805	
<b>CL3</b>				0,857	
<b>Blnt 1</b>					0,867
<b>Blnt2</b>					0,842
<b>Blnt3</b>					0,860
<b>SST4</b>			0,703		

<b>SST5</b>	0,728
<b>SST6</b>	0,743
<b>SST7</b>	0,773

Source: Data processed (2022).

Based on the presentation of the results of the convergent validity test on the outer loadings, table 2 shows that all indicators are declared valid. It is declared valid because all indicators in the variables in the outer loadings meet the threshold, which is  $\geq 0.7$ .

**Table 4.** Convergent Validity – AVE

<b>Research Variable</b>	<b>Average Variance Extracted (AVE)</b>	<b>Rule of Thumb</b>	<b>Model Evaluation</b>
Brand Image (Blm)	0,655	> 0,5	Valid
Customer Satisfaction (CS)	0,682		Valid
SST Service Quality (SST)	0,544		Valid
Customer Loyalty (CL)	0,665		Valid
Behavioral Intention (Blnt)	0,733		Valid

Source: Data processed (2022).

Based on the presentation of the results of the convergent validity test on average variance extracted (AVE), table 3 shows that all indicators are declared valid. It was declared valid because the AVE values for all variables met the threshold of  $> 0.5$ .

**Table 5.** Discriminant Validity – HTMT

	<b>Blm</b>	<b>CS</b>	<b>SST</b>	<b>CL</b>	<b>Blnt</b>
<b>Blm</b>					
<b>CS</b>	0,830				
<b>SST</b>	0,754	0,840			
<b>CL</b>	0,709	0,782	0,775		
<b>Blnt</b>	0,687	0,825	0,801	0,914	

Source: Data processed (2022).

Based on the presentation of the results of the discriminant validity test on the heterotrait-mono ratio (HTMT), table 4.15 shows that all indicators can be declared valid. HTMT has a threshold of  $< 0.9$ , but one HTMT value is 0.914, but it can still be declared valid because an HTMT value  $< 1$  is still considered stable.

### 4.3. Reliability Test

In terms of internal consistency reliability (Hair, Hult, et al., 2017, pp. 111–112), traditionally, the requirement is Cronbach's Alpha which can estimate reliability based on the intercorrelation of the variable indicators studied. **However, with** the limitations of Cronbach's Alpha, a different measurement is needed to measure the reliability of internal consistency, namely through composite reliability. The thresholds for the overall reliability construct are 0.7 – 0.9 and 0.6 – 0.95 in exploratory research (Sarstedt et al., 2022). Composite reliability has a threshold limit of  $\geq 0.7$  and 0.6 – 0.7 for exploratory research (Hair, Babin, et al., 2017).

**Table 6.** Reliability Test – Cronbach’s Alpha

Research Variable	Cronbach's Alpha	Composite Reliability	Model Evaluation
Brand Image (Blm)	0,736	0,850	Reliable
Customer Satisfaction(CS)	0,767	0,865	Reliable
SST Service Quality (SST)	0,720	0,826	Reliable
Customer Loyalty (CL)	0,749	0,856	Reliable
Behavioral Intention (Blnt)	0,818	0,892	Reliable

Source: Data processed (2022).

Based on the presentation of the results of the reliability test on Cronbach's Alpha, table 5 shows that all variables can be declared reliable. It was declared reliable because Cronbach's Alpha value for all variables met the threshold between 0.7 and 0.9. Based on the presentation of the results of the reliability test on Composite Reliability, table 4 shows that all variables can be declared reliable. It is declared reliable because the Composite Reliability value for all variables meets the threshold, which is  $\geq 0.7$ .

#### 4.4. Collinearity Test

Measurement of the collinearity of each item by looking at the variance inflation factor (VIF) by applying the multiple regression model of the indicators on all indicator items in the same construct (Sarstedt et al., 2017, p. 18). In evaluating the collinearity of each indicator in the structural model (Sarstedt et al., 2022), having a threshold value of  $VIF \leq 3$  is declared free from collinearity problems, a value of  $3 < VIF < 5$  is said to allow for collinearity problems and a VIF value  $\geq 0.7$  is said that there is a critical problem in collinearity.

**Table 7.** Collinearity Test – Outer VIF Value

Indicator	VIF
<b>Blm1</b>	1,596
<b>Blm2</b>	1,529
<b>Blm3</b>	1,341
<b>CS1</b>	1,419
<b>CS2</b>	1,680
<b>CS3</b>	1,690
<b>CL1</b>	1,432
<b>CL2</b>	1,498
<b>CL3</b>	1,595
<b>Blnt 1</b>	1,973
<b>Blnt2</b>	1,653
<b>Blnt3</b>	1,925
<b>SST4</b>	1,292
<b>SST5</b>	1,350
<b>SST6</b>	1,364
<b>SST7</b>	1,429

Source: Data processed (2022).

Based on the presentation of the results of the collinearity test on the Outer VIF Value, table 6 shows that all variable indicators can be declared free from collinearity

issues. It is declared free from collinearity issues because the Outer VIF Value on all variable indicators meets the threshold, which is  $\leq 3$ .

**Table 8.** Collinearity Test – Inner VIF Value

	<b>Blm</b>	<b>CS</b>	<b>SST</b>	<b>CL</b>	<b>BInt</b>
<b>Blm</b>				1,762	
<b>CS</b>				2,018	1,639
<b>SST</b>	1,000	1,000		1,757	1,639
<b>CL</b>					
<b>BInt</b>					

Source: Data processed (2022).

Based on the presentation of the results of the collinearity test on the Inner VIF Value, table 7 shows that all variable indicators can be declared free from collinearity issues. It is declared free from collinearity issues because the Inner VIF Value on all variable indicators meets the threshold, which is  $\leq 3$ .

#### 4.5. Path Coefficient

It is necessary to report on the estimation of the path coefficient and information about its significance by testing t-values, and p-values along with standard errors or confidence intervals in bootstrapping (Sarstedt et al., 2022). We can calculate the t-value and p-value for the overall structural path coefficient through the standard error. The critical value for the one-tailed test is 1.65, with a significance level of 5%. To see the significance level, you can use the p-value, where it is assumed that when the significance level is 5%, the p-value is  $<0.05$ . So it can be concluded that the considered hypothesis relationship can be declared supported. The standard value of the path coefficient is between -1 to +1, which can be interpreted that if +1, then it has a strong positive relationship and vice versa for negative values (Hair, Hult et al., 2017, pp. 195–196).

**Table 9.** Path Coefficient

<b>Hypothesis</b>	<b>Original Sample (O)</b>	<b>T-Statistics</b>	<b>P-Values</b>	<b>Hypothesis Analysis</b>
H1: Service quality of self-servicetechnology has a positive effect on customer loyalty	0,278	3,259	0,001	Accepted
H2: Service quality of self-servicetechnology has a positive effect on behavioral intention	0,342	4,960	0,000	Accepted
H3: Service quality of self-service technology has a positive effect on customer satisfaction	0,624	13,324	0,000	Accepted

Source: Data processed (2022).

The first hypothesis can be concluded that the hypothesis is accepted by the t-statistic value (3.259)  $>$  t-value (1.65), and the resulting p-value is 0.001 (p-

value < 0.05). The value of the original sample is 0.278, which indicates that service quality of self-service technology has a positive effect on loyalty. So it can be concluded that the service quality of self-service technology has a significant effect on customer loyalty. The second hypothesis can be concluded that the t-statistic value accepts the hypothesis (4.960) > t-value (1.65), and the resulting p-value is 0.000 (p-value < 0.05). The value of the original sample is 0.342, which indicates that the service quality of self-service technology positively influences behavioral intentions. So it can be concluded that the service quality of self-service technology significantly influences behavioral intentions. The third hypothesis can be concluded that the t-statistic value accepts the hypothesis (13.324) > t-value (1.65), and the resulting p-value is 0.000 (p-value < 0.05). The value of the original sample is 0.624, which indicates that the service quality of self-service technology has a positive effect on customer satisfaction. So it can be concluded that the service quality of self-service technology significantly influences customer satisfaction.

**Table 10.** Specific Indirect Effects

Hypothesis	Original Sample (O)	T-Statistics	P-Values	Hypothesis Analysis
H4: Customer satisfaction positively mediates the relationship between self-service technology, service quality, and customer loyalty	0,192	3,695	0,000	Accepted
H5: Customer satisfaction positively mediates the relationship between self-service technology service quality and behavioral intention	0,275	6,497	0,000	Accepted
H6: Brand image positively mediates the relationship between self-service technology service quality and customer loyalty	0,102	2,592	0,005	Accepted

Source: Data processed (2022).

The fourth hypothesis can be concluded that the hypothesis is accepted by the t-statistic value (3.695) > t-value (1.65), and the resulting p-value is 0.000 (p-value < 0.05). The value of the original sample is 0.192, which indicates that customer satisfaction positively mediates the relationship between self-service technology service quality and customer loyalty. So it can be concluded that customer satisfaction significantly mediates the relationship between self-service technology service quality and customer loyalty. The fifth hypothesis can be concluded that the hypothesis is accepted by the t-statistic value (6.497) > t-value (1.65), and the resulting p-value is 0.000 (p-value < 0.05). The value of the original sample is 0.275, which indicates that customer satisfaction positively mediates the relationship between self-service technology service quality and behavioral intention. So it can be concluded that customer satisfaction significantly mediates the relationship between self-service technology service quality and behavioral intention. The sixth hypothesis can be concluded that the hypothesis is accepted by the t-statistic value

(2.592) > t-value (1.65,) and the resulting p-value is 0.005 (p-value <0.05). The value of the original sample is 0.102, which indicates that customer satisfaction positively mediates the relationship between self-service technology service quality and customer loyalty. So, it can be concluded that brand image significantly mediates the relationship between self-servicetechnology service quality and customer loyalty.

#### 4.6. R Square Test

To measure explanatory power this can be done by analyzing the value of  $R^2$  where the value of  $R^2$  depends on the complexity of the model and the phenomena taken for research (Sarstedt et al., 2022). In multiple regression, the value of adjusted  $R^2$  or the adjusted coefficient of determination can be used to avoid bias in complex models. The value of  $R^2$  is between 0 – 1, where the higher it will show, the higher the accuracy of the prediction (Hair, Hult, et al., 2017, pp. 198–199).

**Table 11.** R Square Adjusted

Variable	R Square Adjusted
Brand Image	0,298
Customer Satisfaction	0,387
Customer Loyalty	0,433
Brand Image	0,298
Behavioral Intention	0.945

Source: Data processed (2022).

Based on table 10, the adjusted  $R^2$  value for the brand image variable is 0.298, which means that 29.8% of the independent variable's variance value can explain the dependent variable, and 70.2% is explained by variables outside the research model being conducted. The adjusted  $R^2$  value for the customer satisfaction variable is 0.387, which means that 38.7% of the independent variable's variance value can explain the dependent variable, and 61.3% is explained by variables outside the research model conducted. The adjusted  $R^2$  value for the customer loyalty variable is 0.433, which means that 43.3% of the variance value of the independent variable can explain the dependent variable, and 56.7% is explained by variables outside the research model being conducted. The adjusted  $R^2$  value for the behavioral intention variable is 0.495, which means that 49.5% of the variance value of the independent variable can explain the dependent variable and 50.5% is explained by variables outside the research model being conducted.

#### 4.7. Model Fit

To analyze the fit model, you can use SRMR or a bootstrap-based test to produce the right fit model (Sarstedt et al., 2022). SRMR can be said to be an absolute measure, so a value of zero means it can be interpreted as having a perfect match. However, an SRMR value of less than 0.08 can still be considered suitable, or there is a good match (Hair, Hult, et al., 2017, p. 193). Normed fit index (NFI) aims to measure the fit of the null model or is assumed to be uncorrelated. NFI has a value range between 0 – 1, meaning that if the composite model is perfect, then the NFI is worth 1, and if the model fit is poor, then the NFI is worth 0 (Schuberth et al., 2022).



**Table 12. Model Fit**

<b>Model Fit</b>	<b>Saturated Model</b>
SRMR	0,075
NFI	0,731

Source: Data processed (2022).

For the measurement of model fit in table 4.24, it can be seen that the SRMR value in the saturated model is 0.075. And this value is still below 0.08, so that it can be said that the model fit can be considered suitable or there is a good fit in the model. It can also be seen that the NFI has a value of 0.731, where the closer to the value 1, the more perfect the match.

## **5. CONCLUSION**

From the research results, the first hypothesis is stated to be significant and supported so that it can be interpreted that good quality self-service technology (e-commerce) can increase customer loyalty to e-commerce. The higher the quality of self-service technology services provided by E-commerce Tokopedia, the more loyal customers will be to re-use E-commerce Tokopedia in the future. The second hypothesis is stated to be significant and supported so that it can be interpreted that good quality self-service technology (e-commerce) can influence customers' behavioral intention towards e-commerce. The higher the quality of self-service technology services provided by E-commerce Tokopedia, the more it can influence customers' behavioral intention to act positively towards E-commerce Tokopedia. The third hypothesis is stated to be significant and supported so that it can be interpreted that good quality self-service technology (e-commerce) can affect customer satisfaction with e-commerce. The higher the quality of the self-service technology services provided by E-commerce Tokopedia, the more satisfying the customers are because the services provided by E-commerce Tokopedia meet customer expectations. The fourth hypothesis is also stated to be significant and supported so that it can be interpreted that customer satisfaction can positively mediate the relationship between good quality self-service technology (e-commerce) towards increasing customer loyalty in e-commerce. The higher the quality of self-service technology services provided by E-commerce Tokopedia through customer satisfaction, the more loyal customers will re-use E-commerce Tokopedia in the future. The fifth hypothesis is stated to be significant and supported so that it can be interpreted that customer satisfaction can positively mediate the relationship between the quality of good self-service technology (e-commerce) services and the growth of behavioral intentions in e-commerce customers. The higher the quality of self-service technology services provided by E-commerce Tokopedia through customer satisfaction, the more it can influence the behavioral intention of customers to act positively towards E-commerce Tokopedia. And the sixth hypothesis is also stated to be significant and supported so that it can be interpreted that brand image can mediate the relationship between good quality self-service technology (e-commerce) towards increasing customer loyalty to e-commerce positively. The higher the quality of self-service technology services provided by E-commerce Tokopedia through a good and positive brand image of E-commerce Tokopedia, the more loyal customers are to re-use E-commerce Tokopedia in the future.

## 5.1. Managerial Implication

The managerial implication for the entire research for e-commerce Tokopedia is to improve the service quality of e-commerce, such as increasing server capacity in services on the e-commerce Tokopedia application to minimize technical problems, being able to provide orders to customers according to what was ordered at the store Virtual services owned by partners, guarantee the protection of customer privacy, validate sales partners on the e-commerce Tokopedia application so that they can provide guarantees for customers, provide guarantees on transaction problems and improve consumer service on e-commerce Tokopedia. Furthermore, coupled with the existence of a brand image owned by e-commerce Tokopedia, it can influence the views held by customers, such as e-commerce Tokopedia providing services that can be used according to its function by maximizing all the features in the e-commerce Tokopedia application, having positive symbols by responding positive and negative comments submitted by customers and being able to create a pleasant experience by keeping promotions as promised, easy transaction processes through payment channels that make it easy for customers.

Coupled with the existence of a brand image owned by e-commerce Tokopedia, it can influence the views held by customers, such as e-commerce Tokopedia providing services that can be used according to its function by maximizing all the features in the e-commerce Tokopedia application, having positive symbols by responding positive and negative comments submitted by customers and being able to create a pleasant experience by keeping promotions as promised, easy transaction processes through payment channels that make it easy for customers.

## 5.2. Limitation and Future Research

The limitation on the scope of the research conducted is that this research focuses on e-commerce Tokopedia customers, the respondents in this study are Indonesian citizens in the Jabodetabek area who are customers or users of e-commerce Tokopedia, and the respondents in this study have used e-commerce Tokopedia for more or less one year. The recommendations given by the researcher to future researchers who will conduct research in a similar context are for future researchers to be able to measure samples with a larger size, to be able to implement other e-commerce not only for e-commerce Tokopedia, to be able to test brand image variables as mediation on the other relationship variable and adding customer trust variables in further research.

## REFERENCES

- Ayu, S., & Lahmi, A., 2020. Peran e-commerce terhadap perekonomian Indonesia selama pandemi covid-19. *Jurnal Kajian Manajemen Bisnis*, 9(2), 114. <https://doi.org/10.24036/jkmb.10994100>.
- Basias, N., & Pollalis, Y., 2018. Quantitative and qualitative research in business & technology: Justifying a suitable research methodology. *Review of Integrative Business and Economics Research*, 7, 91–105. <http://buscompress.com/journal-home.html>.

- Boon-itt, S., 2015. Managing self-service technology service quality to enhance e-satisfaction. *International Journal of Quality and Service Sciences*, 7(4), 373–391. <https://doi.org/10.1108/IJQSS-01-2015-0013>.
- Cahyani, F. T., & Widati, S., 2021. The influence of behavior intention, personal autonomy, accessibility of information, and social support on the compliance of the use of ppe at PT. PLN. *The Indonesian Journal of Public Health*, 16(1). <https://doi.org/10.20473/ijph.v16i1.2021.112-123>.
- Chen, C.-M., & Liu, H.-M., 2017. Exploring the impact of airlines service quality on customer loyalty: Evidence from taiwan. *International Journal of Business and Management*, 12(5), 36. <https://doi.org/10.5539/ijbm.v12n5p36>.
- Ciputra, W., & Prasetya, W., 2020. Analisis pengaruh e-service quality, perceived value terhadap customer satisfaction, trust, dan customer behavioral intention. *COMMENTATE: Journal of Communication Management*, 1(2), 109. <https://doi.org/10.37535/103001220201>.
- Familiar, K., & Maftukhah, I., 2015. Pengaruh kualitas produk dan kualitas pelayanan terhadap loyalitas pelanggan melalui kepuasan pelanggan. *Management Analysis Journal*, 4(4), 348–354.
- Fauzi, M. R., & Mandala, K., 2019. Pengaruh kualitas pelayanan, kualitas produk, dan inovasi produk terhadap kepuasan untuk meningkatkan loyalitas pelanggan. *E-Jurnal Manajemen Universitas Udayana*, 8(11), 6741. <https://doi.org/10.24843/ejmunud.2019.v08.i11.p18>.
- Hair, J. F., Babin, B. J., & Krey, N., 2017. Covariance-based structural equation modeling in the journal of advertising: review and recommendations. *Journal of Advertising*, 46(1), 163–177. <https://doi.org/10.1080/00913367.2017.1281777>.
- Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M., 2017. *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM) (2nd ed.)*. SAGE Publications, Inc.
- Hair, J. F., Sarstedt, M., Hopkins, L., & Kuppelwieser, V. G., 2014. Partial least squares structural equation modeling (PLS-SEM): an emerging tool in business research. In *European Business Review* (Vol. 26, Issue 2, pp. 106– 121). Emerald Group Publishing Ltd. <https://doi.org/10.1108/EBR-10-2013-0128>.
- Henseler, J., Ringle, C. M., & Sarstedt, M., 2015. A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, 43(1), 115–135. <https://doi.org/10.1007/S11747-014-0403-8>.
- Irwansyah, A., & Mappadeceng, R., 2018. Pengaruh e-service quality terhadap customer loyalty melalui customer satisfaction pada toko online bukalapak. *Jurnal Manajemen Dan Sains*, 3(2). <https://doi.org/http://dx.doi.org/10.33087/jmas.v3i2.50>.
- Kotler, P., & Keller, K. L., 2012. *Marketing Management*. 14 edition. Pearson.
- Kurniawan, S., & Chandra, R., 2020. The effect of service quality, and promotion of satisfaction in mediation brand image. *Marketing Management*, 16, 1–15. <http://repository.stei.ac.id/id/eprint/1333>.

- Machfiroh, I. S., 2018. Keterkaitan citra merek dan harga terhadap keputusan pembelian pada emak di fried chicken pelaihari. *Jurnal Humaniora Teknologi* 4(1), 2614–3682. <https://doi.org/https://doi.org/10.34128/jht.v4i1.43>
- Memon, M. A., Ting, H., Cheah, J.-H., Thurasamy, R., Chuah, F., & Cham, T. H., 2020. Sample size for survey research: review and recommendations. *Journal of Applied Structural Equation Modeling*, 4(2), i–xx. [https://doi.org/10.47263/jasem.4\(2\)01](https://doi.org/10.47263/jasem.4(2)01).
- Narteh, B., 2015. Perceived service quality and satisfaction of self-service technology: The case of automated teller machines. *International Journal of Quality and Reliability Management*, 32(4), 361–380. <https://doi.org/10.1108/IJQRM-08-2012-0113>.
- Nurdianasari, R., & Indriani, F., 2021. Study of perceived online convenience and customer satisfaction toward behavioral intention in online shopping. *International Journal of Economics, Business and Accounting Research (IJEBAR)*, 5(2), 399–409. <https://jurnal.stie-aas.ac.id/index.php/IJEBAR>.
- Nurhidayati, & Anam, A. K., 2019. Manajemen Bisnis Di Era Pandemi Covid-19 & New Normal. Unissula Press.
- Nurlela, 2021. E-commerce, solusi di tengah pandemi covid-19. *Jurnal Simki Economic*, 4(1), 47–56. <https://doi.org/https://doi.org/10.29407/jse.v4i1.53>
- Pratiwi, L., Sunaryo, S., & Mugiono, M., 2021. The effect of e-service quality on e-loyalty mediated by e-trust and brand image variables. *International Journal of Research in Business and Social Science*, 10(6), 56–62. <https://doi.org/10.20525/ijrbs.v10i6.1364>.
- Rahi, S., & Abd Ghani, M., 2018. Investigating the role of e-service quality and brand image in internet banking acceptance context with structural equation modeling (SEM-PLS). *30th International Scientific Conference on Economic and Social Development*, 427–442. <http://www.esd-conference.com>.
- Rahman, S., Fadrul, F., Yusrizal, Y., Marlyna, R., & Momin, M., 2022. Improving the satisfaction and loyalty of online shopping customers based on e-commerce innovation and e-service quality. *Gadjah Mada International Journal of Business*, 24(1), 56–81.
- Rehatalanit, Y. L. R. (2016). Peran e-commerce dalam pengembangan bisnis. *Jurnal Teknologi Industri*, 5. <https://doi.org/10.35968/jti.v5i0.764>.
- Rosana, F. C., 2022. *Kemendag Terima 3.692 Aduan Sepanjang 2022, Mayoritas Konsumen E-commerce*. Available at: <https://bisnis.tempo.co/read/1610026/kemendag-terima-3-692-aduan-sepanjang-2022-mayoritas-konsumen-e-commerce>.
- Rosyidah, N., & Andjarwati, A. L., 2021. Pengaruh self-service technology quality terhadap loyalitas dengan kepuasan sebagai variabel mediasi. *Journal IMAGE*, 10(1), 14–27. <https://doi.org/https://doi.org/10.17509/image.v10i1.31448>.
- Sari, K., 2020. Analisis pendekatan behavioral intention pada minat menggunakan mobile payment ovo. *Jurnal Online Mahasiswa (JOM)*, 5(4). <https://jom.unpak.ac.id/index.php/ilmumanajemen/article/view/1506>.

- Saricam, C., 2022. Analysing service quality and its relation to customer satisfaction and loyalty in sportswear retail market. *Autex Research Journal*, 22(2), 184–193. <https://doi.org/10.2478/aut-2021-0014>.
- Sarstedt, M., Hair, J. F., Pick, M., Liengard, B. D., Radomir, L., & Ringle, C. M., 2022. Progress in partial least squares structural equation modeling use in marketing research in the last decade. *Psychology and Marketing*, 39(5), 1035–1064. <https://doi.org/10.1002/mar.21640>
- Sarstedt, M., Ringle, C. M., & Hair, J. F., 2017. Partial least squares structural equation modeling. *Handbook of Market Research* (pp. 1–40). Springer International Publishing. [https://doi.org/10.1007/978-3-319-05542-8\\_15-1](https://doi.org/10.1007/978-3-319-05542-8_15-1).
- Schiffman, L. G., & Wisenblit, J. L., 2015. *Consumer Behavior*. (11th ed., Issue 6). Pearson Education Limited.
- Schuberth, F., Rademaker, M. E., & Henseler, J., 2022. Assessing the overall fit of composite models estimated by partial least squares path modeling. *European Journal of Marketing*. <https://doi.org/10.1108/EJM-08-2020-0586>.
- Sekaran, U., & Bougie, R., 2016. Research methods for business: A skill-building approach. *Leadership & Organization Development Journal*, 34 (7). <https://doi.org/10.1108/lodj-06-2013-0079>.
- Shahid Iqbal, M., Ul Hassan, M., & Habibah, U., 2018. Impact of self-service technology (SST) service quality on customer loyalty and behavioral intention: The mediating role of customer satisfaction. *Cogent Business and Management*, 5(1). <https://doi.org/10.1080/23311975.2018.1423770>.
- Statista, 2020a. *Indonesia: Online Purchase Behavior During COVID-19 Pandemic 2020*. Available at: <https://www.statista.com/statistics/1127876/indonesia-impact-on-online-purchase-behavior-covid-19/>.
- Statista, 2020b. *E-Commerce Users in Indonesia 2025*. Available at: <https://www.statista.com/forecasts/251635/e-commerce-users-in-indonesia>
- Statista, 2022. *Indonesia: Leading E-Commerce Sites by Monthly Traffic 2022*. Available at: <https://www.statista.com/statistics/869700/indonesia-top-10-e-commerce-sites/>.
- Sukma Wijaya, B., 2013. Dimensions of brand image: A conceptual review from the perspective of brand communication. *European Journal Business and Management*, 5. <https://doi.org/10.13140/ejbm.2013.55.65>.
- SurveySensus, 2022. *E Commerce Trends Indonesia 2022*. Available at: <https://www.surveysensus.com/lp/Indonesia-E-Commerce-Trends-Report-2022.html>.
- Tanujaya, C., 2017. Perancangan standart operational procedure produksi pada perusahaan Coffeein. *Performa: Jurnal Manajemen Dan Start-Up Bisnis*, 2(1). <https://journal.uc.ac.id/index.php/performa/article/view/441>.
- Top Brand, 2022. *Top Brand Index*. Available at: [https://www.topbrand-award.com/top-brand-index/?tbi\\_find=Tokopedia](https://www.topbrand-award.com/top-brand-index/?tbi_find=Tokopedia).
- Tripathi, K. K., & Jha, K. N. (2018). Determining success factors for a construction organization: A structural equation modeling approach. *Journal of Management in Engineering*, 34(1). [https://doi.org/10.1061/\(asce\)me.1943-5479.0000569](https://doi.org/10.1061/(asce)me.1943-5479.0000569).

- Wahab, R. A., Nurdiyanah, R., Ahmad, F., & Shukri, Z., 2018. Perceived value, customers' satisfaction and behavioural intention in relation to seafood restaurants in Johor Bahru. *Malaysian Applied Biology*, 47(4), 95–106.
- Zeglat, D., Shrafat, F., & Al-Smadi, Z., 2016. international review of management and marketing the impact of the e-service quality of online databases on users' behavioral intentions: A perspective of postgraduate Students. *International Review of Management and Marketing*, 6(1), 1–10. <https://econjournals.com>