

# ANALYSIS OF THE INFLUENCE OF BRAND IMAGE, SERVICE QUALITY, AND ELECTRONIC WORD OF MOUTH ON PURCHASE DECISIONS

(Case Study on Shopee's Consumers)

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***Abstract** - This study aims to determine the effect of brand image, service quality and electronic word of mouth on purchasing decisions at Shopee.*

*The strategy used in this research is associative research. The method used in this research is a survey method. The population in this study were all consumers who have shopee. The sample in this study were 100 respondents. The data collection method used a questionnaire. The data sources of this research are primary and secondary data. The analysis method used in this research is PLS with the SmartPLS version 3.2 program evaluated with the outer and inner models.*

*The results of this study indicate that brand image has a positive and significant effect on purchasing decisions at Shopee, service quality has a positive and significant effect on purchasing decisions at Shopee, and electronic word of mouth has a positive and significant effect on purchasing decisions at Shopee. The  $R^{\text{Square}}$  value of 0,580 indicates that changes in purchasing decision variables can be explained by brand image, service quality, and electronic word of mouth by 58%.*

*The conclusion in this study shows that all independent variables in the study, namely brand image, service quality, electronic word of mouth, affect purchasing decisions at Shopee.*

**Keywords:** brand image, service quality, electronic word of mouth, purchase decisions

***Abstrak** - Penelitian ini bertujuan untuk mengetahui pengaruh citra merek, kualitas layanan dan electronic word of mouth terhadap keputusan pembelian pada Shopee.*

*Strategi yang digunakan dalam penelitian ini adalah penelitian asosiatif. Metode yang digunakan dalam penelitian ini*

*adalah metode survei. Populasi dalam penelitian ini adalah seluruh konsumen yang memiliki shopee. Sampel dalam penelitian ini sebanyak 100 responden. Metode pengumpulan data menggunakan kuesioner. Sumber data penelitian ini merupakan data primer dan sekunder. Metoda analisis yang digunakan dalam penelitian ini adalah PLS dengan program SmartPLS versi 3.2 dievaluasi dengan outer dan inner model.*

*Hasil penelitian ini menunjukkan bahwa citra merek berpengaruh positif dan signifikan terhadap keputusan pembelian pada Shopee, kualitas pelayanan berpengaruh positif dan signifikan terhadap keputusan pembelian pada Shopee, dan electronic word of mouth berpengaruh positif dan signifikan terhadap keputusan pembelian pada Shopee. Nilai  $R^{Square}$  sebesar 0,580 menunjukkan bahwa perubahan variabel keputusan pembelian dapat dijelaskan oleh citra merek, kualitas pelayanan, dan electronic word of mouth sebesar 58%.*

*Kesimpulan dalam penelitian ini menunjukkan bahwa semua variabel bebas dalam penelitian yaitu citra merek, kualitas pelayanan, electronic word of mouth mempengaruhi keputusan pembelian pada Shopee.*

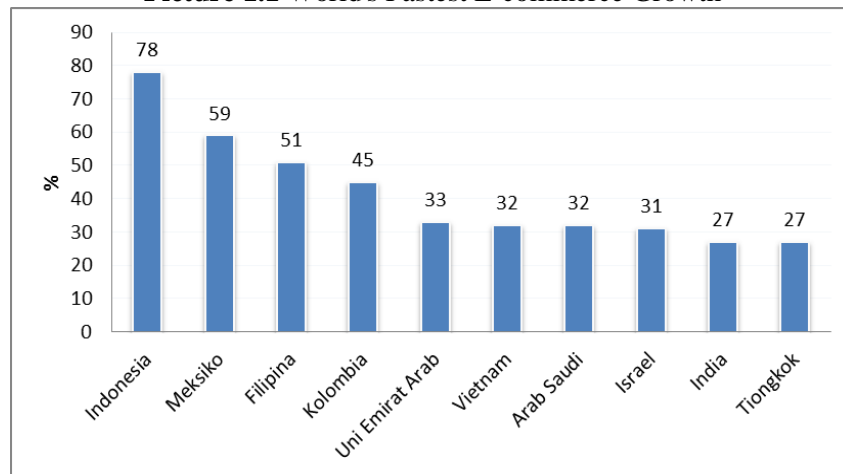
***Kata Kunci** : citra merek, kualitas pelayanan, electronic word of mouth, keputusan pembelian*

## **I. INTRODUCTION**

In this technological era, there are many media that provide information, for example print media, social media, television and others, and we can access all of these for free and without limits. With the ease of accessing unlimited information, there are many benefits that can be utilized. This technological advancement is used by various groups, ranging from children, adults, students, students, workers, to business people. With this technological advancement, a lot of easier work, from communicating, studying to shopping for daily necessities, can be done with just a smartphone.

With easy access to get and find something we want. Many people see opportunities that can be used to offer and sell products that consumers want and need. Consumers can have many choices in choosing various kinds of products or various prices, as well as business people who can offer their products to many potential consumers easily. Various small to large business activities take advantage of this development to run their business. The more rapid the development of information technology, the tighter the business becomes with the number of competitors. With a phenomenon like this, many parties take advantage of this business opportunity to reap profits by creating or providing an online store as part of e-commerce.

**Picture 1.1** World's Fastest E-commerce Growth



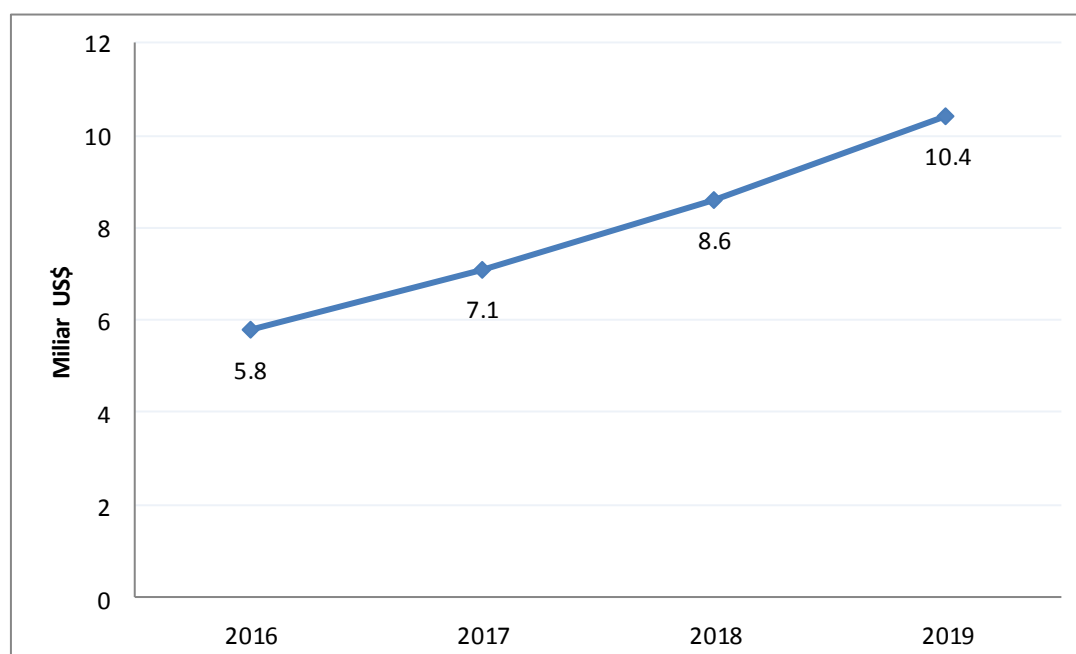
Source: databoks.katadata.co.id,2019:accessed 12 June 2020

Based on picture 1.1, Indonesia leads the ranks of the highest e-commerce growth in the world compared to nine other countries with a growth of 78% in 2018. The number of internet users in Indonesia, which is more than 100 million users, is one of the forces driving the growth of e-commerce.

On average, Indonesians spend on online shopping sites reaching US \$ 228 per person or around Rp. 3.19 million per person. About 17.7% of respondents spent their money on airline tickets and booking hotels online. As much as 11.9% of respondents spend their money on clothing and footwear products. The third most popular category is health and beauty products chosen by 10% of respondents.

Through online buying and selling sites, people's shopping patterns have begun to change. Currently, consumer behavior has begun to change, preferring a background of convenience so that everything becomes practical (Wibowo et al, 2015). There are several types of e-commerce that are developing in Indonesia, E-commerce (electronic commerce) is the activity of buying and selling goods / services or the transmission of funds or data through electronic networks, especially the internet. E-commerce consists of several types, namely B2B, B2C, C2C, C2B, B2A, C2A, O2O.

**Picture 1.2** Graph of Indonesia's E-commerce Transaction Value Development



Source: databoks.katadata.co.id,2019:accessed 12 June 2020

Based on Picture 1.2, the growth of e-commerce in Indonesia can be said to be very fast, the number of online shopping transactions in the country also shows an increasing graph. From the original USD 5.8 billion in 2016, based on Katadata's records, it skyrocketed to USD 10.4 billion in 2019, up 4.6 billion.

The number of online buying and selling sites that have emerged today makes people consider several things in choosing which online buying and selling site to buy their needs, things that are usually considered, buying online can be influenced by: Efficiency for searching (fast time, easy to use, and easy search effort); value (competitive price and good quality) of course because the price of each site for buying and selling is usually different, they compete to be able to attract buyers by offering affordable prices; and interaction (information, security, load time, and navigation) how the promotion is carried out by each online shop, not only that usually this online buying and selling site also offers many discounts for certain products, besides that the application is easy to use and display what is interesting is also the main attraction, especially for new users, and there are several other things that buyers can consider until they finally decide to buy the product they need.

The phenomenon of the development of e-commerce has led to the emergence of many startup companies engaged in e-commerce. Which indicates that the e-commerce business is a potential business field. Shopee is a type of C2C e-commerce, namely C to C (Consumer to Consumer), which is trade between individuals and consumers. C to C can be said to be a transaction in which consumers sell products directly to other consumers using electronic or online media.

Shopee is one of the e-commerce sites that the Indonesian community has known. Founded in 2015, Shopee was first launched in Singapore in 2015, and has since expanded its reach to

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Malaysia, Thailand, Taiwan, Indonesia, Vietnam and the Philippines. Starting in 2019, Shopee has also been active in Brazil, making it the first Shopee outside Asia.

Shopee is led by Chris Feng. Chris Feng is one of the former Rocket Internet activists who once headed Zalora and Lazada. In 2017, the platform recorded 80 million app downloads and more than 180 million active products from more than four million entrepreneurs. In Q4 2017, it reported a gross trade value (GMV) of US \$ 1.6 billion, up 206 percent from the previous year. Shopee had a total GMV value in 2018 of US \$ 2.7 billion, up 153 percent from 2017.

**Table 1.1** E-commerce Application Ranking

	Ranking				
	1	2	3	4	5
Monthly Active User ( Southeast Asia )	Shopee	Lazada	Tokopedia	Bukalapak	All Express
Top Download ( Indonesia )	Shopee	Lazada	Tokopedia	Bukalapak	Blibli.com

Source: *Iprice.co.id*, 2019

Based on table 1.1, Shopee has succeeded in becoming the application with the highest total number of monthly active visitors. Some of the campaigns that Shopee conducted this quarter such as cahsback, free delivery without minimum orders and the selection of brand ambassadors from well-known people who are close to users can be used as evidence of Shopee's persistence in acquiring markets, especially in Indonesia.

In addition, Shopee also targets the millennial generation to be more “at home” in their application with the In-App Games, this strategy has resulted in a high increase in user engagement in the Shopee application. It can be concluded that the In-App Games and entertainment features that are present at Shopee give a positive impression on the increase in the total monthly active visitors of Shopee in Indonesia.

**Table 1.2** E-commerce Application Ranking

E-Commerce	Monthly Web Visitors	Twitter	Instagram	Facebook
Shopee	71.533.300	210.300	4.215.000	16.793.400
Tokopedia	69.800.000	387.800	1.672.100	6.378.200
Bukalapak	37.633.300	185.700	1.015.800	n/a
Lazada	24.000.000	385.400	1.764.400	29.470.600
Blibli	17.600.000	501.200	1.073.400	8.636.300
JD ID	6.066.700	29.500	470.100	765.500

Sumber: *Iprice.co.id*, 2020

Based on table 1.2, the iprice Group also named Shopee as the e-commerce with the largest number of monthly web visitors and Instagram visitors in the first quarter of 2020. Shopee's total monthly web visitors are more than 71 million visitors and more than 4 million Instagram visitors.

Kotler and Keller (2016: 194) state that consumer purchasing decisions are part of consumer behavior, namely the study of how individuals, groups and organizations choose, buy, use, and how goods, services, ideas or experiences satisfy their needs and desires. Kotler and Keller (2016: 194) argue that purchasing decisions is an important thing to pay attention to because this will be a marketing strategy that will be carried out by companies for business success.

The brand image of a brand depends on consumer judgment after hearing or seeing the brand, if the consumer's assessment is good then the brand has a good image, and vice versa. This is of course very influential on the buyer's decision of potential consumers, the better the image of a brand, the greater the possibility of potential customers to purchase a product.

Electronic Word Of Mouth is a factor that is no less important in influencing purchasing decisions. Electronic Word Of Mouth (E-WOM) is the dissemination of information in the form of a review from previous consumers who have used the product through an internet media. Jalilvand and Samiei (2012) state electronic word of mouth as a statement of opinion from consumers regarding the actual and potential good or bad of a product. E-wom can effectively be a reference for consumers in evaluating a product or brand. Through this e-wom message, consumers get information about the quality of a product or service. In addition, messages from e-wom can also reduce the risk of dissatisfaction faced by consumers when buying a product or service.

### **Problem Formulation**

Based on this background, the problem formulation in this research is as follows:

1. Does Brand Image influence purchasing decisions at Shopee?
2. Does Service Quality affect purchasing decisions at Shopee?
3. Does Electronic Word of Mounth (E-WOM) affect purchasing decisions at Shopee?

## **II. THEORETICAL BHASIS**

### **Definition of Brand Image**

Brand image according to Tjiptono (2011: 49), namely a description of the association and consumer confidence in certain brands. Brand image is an association that appears in the minds of consumers when they remember a particular brand. This association can simply appear in the form of certain thoughts and images associated with a brand. Brand image is also the public's perception of the company or its products.

### **Definition of Service Quality**

Sunyoto (2016: 288) defined service quality to what extent is the difference between reality and customer expectations for the services they receive or receive. From the above definition, the authors conclude that service quality is a condition related to the product or service provided to meet expectations for customers.

### **Definition of *Electronic Word of Mouth***

Thurau, et al., In Tommi and Eristia (2014: 14) say electronic word of mouth is a statement made by actual, potential or previous consumers regarding products or companies where this information is available to people or institutions via the internet media.

### **Definition of Purchase Decisions**

Tjiptono (2016: 21) defines consumer purchase decisions as a process where consumers recognize the problem, looking for information about certain products or brands.

### **Relationship Between Variables**

#### **The Influence of Brand Image on Purchase Decisions**

Brand image according to Tjiptono (2011: 49), namely a description of the association and consumer confidence in certain brands. Brand image is an association that appears in the minds of consumers when they remember a particular brand. This association can simply appear in the form of certain thoughts and images associated with a brand. This is in accordance with the research conducted by (Rizki, et al., 2019; Adyanto and Santosa, 2018; Adnan, et al., 2020; Mahliza, 2020) that the brand image variable has a positive effect on purchasing decisions.

#### **The Influence of Service Quality on Purchase Decisions**

Service quality is a benchmark in determining interests that can provide positive references or not for consumers, because through service quality they will be able to feel satisfied or not with the services provided by service providers. Sunyoto (2016: 288) defined service quality to what extent is the difference between reality and customer expectations for the services they receive or receive. This is in accordance with the research that has been done (Adyanto and Santosa, 2018; Setyarko, 2016; Harahap and Amanah, 2018) service quality variables have a positive and significant effect on product trust and purchase decisions, this means that higher consumer confidence can increase purchasing decisions.

#### **The Influence of Electronic Word of Mouth on Purchase Decisions**

Thurau et al., In Tommi and Eristia (2014: 14) say electronic word of mouth is a statement made by actual, potential or previous consumers about a product or company where this information is available to people or institutions via the internet media. Dissemination of information through electronic word of mouth is carried out through online or internet media such as through blogs, microblogs, e-mails, consumer review sites, forums, virtual consumer communities, and social networking sites that can lead to interactions between consumers and other consumers. The existence of this online social communication will automatically help consumers share experiences about the products or services they get in carrying out the purchase process (Kamtarin in Syafaruddin Z et al. 2016: 66). This is in accordance with the research that has been done (Sari, et al., 2017; Maria, et al., 2016; Adnan, et al., 2020) that the electronic word of mouth variable has a positive effect on purchasing decisions.

### **Hypothesis Development**

According to Sugiyono (2017: 64) the hypothesis is a temporary answer to the formulation of research problems. Based on the formulation and research objectives, a research hypothesis can be formulated as follows:

H<sub>1</sub>: It is suspected that there is a positive effect on brand image on purchasing decisions at Shopee.

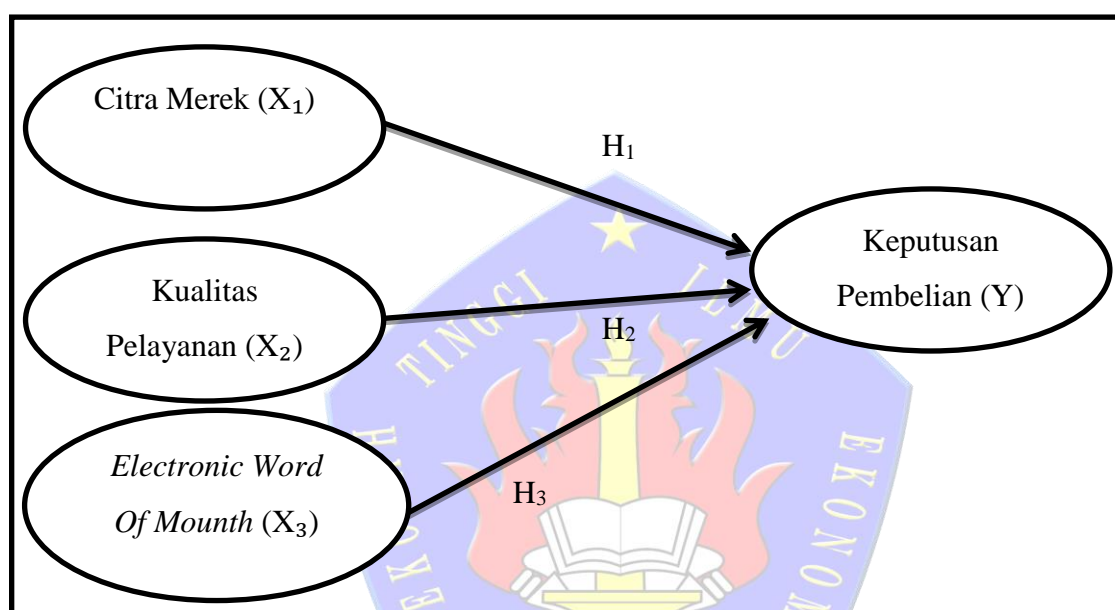
H<sub>2</sub>: It is suspected that there is a positive effect of service quality on purchasing decisions at Shopee.

H<sub>3</sub>: It is suspected that electronic word of mouth has a positive influence on purchasing decisions at Shopee.

### **Research Conceptual Framework**

This study uses 3 (three) exogenous variables, namely brand image (X<sub>1</sub>), service quality (X<sub>2</sub>), Electronic Word of Mouth (X<sub>3</sub>), while the endogenous variable is the purchase decision (Y).

**Picture 2.1** Research Conceptual Framework



Source: Developed for this research, 2020

## **III. RESEARCH METHODS**

### **Research Strategy**

The strategy used in this research is an associative research strategy, namely the research strategy used to determine the relationship between two or more variables. Where this research aims to provide an explanation whether there is an influence between each - each variable, namely brand image (X<sub>1</sub>), service quality (X<sub>2</sub>), and electronic word of mouth (X<sub>3</sub>) are independent variables and purchase decisions (Y) are dependent variables.

This study uses a quantitative approach. Quantitative approaches are methods for testing certain theories by examining the relationship between variables. The quantitative approach strategy used in this research is a survey. Survey is to describe quantitatively the tendency, attitude, or opinion of a certain population by examining a sample of that population. This method includes cross-sectional and longitudinal studies using questionnaires or planned interviews in data collection, with the aim of generalizing the population based on a predetermined sample (Creswell, 2016: 28).

### **Sample and Population**

#### **Research Population**



General population: All consumers who own a shopee.

Target population: All consumers who own a shopee and make purchases in July 2020.

### **Sample**

According to Sugiyono (2016: 81) the sample is part of the number and characteristics of the population. If the population is large and it is impossible for the researcher to study everything in the population, for example, because of limited funds, energy and time, the researcher can use a sample drawn from that population. Furthermore, because the analysis using PLS requires a maximum sample of 100 respondents, the number of samples taken is 100 respondents (Ghozali, 2014: 34).

The sampling technique is a sampling technique to determine the sample to be used for research, there are various sampling techniques used (Sugiyono, 2017: 60). This study uses purposive sampling technique, which is a sampling technique that is set deliberately to become a sample obtained through distributing questionnaires. Respondents who match the data sources referred to in this study are office colleagues, relatives, family, and college friends.

### **Data and Data Collection Method**

#### **Data**

##### **1. Primary Data**

Primary data is a data source that directly provides data to data collectors. Primary data in this study are about brand image, service quality, electronic word of mouth, and purchase decisions.

##### **2. Secondary Data**

Secondary data is some data that does not directly provide data to data collectors. This secondary data is data that supports primary data needs such as books, literature, journals, websites, supporting literature related to and supporting this research.

#### **Data Collection Method**

Researchers used a questionnaire as a means of collecting data in this study. The questionnaire is an efficient data collection technique when the researcher knows exactly what variables to measure and what can be expected from the respondent and the form, words, and order of statements will influence the response. Closed statements, namely specifying all possible answers and providing answers that are easier to interpret and compute. Open statements allow respondents to answer statements in their own words and are often more likely to express a person's way of thinking. The questionnaire can be given to respondents in person or sent by post or the internet.

This research is measured by the Likert scale, which is a scale used to measure the attitudes, opinions and perceptions of a person or group of people about social phenomena (Sugiyono, 2017: 136).

### **Data Analysis Techniques**

#### **PLS Analysis**

In this study, data processing used the PLS (Partial Least Square) method using the SmartPLS (3.2) software. According to Ghozali and Latan (2015: 34) PLS (Partial Least Square) is a data analysis method used to measure a certain scale with a small sample size. This method is suitable for use in this study because of the limitations of the data (number of samples) studied, including the number of studies (samples) only small or small (less than 100).

### **Outer Model Analysis**

Done to ensure that the measuring instrument used is suitable for measurement (valid and reliable). Analysis of the outer model for reflective indicators can be tested through several indicators:

#### 1. Convergent Validity

The value of convergent validity is the value of loading factors on latent variables with its indicators. Convergent validity shows the degree to which the measurement results of a concept are correlated with the measurement results of other concepts which theoretically must be positively correlated. An indicator is said to have good reliability, if the outer loading value is above 0.7. While the outer loading value can still be tolerated  $> 0.5$  if  $< 0.5$  is removed from the model. Apart from seeing the outer loading value, the convergent validity test can also be done by looking at the AVE value. If the AVE value is above 0.5 then an indicator has fulfilled good convergent validity.

#### 2. Discriminant cross loading

It is a useful value to find out whether a construct has sufficient discriminant, by comparing the loading value of the intended construct must be greater than the loading value of other constructs. The requirement to fulfill this discriminant validity requirement is that the result in view combined loading and cross-loadings shows that loading to other constructs is of lower value than loading to variable constructs.

#### 3. Composite Reliability dan Cronbach's Alpha

Composite Reliability is the part used to test the reliability value of indicators on a variable. A variable can be declared to meet composite reliability if it has a composite reliability value  $> 0.7$  (Ghozali, 2014: 39). The reliability test with the composite reliability above can be strengthened by using the Cronbach's alpha value. A variable can be declared reliable or meets Cronbach's alpha if it has a Cronbach's alpha value  $> 0.6$ .

### **Inner Model Analysis**

Inner model analysis is also known as structural model analysis, which is carried out to ensure that the structural model built is robust and accurate. The inner model evaluation can be seen from several indicators which include (Vicenzo, 2016: 55):

#### 1. $Q^2$ Predictive Relevance

In PLS (Partial Least Square) analysis,  $Q^2$  shows the predictive power of the model. The  $Q^2$  value of the model of 0.02 indicates that the model has a weak predictive relevance, the  $Q^2$  value of the model is 0.15 which indicates that the model has moderate predictive relevance and the  $Q^2$  value of the model is 0.35 indicating that the model has a strong predictive relevance. The closer to number 1, the better the predictive value is.

#### 2. Model Fit

This model fit test is used to determine whether a model has a fit with the data. In the model fit test, it can be seen from the model's SMRM value. The PLS model is declared to have met the criteria for the fit model test if the SMRM value is  $< 0.10$  and the model is declared perfect fit if the SRMR value  $< 0.08$ .

#### 3. Effect Size ( $f^2$ )

The value of  $f^2$  obtained can be categorized into the category of small effect ( $f^2 = 0.02$ ), medium effect ( $f^2 = 0.15$ ) and a large effect ( $f^2 = 0.35$ ).

#### 4. R-Squared

Used to determine how much influence exogenous variables affect endogenous variables.

### **Hypothesis Test**

After conducting various evaluations, both the outer model and the inner model, the next step is to do hypothesis testing. Hypothesis testing is used to explain the direction of the

relationship between the independent variable and the dependent variable. This test is carried out using PLS (Partial Least Square) on the model that has been created. The results of the correlation between constructs are measured by looking at the path coefficient and the level of significance which is then compared with the research hypothesis

The hypothesis used in this study is:

1.  $H_0: \beta = 0$ , meaning that the brand image variable has no significant effect on the purchasing decision variable.
2.  $H_1: \beta \neq 0$ , meaning that the brand image variable has a significant effect on the purchasing decision variable.
3.  $H_0: \beta = 0$ , meaning that the service quality variable has no significant effect on the purchasing decision variable.
4.  $H_1: \beta \neq 0$ , meaning that the service quality variable has a significant effect on the purchasing decision variable.
5.  $H_0: \beta = 0$ , meaning that the variable electronic word of mouth has no significant effect on the purchasing decision variable.
6.  $H_1: \beta \neq 0$ , meaning that the variable electronic word of mouth has a significant effect on purchasing decision variables.

The basis for decision making (Ghozali, 2015: 85):

1. By comparing the value of t count with t table ( $\alpha = 5\%$ ).
  - a. If t count > t table, then  $H_0$  is rejected and  $H_1$  is accepted.
  - b. If t count < t table, then  $H_0$  is accepted and  $H_1$  is rejected.
2. By using the probability of significance.
  - a. If the significance value < 0.05, then  $H_0$  is rejected and  $H_1$  is accepted.
  - b. If the significance value is > 0.05 then  $H_0$  is accepted and  $H_1$  is rejected.
3. By looking at the parameter coefficient.

An exogenous variable can be said to have a positive or negative effect on endogenous variables by looking at the number of parameter coefficients. If the parameter coefficient value shows a positive number, the exogenous variable is declared to have a positive effect on the endogenous variable, and vice versa.

## **IV. RESEARCH RESULTS AND DISCUSSION**

### **Company Profile Description**

Shopee is an e-commerce platform headquartered in Singapore under the SEA Group (formerly known as Garena), which was founded in 2009 by Forrest Li. Shopee was first launched in Singapore in 2015 and is led by Cris Feng. In the same year shopee also expanded its reach to Malaysia, Thailand, Taiwan, Indonesia, Vietnam and the Philippines. Starting in 2019, Shopee has also been active in Brazil, making Shopee the first in the United States.

Shopee has become one of the largest digital-based buying and selling companies in Indonesia. Since officially entering Indonesia in December 2015, Shopee has succeeded in becoming one of Indonesia's fastest growing internet companies. Using a marketplace and online mall business model, Shopee enables individuals, small shops, brands to open and manage online stores and provides customers with an easy, safe, and fast online shopping experience through strong payment and fulfillment support. Shopee first started out as a customer-to-customer (C2C) marketplace but has now shifted to a C2C and Business for Customer (B2C) hybrid model since launching Shopee Mall which is an online shop platform for well-known store distribution.

### **Vision and Mission**

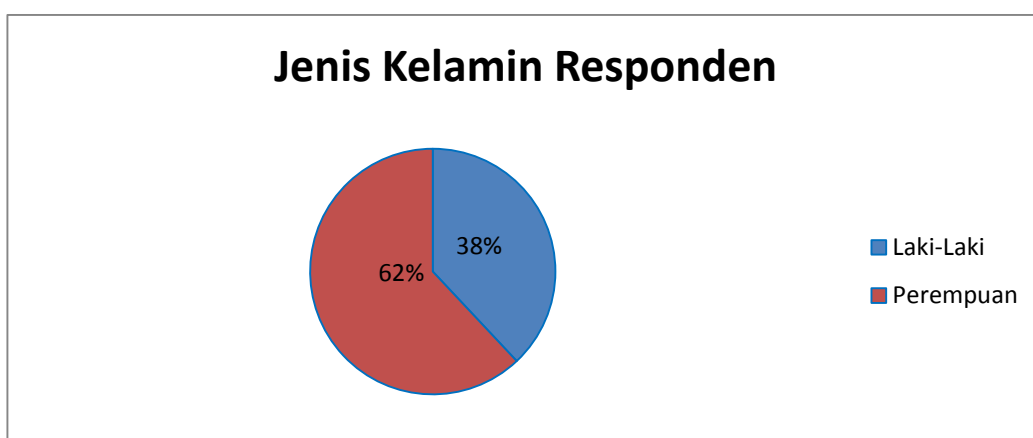
Shopee Indonesia company has a vision to become the no.1 mobile marketplace in Indonesia. Meanwhile, the company's mission is to develop an entrepreneurial spirit for sellers in Indonesia.

### **Respondents Description**

From 100 questionnaires distributed to 100 Shopee consumer respondents, data on the characteristics of respondents were obtained which included respondent data based on: gender, age, education, occupation, and income which were described as follows:

1. Respondent data based on gender, in this study used to see Shopee consumers based on the gender of the research sample, while the explanation of identification can be explained in the following:

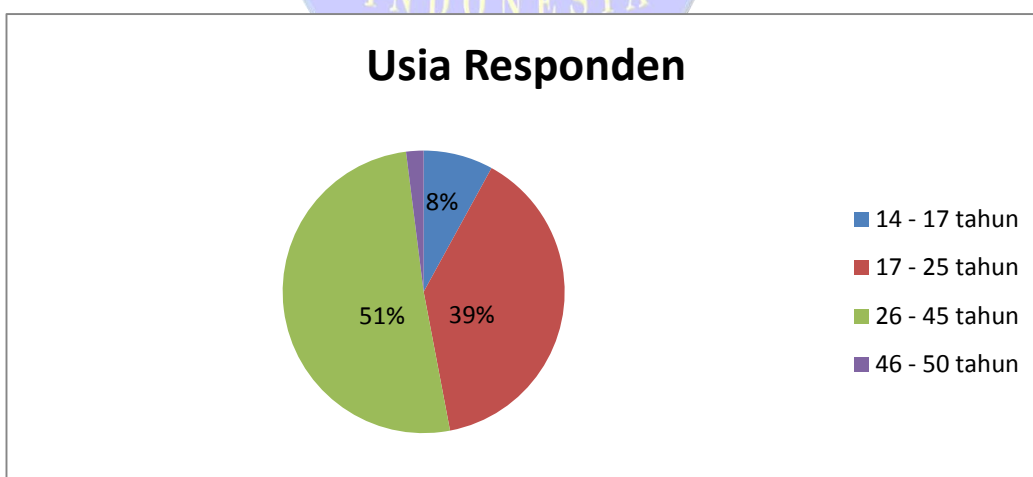
**Picture 4.1** Respondents Gender



Source: Processing Data, 2020

2. Respondent data by age, used to see Shopee consumers by age who were the samples of the study, as for the explanation of identification can be explained in the following:

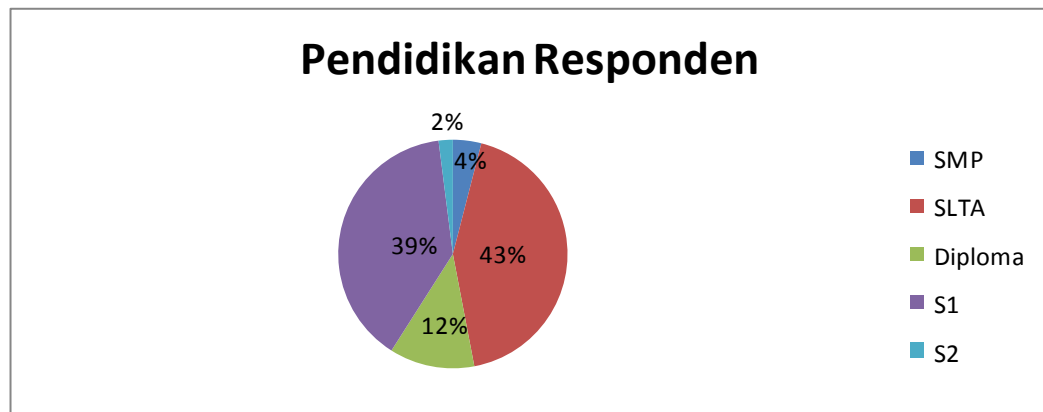
**Picture 4.2** Respondents Age



Source: Processing Data, 2020

3. Respondent data based on education is used to see Shopee consumers based on education who are the samples of the research, as for the explanation of identification can be explained in the following:

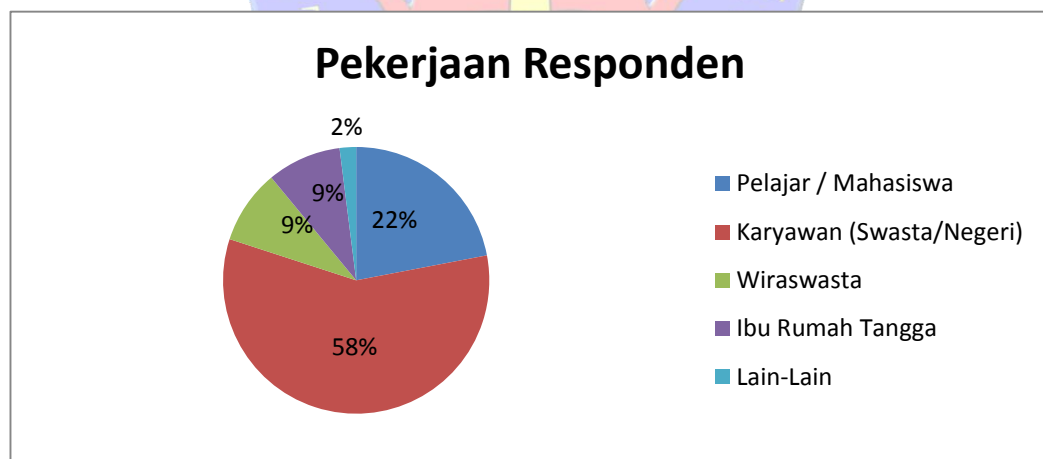
**Picture 4.3** Respondents Education



Source: Processing Data, 2020

4. Respondent data by occupation is used to see Shopee consumers based on the work that is the sample of the research, as for the explanation of identification can be explained in the following:

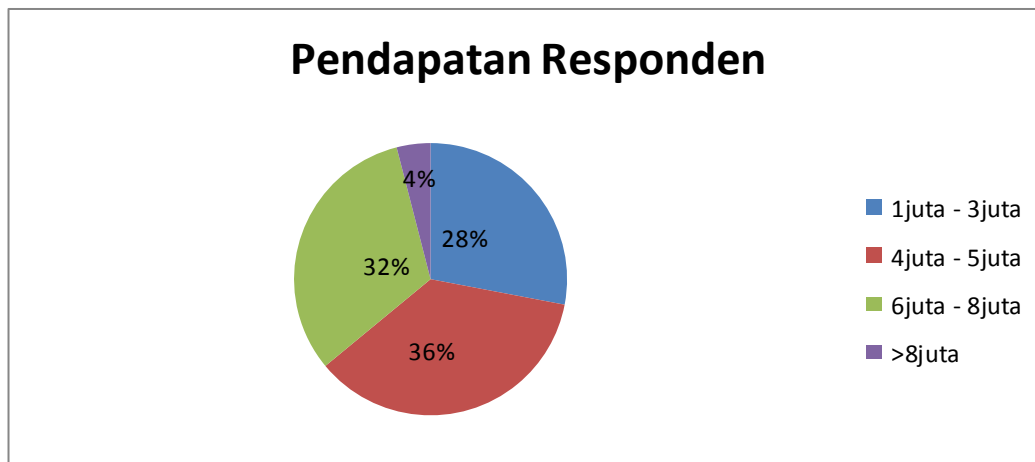
**Picture 4.4** Respondents Occupation



Source: Processing Data, 2020

5. Respondent data based on income, is used to see Shopee consumers based on income who are the samples of the study, as for the explanation of identification can be explained in the following:

Picture 4.5 Respondents Income

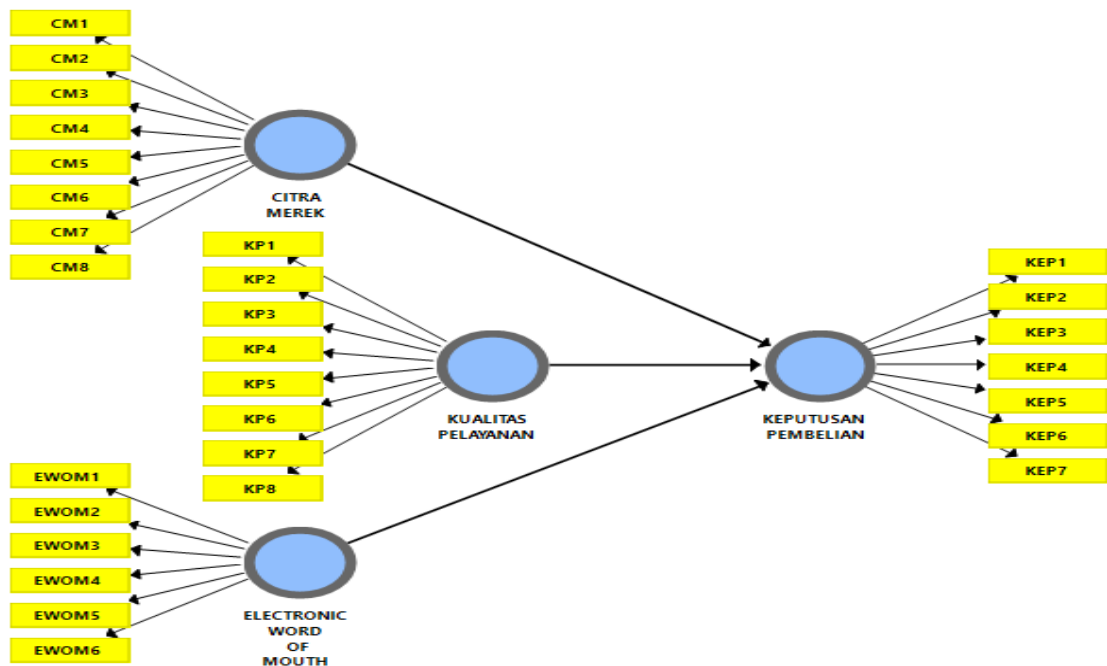


Source: Processing Data, 2020

### PLS Analysis

In this research, the influence of brand image, service quality, and electronic word of mouth variables on purchasing decisions at Shopee will be analyzed using PLS (Partial Least Square) analysis. In this study, the brand image variable was measured using 8 indicators, the service quality variable was measured using 8 indicators, the electronic word of mouth variable was measured using 6 indicators and the purchasing decision variable was measured using 7 indicators. Based on the hypothetical design proposed in this study, the PLS model specifications to be estimated in this study are as follows:

Picture 4.6 PLS Specification Model



The stages in the PLS analysis include the measurement model testing phase (outer model) and the structural model testing phase (inner model). At the outer model testing stage, all indicators on each variable will be tested for validity and reliability in measuring the variables, then in the inner model test, hypo-etiology testing is carried out based on the results of the t test and the influence of all exogenous variables on endogenous variables will also be calculated by looking at the value. adjusted R square of endogenous variables.

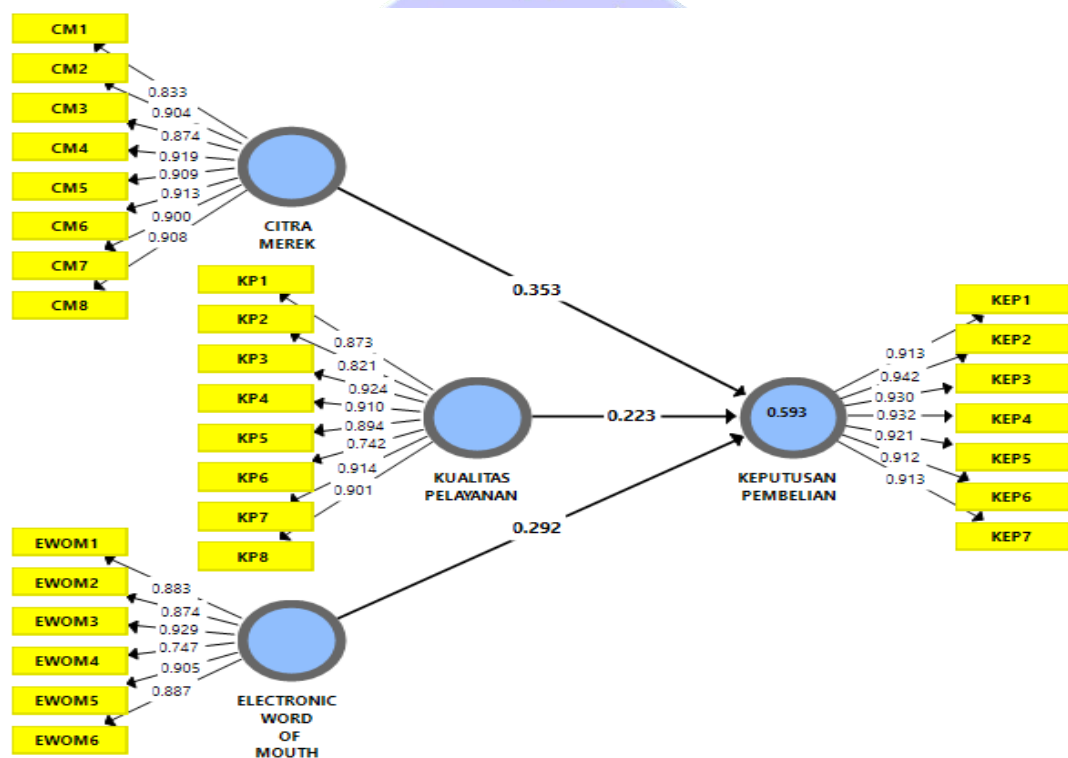
**Outer Model Test**

The testing phase of the measurement model includes testing Convergent Validity, Discriminant Validity and Composite Reliability. The results of the PLS analysis can be used to test the research hypothesis if all indicators in the PLS model have met the requirements of convergent validity, discriminant validity and composite reliability.

1. Convergent Validity

Convergent validity is related to the principle that the gauges (manifest variables) of a construct should be highly correlated, the convergent forex test can be seen from the factor loading value for each construct indicator (Ghozali, 2014: 74).

**Picture 4.7** PLS Model Estimation Results (Algorithm)



Source: SmartPLS Data Processing, 2020

An indicator is said to have good reliability if the outer loading value is above 0.70 (Ghozali, 2014: 38). Then the loading factor limit used to test the convergent validity of each indicator is 0.70.

Based on the results of the model estimation in Figure 4.7, the following results are obtained:

- a. That all indicators of brand image have a loading factor value above 0.70. The fourth brand image indicator has the highest loading factor value, namely 0.919, and the first brand image indicator has the lowest loading factor value, namely 0.833.
- b. That all indicators of service quality have a loading factor above 0.70. The third service quality indicator has the highest loading factor value, namely 0.924, and the sixth service quality indicator has the lowest loading factor value, namely 0.742.
- c. That all indicators of electronic word of mouth have a loading factor above 0.70. The third electronic word of mouth indicator has the highest loading factor value, namely 0.929, and the fourth service quality indicator has the lowest loading factor value, namely 0.747.
- d. That all indicators of purchase decisions have a loading factor above 0.70. The second indicator of purchasing decisions has the highest loading factor value of 0.942, and the sixth indicator of service quality has the lowest loading factor value of 0.912.

Apart from looking at the loading factor value of each indicator, the convergent validity must also be tested from the AVE value of each construct, all constructs in the PLS model are declared to have met the convergent validity if the AVE value of each construct is  $> 0.5$ . The complete AVE value of each construct can be seen in the following table:

**Table 4.5.** AVE Value

	Average Variance Extracted (AVE)
BRAND IMAGE	0,802
ELECTRONIC WORD OF MOUTH	0,762
PURCHASE DECISIONS	0,852
SERVICE QUALITY	0,765

Source: SmartPLS Data Processing, 2020

The results of the analysis in table 4.5 show that the brand image construct has an AVE value of 0.802, the electronic word of mouth construct has an AVE value of 0.762, the purchase decision construct has an AVE value of 0.852, and the service quality construct has an AVE value of 0.765, which means that respectively the construct has met good convergent validity.

## 2. Discriminant Validity

Discriminant validity is done to ensure that each concept of each latent variable is different from other variables (Ghozali, 2014: 39). The model has good discriminant validity if the AVE square value of each exogenous construct (the value on the diagonal) exceeds the correlation between that construct and other constructs (the value is below the diagonal). The results of discriminant validity testing were obtained as follows:

**Table 4.6.** Discriminant Validity

	BRAND IMAGE	E-WOM	PURCHASE DECISIONS	SERVICE QUALITY
BRAND IMAGE	0,895			
E-WOM	0,681	0,873		
PURCHASE DECISIONS	0,695	0,689	0,923	
SERVICE QUALITY	0,641	0,701	0,654	0,874

Source: SmartPLS Data Processing, 2020



The results of the discriminant validity test in table 4.6 show that the brand image construct has an AVE square root value of 0.895, the electronic word of mouth construct has an AVE square root value of 0.873, the purchase decision construct has an AVE square root value of 0.923, and the construct service quality has a square root value of 0.874 AVE. All constructs have a square root value of AVE above the correlation value with other latent constructs so that it can be concluded that the model has fulfilled good discriminant validity.

### 3. Composite Reliability and Cronbach's Alpha

Construct reliability can be assessed from Cronbach's alpha and the composite reliability value of each construct. The construct is said to have high reliability if the Cronbach's alpha value exceeds 0.7 and the composite reliability value exceeds 0.70 (Ghozali, 2014: 41). Cronbach's alpha value and composite reliability value can be seen in table 4.7:

**Table 4.7.** Composite Reliability Test Results

	<i>Cronbach's Alpha</i>	<i>Composite Reliability</i>
BRAND IMAGE	0,965	0,970
ELECTRONIC WORD OF MOUTH	0,937	0,950
PURCHASE DECISIONS	0,971	0,976
SERVICE QUALITY	0,955	0,963

Source: SmartPLS Data Processing, 2020

Based on the results of the reliability test in table 4.7. the value of Cronbach's alpha brand image construct was  $0.965 > 0.7$ , the composite reliability value of the brand image construct was  $0.970 > 0.7$ . This shows that the brand image construct has met a good construct reliability. The Cronbach's alpha value of the electronic word of mouth construct was  $0.937 > 0.7$ , the composite reliability value of the electronic word of mouth construct was  $0.950 > 0.7$ . This shows that the electronic word of mouth construct has fulfilled good construct reliability. The value of Cronbach's alpha purchase decision construct was  $0.971 > 0.7$ , the composite reliability value of the purchase decision construct was  $0.976 > 0.7$ . This shows that the purchase decision construct has met the reliability of the good construct. The Cronbach's alpha value of service quality construct was  $0.955 > 0.7$ , the composite reliability value of the service quality construct was  $0.963 > 0.7$ . This shows that the service quality construct has met the good construct reliability.

### Inner Model Test

#### 1. Q<sup>2</sup> Predictive Relevance

In PLS (Partial Least Square) analysis, Q2 shows the predictive power of the model. The Q2 value of the model of 0.02 indicates that the model has a weak predictive relevance, the Q2 value of the model is 0.15 which indicates that the model has moderate predictive relevance and the Q2 value of the model is 0.35 indicating that the model has a strong predictive relevance. The closer to number 1, the stronger the predictive value is. The value of Q2 can be seen in the following table:

**Table 4.8.** Q<sup>2</sup>Predictive Relevance

	SSO	SSE	Q <sup>2</sup> (=1-SSE/SSO)
BRAND IMAGE	800.000	800.000	
ELECTRONIC WORD OF MOUTH	600.000	600.000	
PURCHASE DECISIONS	700.000	355.889	0.492

SERVICE QUALITY	800.000	800.000	
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Source: SmartPLS Data Processing, 2020

The analysis results are in table 4.8. shows that the Q2 value of the model with endogenous variables of purchase decisions is 0.492, this indicates that the PLS (Partial Least Square) model has a strong predictive relevance.

2. Goodness of Fit Model

The PLS (Partial Least Square) model can be seen from the SMRM model value. The PLS model is declared to have met the goodness of fit model criteria if the SRMR value is <0.10 and the model is declared perfect fit if the SRMR value is <0.08 (Vicenzo, 2016: 55). The SMRM value can be seen in the following table:

**Table 4.9.** Goodness of fit Model

	Saturated Model	Estimated Model
SRMR	0,067	0,067

Source: SmartPLS Data Processing, 2020

The results of the goodness of fit test for the PLS (Partial Least Square) model are in table 4.9. indicates that the SRMR value of the PLS (Partial Least Square) model is 0.067. Because the SRMR value of the model is below 0.10, the PLS (Partial Least Square) model is declared perfect fit, so it is feasible to use it to test the research hypothesis.

3. Effect Size (f<sup>2</sup>)

In PLS (Partial Least Square) analysis, the value of f2 shows the size of the partial influence of each predictor variable on the endogenous variables. The f2 value obtained can then be categorized into the category of low effect (f2 = 0.02), medium effect (f2 = 0.15) and has a large effect (f2 = 0.35). The following is the f2 value of each exogenous variable against endogenous variables:

**Table 4.10.** F-Square Value

	PURCHASE DECISIONS
BRAND IMAGE	0,148
ELECTRONIC WORD OF MOUTH	0,088
SERVICE QUALITY	0,056

Source: SmartPLS Data Processing, 2020

Based on table 4.10. obtained several results that the brand image with 0.148 is the variable that most influences the purchase decision. The results of electronic word of mouth are 0.088 and the quality of service is 0.056, which means that each variable has a small effect on purchasing decisions..

4. Coefficients of Determination (R<sup>2</sup>)

The coefficient of determination in the PLS analysis shows the influence of all exogenous variables on the endogenous. The coefficient of determination in a model with 1 exogenous variable is seen from the R2 value, while for models with more than 1 exogenous variable, the coefficient of determination is seen from the adjusted R-Square value..

**Table 4.11.** Coefficients of Determination

	R Square	Adjusted R Square
PURCHASE DECISIONS	0,593	0,580

Source: SmartPLS Data Processing, 2020

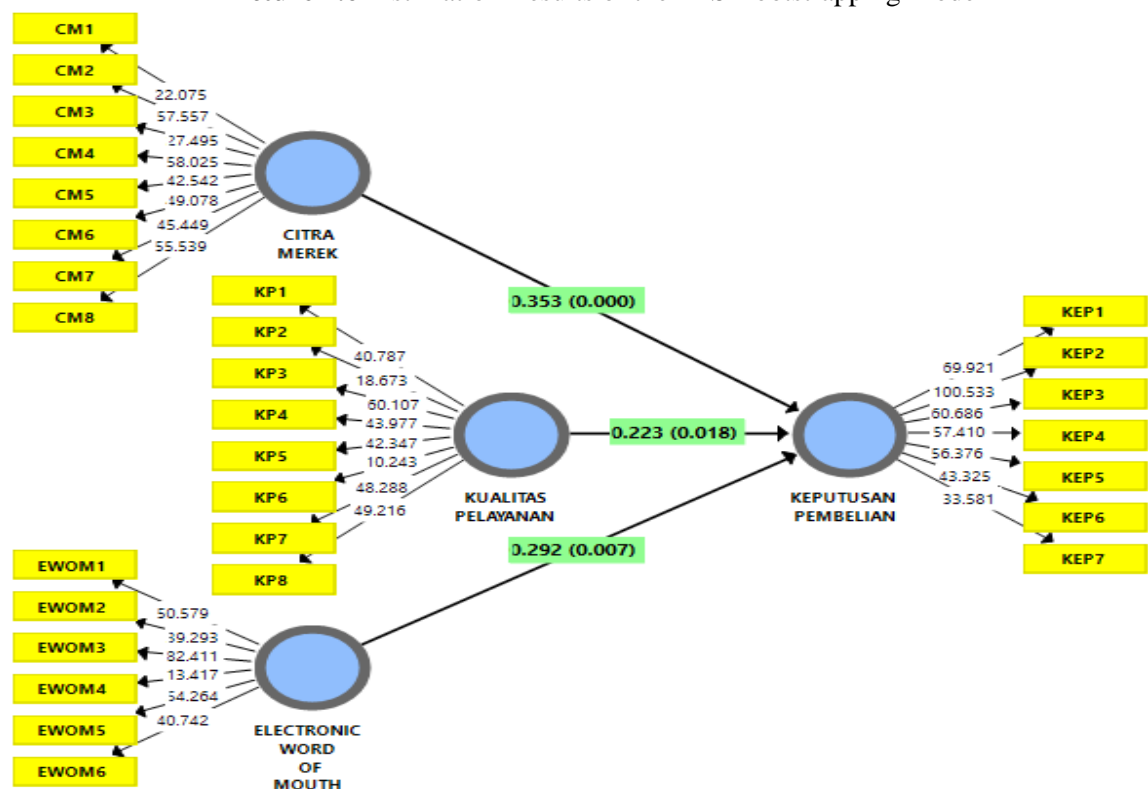
Based on the results of the analysis in table 4:10. The analysis results show that the adjusted RSquare model value is 0.580. This shows that changes in purchasing decision

variables can be explained by brand image, service quality, and electronic word of mouth by 58%, while the remaining 42% is explained by variables other than brand image, service quality and electronic word of mouth.

### Hypothesis Test

The results of the model estimation as a reference for testing the hypothesis in this study can be seen in the following figure:

**Picture 4.6** Estimation Results of the PLS Bootstrapping Model



Source: SmartPLS Data Processing, 2020

Meanwhile, the calculation results can be seen based on the direct effect.

**Tabel 4.12** Pengaruh Langsung

	Parameter Coefficients	T Statistics	P Values
BRAND IMAGE -> PURCHASE DECISIONS	0,353	3,506	0,000
ELECTRONIC WORD OF MOUTH -> PURCHASE DECISIONS	0,292	2,730	0,007
SERVICE QUALITY -> PURCHASE DECISIONS	0,223	2,370	0,018

Source: SmartPLS Data Processing, 2020

Based on table 4.12. It can be seen that the significant influence of each variable on brand image, service quality, and electronic word of mouth by looking at the value of the parameter coefficient:

1. The amount of the parameter coefficient for the brand image variable is 0.353 which means that there is a positive influence on brand image on purchasing decisions. The significance can be seen from the t-statistic value and p value. The t statistical value is  $3.506 > t\text{-table } 1.96$  and the p value is  $0.000 < 0.05$ . So it can be seen that the brand image variable has a positive and significant effect on purchasing decisions at Shopee, so  $H_0$  is rejected and  $H_1$  is accepted.
2. The amount of the parameter coefficient for the service quality variable is 0.223, which means that there is a positive effect of service quality on purchasing decisions. The significance can be seen from the t-statistic and p values. The statistical t value is  $2.370 > t\text{-table } 1.96$  and the p value is  $0.018 < 0.05$ . So it can be seen that the variable service quality has a positive and significant effect on purchasing decisions at Shopee, so  $H_0$  is rejected and  $H_1$  is accepted.
3. The amount of the parameter coefficient for the variable electronic word of mouth is 0.292 which means that there is a positive influence on electronic word of mouth on purchasing decisions. The significance can be seen from the t-statistic value and p value. The statistical t value is  $2.730 > t\text{-table } 1.96$  and the p value is  $0.007 < 0.05$ . So it can be seen that the variable electronic word of mouth has a positive and significant effect on purchasing decisions at Shopee, so  $H_0$  is rejected and  $H_1$  is accepted.

## **Discussions**

### **1. The Influence of Brand Image on Purchase Decisions**

Brand image according to Kotler and Keller (2016) is a consumer's perception of a brand as a reflection of the associations that exist in the minds of consumers. The better the brand image of the company, the more likely it is that people will make purchasing decisions. Brand image influences purchasing decisions at Shopee, by advertising its products attractively, attracting consumers and buying products at Shopee. So Shopee has to innovate even more to maintain a good brand image. This is in accordance with the research conducted by (Rizki, et al., 2019; Adyanto and Santosa, 2018; Adnan, et al., 2020; Mahliza, 2020) that the brand image variable has a positive effect on purchasing decisions.

### **2. The Influence of Service Quality on Purchase Decisions**

The quality of service according to Sunyoto (2016: 288) is the extent to which the difference between reality and customer expectations for the services they receive or receive. Service quality affects purchasing decisions at Shopee. Quality of service, such as simplifying transactions with several types of payments, providing free shipping and providing alternative solutions in the event of complaints from consumers, will quickly attract consumers to shop and repeat their next purchase at Shopee. This is in accordance with the research that has been done (Adyanto and Santosa, 2018; Setyarko, 2016; Harahap and Amanah, 2018) service quality variables have a positive and significant effect on product trust and purchasing decisions.

### **3. The Influence of Electronic Word of Mouth on Purchase Decisions**

Electronic word of mouth is a statement made by actual, potential or previous consumers regarding a product or company where this information is available to people or institutions via the internet (Thurau et al., In Tommi and Eristia, 2014: 14). Electronic word of mouth influences purchasing decisions at Shopee. A lot of information on the product choices that Shopee offers, lots of reviews (reviews) of Shopee products on social media, as well as positive comments from previous users can attract consumers to buy products on Shopee. This is in accordance with the research that has been done (Sari, et al., 2017; Maria, et al., 2016; Adnan,

et al., 2020) that the electronic word of mouth variable has a positive effect on purchasing decisions.

## **V. CONCLUSIONS AND SUGGESTIONS**

### **Conclusions**

Based on the results of research that has been carried out and data analysis as described in the previous chapter, the following conclusions are presented from the research results as follows:

1. Brand image can increase purchasing decisions. Thus, consumers take brand image into consideration in deciding to buy at Shopee. The better the brand image, the higher the consumer purchasing decisions.
2. Good quality service is able to improve purchasing decisions. Thus, consumers make service quality a consideration in deciding to buy at Shopee. The more prioritizing service quality, the more convincing consumers to make purchases.
3. Positive and interesting electronic word of mouth can improve purchasing decisions. Thus, consumers make electronic word of mouth a consideration in deciding to buy at Shopee. The more good comments and how to explain well on a product, the higher the consumer's purchasing decision.

### **Suggestions**

Based on the research results and conclusions described above, the suggestions that can be submitted to Shopee relating to this research are as follows:

1. From the research results, it can be seen that brand image has a positive and significant effect on consumer decisions to buy products at Shopee. Researchers provide suggestions for Shopee to continue to strive to improve a good image in the minds of new and old consumers. Advertise its products attractively, make consumers interested and buy products on Shopee. So Shopee has to innovate even more to maintain a good brand image.
2. From the research results, it can be seen that service quality has a positive and significant effect on consumer decisions to buy products at Shopee. Researchers provide suggestions that sellers at online stores at Shopee improve understanding of customer needs for their products, so that consumers get good service and continue to shop online at Shopee.
3. From the research results, it can be seen that electronic word of mouth has a positive and significant effect on consumer decisions to buy products at Shopee. Researchers provide suggestions for Shopee to provide more information on the product choices offered, increase Shopee product reviews on social media, so that consumers can easily shop online.

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