

# The Effect of Brand Awareness and Quality Perception of Customer Satisfaction through Purchasing Decisions Honda and Yamaha Motors (Case study of Maros Muslim University Students)

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## **Abstract**

This research was conducted with the aim to: (1) test and analyze the effect of brand awareness on consumer satisfaction through purchasing decisions; (2) test and analyze the effect of perceived quality on consumer satisfaction through purchasing decisions. The population of this study was all of Management Bachelor degree students of the Faculty of Economics, Maros Muslim University using 239 Honda and Yamaha motorcycles consumer. The number of samples in this study were 150 people using the Slovin formula with a confidence level of 95% with a value of  $e = 5\%$ , the distribution of samples was based on Honda and Yamaha consumer, namely samples for Honda users were 72 people and Yamaha users were 78 people using the Stratified Random formula Sampling, the survey was

conducted from November to April 2019. Data were analyzed using the Structural Equation Modeling (SEM) program. The results of this study indicate that: (1) brand awareness cannot directly affect customer satisfaction. This is because respondents stated that brand awareness does not guarantee consumers will be satisfied only by knowing and remembering Honda and Yamaha motorcycle brands. (2) Perceived quality has a significant effect on purchasing decisions. This shows that the higher the consumer's perception of product quality, the higher the consumer's purchasing decisions, and vice versa. Therefore, respondents stated that the perception of quality really guarantees consumers will be satisfied just by seeing and remembering the model of the motor

**Keywords:** Brand awareness, Quality, Purchasing decisions, Consumer satisfaction

## 1. Background

The development of increasingly advanced technology has a major influence on the automotive industry; one of the industrial sectors that are currently experiencing quite rapid growth in the automotive industry is the motorcycle. The development of the motorcycle industry in Indonesia is influenced by factors of human needs because at this time humans are required to be able to implement efficiency and effectiveness in all their activities, as well as in terms of mobility from one place to another, this will certainly affect the choice of transportation to be used, in the current condition of all means of transportation, motorbikes are the choice of the community because they are considered the most effective and efficient, aside from being free of traffic jams, motorbikes are also more efficient in the use of fuel, more efficient in travel time and easy to obtain a motorcycle through scattered dealers. In the field of transportation, we may already know motorbikes as a means of transportation commonly used by Indonesian residents. This is because in addition to being practical and economical when compared to paying the cost of public transportation, another reason that affects the development of motorcycles in Indonesia is to speed up someone when they are about to make a move from one place to another. That is the reason why the growth of motorbike users in this country is increasing every year even when the economic crisis that shook the country a few years ago the growth of motorcycles actually increased.

Over time and the increasing need for transportation equipment brings fresh air to automotive companies, especially in the field of motorcycles, which are needed by many people in addition to being affordable and also easy to maintain. Nowadays, there are many motorcycle brands, such as Honda and Yamaha, as the main players in the motorcycle market in this country that are always competing to win the interest of consumers to buy their motorcycle products. Because to attract consumers 'buying interest is very difficult, it requires hard effort and planned innovation from the time of each company to attract consumers' buying interest. The vast Indonesian motorcycle market has made several Honda and Yamaha companies always competing to produce products that can meet the needs of their consumers.

Distribution data of motorcycle production from the five members of Indonesian motorcycle industry association (AISI) in 2016 and 2017 (quoted from [TMCBlog.com](http://TMCBlog.com)):

Table 1. Indonesian motorcycle production 2016

Brand	Total	Market Share
Honda	4,380,888 units	73.86%
Yamaha	1,394,078 units	23.5%
Kawasaki	97,622 units	1.65%
Suzuki	56,824 units	0.96%
TVS	1,873 units	0.03%
Total	5,931,285 units	100%

AISI Motorcycle Distribution Data for 2017, Honda is still the Leader and Yamaha number 2. Quoted from *DetikOto* that the number of wholesale distribution (from factory to dealer) motorcycles from the five AISI members (Honda, Yamaha, Suzuki, Kawasaki, and TVS) during the month January to December 2017 amounted to 5,886,103 units and decreased by 45,182 units or 0.76% compared to the distribution in 2016. The following is a comparison of Motorcycle Distribution Data from the five AISI members in both 2016 and 2017.

Table 2. Indonesia motorcycle production 2017

Brand	Total	Market Share
Honda	4,385,888 units	74.51%
Yamaha	1,348,211 units	22.90%
Kawasaki	78,637 units	1.34%
Suzuki	72,191 units	1.23%
TVS	1,176 units	0.02%
Distribution Amount	5,886,103 units	100%

The table it can be seen that based on Yamaha numbers the most has decreased by 45,867 units or 3.29%. However, when viewed based on a percentage, TVS experienced the largest decline, namely 37.21% or 697 units in numbers. Only Honda experienced a slight increase, which was 5,000 units or 0.11%. Suzuki also experienced an increase of 15,367 units or 27.04% and then Kawasaki experienced a decrease of 18,985 units or 19.45% from the previous year. According to the Indonesian Motorcycle Industry Association (AISI) from 2012-2016 Honda has always been the leader of the motorcycle market, while Yamaha has always been number 2 (two) after Honda. Even though their sales always show positive results, this means that positive trends in increasing Yamaha motorcycle sales have not been able to beat Honda motorcycle sales as the leader of the motorcycle market in Indonesia.

Table 3. The number of distributions of each AISI member 2017

Brand	total	Status	Difference	Percent (%)
Honda	4,385,888 units	Up	5,000 units	0.11%
Yamaha	1,348,211 units	Down	45,867 units	3.29%
Kawasaki	78,637 units	Down	18,985 units	19.45%
Suzuki	72,191 units	Up	15,367 units	27.04%
TVS	1,176 units	Down	697 units	37.21%
Total	5,886,103 units	Down	45,182 units	0.76%

The present the company's competition in marketing is not limited to product functional attributes. The product is explained as an exchangeable commodity, while the brand is explained on the specifications of its customers. The brand is the identity of a product; the brand provides concise information about a product desired by consumers. A brand is a name, term, symbol or design, or a combination of these things intended by consumers to identify goods or services from a person or group of sellers and to distinguish them from competitors (Kotler, 2009: 332). Brand serves to identify the goods or services of one or a group of presenters and differentiate from similar products from other presenters (Kotler, 2011: 163). More than that, the brand is something that is formed in the mind of the customer and has the power to build customer trust if the company is able to build a strong brand in the minds of consumers through the right marketing strategy, the company will be able to build its brand (Peter & Olson, 2011: 168).

Brand awareness is the ability of a prospective consumer to recognize and recall a brand on a product with a certain category (Aaker, 1991: 61). Brand awareness is the ability of a prospective buyer to recognize or recall that a brand is part of a particular product category (Aaker, 2013: 204). Perceived Quality is the consumer's view of the quality or excellence of the overall product brand in accordance with consumer expectations (Aaker, 1991: 85). Perceived quality is the customer's perception of the overall quality or excellence of a product or service related to what the customer expects. Kotler & Armstrong (2011: 156) suggest that in the same situation, a person's perception of a product can be varying; this is caused by the selection process of various stimuli that exist. Because perception is very closely related to the process by which a person thinks, analyzes what are the strengths and weaknesses of a product before being bought by it. Stated that the creation of customer perceptions that companies makes high-quality products and services will affect customer perceptions of corporate image, and vice versa (Kotler et al. 2010).

Customers will be able to remember the brand if the brand is able to provide more value to him. A perception of quality provided by a brand will be increasingly strong formed along with increasing customer experience. The perceived satisfaction of the brand will ultimately make consumers loyal to the brand. Based on the experience felt by these consumers, consumer confidence will arise so that there is no doubt in making a purchase decision. Consumer awareness of the brand is an important thing that must be known by the manufacturer. Strong brand awareness can make it difficult for consumers to move to

remember other brands. Companies can use brands to expand products, so that brands will be increasingly remembered by consumers.

The motorcycle product category is always trying to expand and increase market share, which will affect the brand equity of its products in the market. With strong brand equity, distribution channels can develop so that more and more sales outlets will ultimately increase the value or volume of sales of these products and enhance market share acquisition and increase consumer purchasing decision confidence. A motorcycle is a two-wheeled vehicle created to support mobility and human activities. Traffic congestion in urban areas is getting higher, transportation costs are more expensive, and fuel consumption is limited by the government causing motorbikes to be an alternative means of transportation because it is more efficient, faster and cheaper than four-wheeled vehicles, especially for people who have high levels of middle to lower welfare.

The rapid growth of motorbikes in Indonesia is influenced by the entry of a number of motorcycle manufacturers from abroad, which mostly come from Japan, China, Europe and India. But until now, Japanese-made motorcycles remain the main choice for the people of Indonesia because of its various advantages. In Indonesia there are four big players in the motorcycle industry including PT. Astra Honda Motor, PT. Yamaha Motor Indonesia Manufacturing, PT. Suzuki Indomobil Motor, and PT. Kawasaki Motor Indonesia but what were discussed in this study was two motorcycle industry companies, namely PT. Astra Honda Motor and PT. Yamaha Motor Indonesia Manufacturing (Haming et al. 2017).

## **2. Literature Review**

### *2.1 Brand Awareness*

Brand awareness is a measure of how many potential customers know a brand. A common strategy in marketing and advertising is to enhance brand awareness (Simamora, 2007: 439). Brand awareness is the ability of a prospective buyer to recognize or recall that a brand is part of a particular product category (Surachman, 2008: 7; Razak et al., 2019).

### *2.2 Perceived Quality*

Having a strong brand is a vital aspect for every company, because the advantages that can be obtained are diverse, starting from the perception of better quality and greater brand loyalty. These advantages can be in the form of value for customers (functional and expressive excellence) and value for owner's brand (financial, strategic and managerial superiority). Perceived quality is a consumer's assessment of the overall superiority or superiority of the product. Brand equity items that reflected three main dimensions: brand loyalty, trust quality, and brand awareness/association. This study also shows that perceived quality is the most important factor for American and Korean consumers (Tjiptono, 2011: 131; Basir et al., 2015; Mokhtar & Sjahrudin, 2019).

### *2.3 Consumer Satisfaction*

Consumer satisfaction is the level of one's feelings after comparing the perceived performance or results compared to his expectations (Kotler & Armstrong, 2009: 137).

Consumers can experience one of three general levels of satisfaction, namely if the performance is below expectations, consumers will feel disappointed but if the performance is in line with customer expectations will feel satisfied and if the performance can exceed expectations, the customer will feel very satisfied happy or happy. Satisfaction is a feeling of pleasure or disappointment someone who arises because of comparing the perceived performance of products or results against their expectations (Kotler & Armstrong, 2009: 138). Consumer expectations can be known from their own experiences when using these products, information from other people, and information obtained from other advertisements or promotions (Kotler, 2013: 181)

#### *2.4 Purchasing Decisions*

The purchase decision is a consumer decision that is influenced by the financial economy, technology, politics, culture, products, prices, location, promotion, physical evidence, people and, process (Buchari Alma, 2013: 96). Purchasing decisions namely Consumer behavior is the study of how individuals, groups, and organizations select, buy, use, and dispose of goods, services, ideas, or experiences to satisfy their needs and wants. Which means purchasing decisions are part of consumer behavior consumer behavior, namely the study of how individuals, groups, and organizations choose, buy, use, and how goods, services, ideas or experiences to satisfy their needs and desires. Purchasing decisions are inseparable from the nature of a consumer (consumer behavior) so that each consumer has different habits in making purchases (Kotler et al., 2016: 177).

### **3. Methods**

The number of samples in this study were 150 Management Bachelor degree students of the Faculty of Economics, Maros Muslim University using the Slovin formula with a confidence level of 95% with a value of  $e = 5\%$ . The data were analyses using Structural Equation Modeling (SEM) through support analysis of moment structures (AMOS) Ver. 20

### **4. Results**

#### **A. Measurement Model Testing (Honda Motor customers)**

Testing of measurement models in each construct consists of several stages, namely (1) measurement model specifications, (2) goodness of fit testing of measurement models, (3) construct validity test and (4) construct reliability test. The construct validity can be done by looking at the loading factor value of each indicator in the construct. In this test the indicator is declared valid if it has a Loading factor value  $> 0.5$ , while the construct reliability test is performed by calculating the AVE and C.R values of the construct, the construct is declared reliable if the AVE model  $> 0.5$  and the C.R model  $> 0.7$ .

#### **1) Brand awareness construct**

Brand awareness variables are measured by 5 indicators. The following is a specification of the brand awareness construct measurement model and its estimation results. All of indicators in the brand awareness construct have loading factors  $> 0.5$  and the model has a good of fit model, so the model has been used to test the validity and reliability of the brand awareness construct.

Table 4. CR and AVE Constructions of Brand Awareness

Variable	Indicator	$\Lambda$	Validity	AVE	CR	Reliability
Brand Awareness (KM)	KM1	0887	valid	0.796	0.952	Reliable
	KM2	0.881	valid			
	KM3	0.915	valid			
	KM4	0889	valid			
	KM5	0868	valid			

Based on the calculation results the AVE construct value of brand awareness has exceeded 0.5 and the value of construct CR has exceeded 0.7. This shows that all indicators in the construct of brand awareness have been reliable.

## 2) Quality perception construct

Variable perceived quality is measured by 5 indicators. The following is a specification of the measurement model of construct quality perception and the results of its estimation. All of indicators in the construct of perceived quality have a loading factor  $> 0.5$  and the model has a goodness of fit model that is good, so the model has been used to test the validity and reliability of the construct of perceived quality.

Table 5. CR and AVE quality perception construct

Variable	Indicator	$\Lambda$	Validity	AVE	CR	Reliability
Quality Perception (PK)	PK5	0.881	valid	0770	0.951	reliable
	PK4	0891	valid			
	PK3	0.886	valid			
	PK2	089	valid			
	PK1	0850	valid			

Based on the results of the calculation of the AVE construct value has exceeded 0.5 and the construct CR value has exceeded 0.7. This shows that all indicators in the construct of perceived quality have been reliable.

## 3) Purchase decision construct

Purchase decision variable is measured by 5 indicators. The following is a specification of the purchase decision construct measurement model and its estimation results. All of indicators in the purchase decision construct have a loading factor  $> 0.5$  and the model has a goodness of fit model that is good, so the model has been used to test the validity and reliability of the purchase decision construct.

Table 6. CR and AVE purchase decisions construct

Variable	Indicator	$\Lambda$	Validity	AVE	CR	Reliability
Purchase Decision (KP)	KP1	0.922	valid	0.837	0.954	reliable
	KP2	0.920	valid			
	KP3	0.895	valid			
	KP4	0.922	valid			
	KP5	0.914	valid			

Based on the calculation results the AVE construct value of purchasing decisions has exceeded 0.5 and the value of construct CR has exceeded 0.7. This shows that all indicators in the construct of purchasing decisions have been reliable.

#### 4) Consumer satisfaction construct

Customer satisfaction is measured by five indicators. The following is a specification of the measurement model of customer satisfaction construct and the results of its estimation. All of indicators in the construct of consumer satisfaction have a loading factor  $> 0.5$  and the model has a goodness of fit model that is good, so the model has been used to test the validity and reliability of the consumer satisfaction construct.

Table 7. CR and AVE Consumer satisfaction construct

Variable	Indicator	$\Lambda$	Validity	AVE	CR	Reliability
Consumer Satisfaction (KK)	KP1	0.887	valid	0.802	0.952	reliable
	KP2	0.927	valid			
	KP3	0.917	valid			
	KP4	0.913	valid			
	KP5	0.839	valid			

Based on the calculation results the AVE construct value of customer satisfaction has exceeded 0.5 and the value of construct CR has exceeded 0.7. This shows that all indicators in the construct of consumer satisfaction have been reliable.

#### 5) Test Prerequisites SEM Analysis

Some of the requirements that must be fulfilled in SEM analysis include the requirements for the number of samples, there are no outlier data in the model, normal distributed data both univariate and multivariate and there is no multicollinearity in the model.

##### a) Outlier

Outliers are observations that arise with extreme values both univariate and multivariate that arise because of the combination of unique characteristics they have and look very much



different from other observations. In SEM analysis, outliers can be detected by looking at the mahalonobis distance, in that table the data is referred to as outliers if the Mahalanobis d-squared value exceeds 61.098, that is the Chi Square value at 31 degrees of freedom (because there are 31 valid indicators analyzed) and a significant level of 0.001 . Outlier detection results in the following table show that of the 205 analyzed data there are no data that have an expensive aerobic distance above 61.098.

b) Normality test

Evaluation of normality is done by looking at the value of c.r skewness or kurtosis both univariate, the data are said to be normally distributed if the value of c.r skewness or c.r kurtosis is below the absolute price of 2.58 (Ghozali, 2016), the value of multivariate c.r at below 8 can still be accepted and the analysis can continue as long as all indicators have c.r kurtosis values  $< \text{vulnerable } -2.58 < Z < 2.58$  (Ferdinand, 2006).

The results of the normality test showed that the research data were normally distributed because the univariate kurtosis values of all indicators were in the interval  $-2.58 < z < 2.58$  as well as the multivariate c.r value of -1.340 indicating that the multivariate c.r had been in the -2 interval,  $58 < Z < 2.58$ , this shows that the data to be analyzed has normal distribution both univariate and multivariate.

The following are the results of normality test data on the model:

Table 8. Assessment of normality

Variable	Min	max	skew	cr	kurtosis	cr
KK5	1,000	5,000	-1,021	-5,106	.779	1,949
KK4	1,000	5,000	-690	-3,452	-.127	-.319
KK3	1,000	5,000	-878	-4,391	.471	1,177
KK2	1,000	5,000	-800	-4,002	.281	703
KK1	1,000	5,000	-854	-4,269	.300	.750
KP5	1,000	5,000	-814	-4,071	.003	.008
KP4	1,000	5,000	-658	-3,289	-.070	-174
KP3	1,000	5,000	-675	-3,376	-.075	-.187
KP2	1,000	5,000	-656	-3,279	-.114	-.286
KP1	1,000	5,000	-.752	-3,760	-185	-.462
PK1	1,000	5,000	-699	-3,497	.431	1,078
PK2	1,000	5,000	-743	-3,714	.438	1,095
PK3	1,000	5,000	-806	-4,031	496	1,239
PK4	1,000	5,000	-690	-3,450	.238	594
PK5	1,000	5,000	-768	-3,838	.403	1,008
KM5	1,000	5,000	-.705	-3,527	-.035	-.088
KM4	1,000	5,000	-700	-3,501	.242	604
KM3	1,000	5,000	-760	-3,800	.316	.791

Variable	Min	max	skew	cr	kurtosis	cr
KM2	1,000	5,000	-632	-3,162	.069	.173
KM1	1,000	5,000	-510	-5,549	-.155	-.387
Multivariate					-9,590	-1.340

c) Multicollinearity test

Multicollinearity test is done by looking at the correlation value between exogenous variables. The model is declared free from multicollinearity if the correlation value between exogenous variables  $< 0.9$ . In this SEM model, which acts as an exogenous variable is the brand awareness variable, perceived quality.

The results of the analysis in the following table show that the correlation coefficient between the exogenous variables is nothing that exceeds 0.9; this shows that there is no multicollinearity among the three exogenous variables so that the assumption of the absence of multicollinearity has been fulfilled.

Table 9. Multicollinearity test

Correlations	Estimate
KM <--> PK	704

d) Test of significance

Table 10. Significance

	Estimate	SE	CR	P.	Label
KP <--- KM	.234	.113	2,079	.038	par_25
KP <--- PK	.387	.102	3,808	***	par_26
KK <--- KP	.297	.106	2,792	.005	par_29
KK <--- KM	-.110	.126	-.876	.381	par_30
KK <--- PK	.313	.119	2,635	.008	par_31

Based on the SEM analysis results in the above table, the following results are obtained:

- 1) The value of p value of the influence of brand awareness variables on purchasing decisions (KM  $\rightarrow$  KP) is significant (p value = 0.038) with a positive c.r of 2.079. Because the p value obtained  $< 0.05$  and c.r is positive  $> 1.96$ ,  $H_0$  is rejected and it is concluded that brand awareness has a positive and significant effect on purchasing decisions. This shows that the higher the consumer's brand awareness, the higher the purchase decision, and vice versa.
- 2) The p value of the influence of brand awareness variables on customer satisfaction (KM

→KK) is significant (p value = 0.381) with c.r of -0.876. Because the p value obtained > 0.05 and c.r < 1.96, Ho is not rejected and it is concluded that brand awareness has no significant effect on purchasing decisions. This shows that brand awareness cannot directly affect customer satisfaction.

- 3) The p value of the influence of the variable perceived quality of purchase decisions (PK →KP) is significant (p value = \*\*\*) with a positive c.r marking of 3.808. Because the value of p value obtained < 0.05 and c.r is positive > 1.96, Ho is rejected and it is concluded that perceived quality has a positive and significant effect on purchasing decisions. This shows that the higher the perception of consumer quality, the higher the purchase decision, and vice versa.
- 4) The p value of the effect of the variable perceived quality of customer satisfaction (PK →KK) is significant (p value = 0.008) with a positive c.r of 2.635. Because the p value obtained < 0.05 and c.r is positive > 1.96, Ho is rejected and it is concluded that perceived quality has a significant effect on purchasing decisions. This shows that the higher the consumer's perception of product quality, the higher the consumer's purchasing decisions, and vice versa.

e) Direct and Indirect effects

Purchase decision variable acts as an intervening variable that mediates the indirect effect of brand awareness variables, perceived quality of customer satisfaction.

Table 11. Direct effects

	PK	KM	KP	KK
KP	.319	.200	.000	.000
KK	.298	-.108	.343	.000

Table 12. Indirect effects

	PK	KM	KP	KK
KP	.000	.000	.000	.000
KK	.109	.069	.000	.000

Based on the test results above, obtained the following results:

- 1) The direct effect of brand awareness on consumer satisfaction is -0.108 (not significant), while the indirect effect of brand awareness on customer satisfaction mediated by purchasing decisions is 0.069 (significant). Based on the test results, the direct effect is not significant while the significant direct effect is significant, which means that the brand awareness variable cannot directly influence customer satisfaction, but indirectly, the brand awareness variable can affect customer satisfaction. High brand awareness then followed by high consumer purchasing decisions can indicate high consumer satisfaction,

while high brand awareness without being followed by consumer purchasing decisions cannot indicate high or low customer satisfaction.

- 2) The magnitude of the direct effect of perceived quality on consumer satisfaction is 0.298 (significant), while the indirect effect of perceived quality on consumer satisfaction mediated by purchasing decisions is 0.109 (significant). Based on the test results, the significant direct effect is significant as well as the significant direct effect which means that the variable perceived quality can affect customer satisfaction both directly and indirectly.

f) Hypothesis testing

Hypothesis testing with the aim to find out the relationship between the hypothesized variable and the level of significance of causality between the variables shown in the following table:

Table 13. Hypothesis Testing of Honda Motor customers

Variable			P-value	Direct Effect	Indirect Effect	Total Effect
Exogenous	Intervening	Endogenous				
KM	-	KK	0.381	-0.108	0.069	-0,039
PK	-	KK	0.008	0.298	0.109	0.407
KM	-	KP	0.038	0.200	0,000	0.200
PK	-	KP	***	0.319	0,000	0.319
KM	KP	KK	0.09585	0.200	0.069	0.269
PK	KP	KK	0.0242	0.319	0.109	0.419
KP	-	KK	0.005	0.343	0,000	0.343

Testing the hypothesis and the value of the path coefficient of direct and indirect influence, shows that there are nine models of relationships or direct effects and four relationships or indirect effects produced are as follows:

- 1) Brand awareness has a p-value of  $0.381 > 0.05$ . Thus brand awareness has a positive but not significant effect on customer satisfaction. Accordingly, the first hypothesis of this study was rejected.
- 2) Quality perception has a p-value of  $0.008 < 0.05$ . Thus the perception of quality has a positive and significant effect on customer satisfaction. Accordingly, the second hypothesis of this study was accepted at the 95% confidence level.
- 3) Brand awareness has a p-value of  $0.038 < 0.05$ . Thus brand awareness has a positive and significant effect on purchasing decisions. Accordingly, the fifth hypothesis of this study was accepted at the 95% confidence level.
- 4) Quality perception has a p-value of  $0,000 < 0.05$ . Thus the perception of quality has a positive and significant effect on purchasing decisions. Accordingly, the sixth hypothesis of this study was accepted at the 95% confidence level.

- 5) Brand awareness through purchasing decisions has a p-value of  $0.09585 > 0.05$ . Thus brand awareness has an indirect, positive but not significant effect on customer satisfaction. Accordingly, the ninth hypothesis of this study was rejected.
- 6) Perception of quality through purchasing decisions has a p-value of  $0.0242 < 0.05$ . Thus the perception of quality has an indirect, positive and significant effect on customer satisfaction. Accordingly, the tenth hypothesis of this study was accepted at the 95% confidence level.
- 7) The purchase decision has a p-value of  $0.005 < 0.05$ . Thus the purchase decision has a positive and significant effect on customer satisfaction. Accordingly, the thirteenth hypothesis of this study was accepted at the 95% confidence level.

## B. Measurement Model Testing (Yamaha Motor customers)

The construct validity can be done by looking at the loading factor value of each indicator in the construct. In this test the indicator is declared valid if it has a Loading factor value  $> 0.5$ , while the construct reliability test is performed by calculating the AVE and CR values of the construct, the construct is declared reliable if the AVE  $> 0.5$  and the CR  $> 0.7$ .

### 1) Brand Awareness construct

In this study, brand awareness variables are measured by 5 indicators. The following is a specification of the brand awareness construct measurement model and its estimation results. All of indicators in the brand awareness construct have loading factors  $> 0.5$  and the model has a good of fit model, so the model has been used to test the validity and reliability of the brand awareness construct.

Table 14. CR and AVE of Brand awareness construct

Variable	Indicator	$\lambda$	Validity	AVE	CR	Reliability
Brand Awareness (KM)	KM1	0.902	valid	0.797	0.952	reliable
	KM2	0.886	Valid			
	KM3	0.915	Valid			
	KM4	0894	Valid			
	KM5	0867	Valid			

Based on the calculation results the AVE construct value of brand awareness has exceeded 0.5 and the value of construct CR has exceeded 0.7. This shows that all indicators in the construct of brand awareness have been reliable.

### 2) Quality perception construct

Perceived quality is measured by 5 indicators. The following is a specification of the measurement model of construct quality perception and the results of its estimation. All of indicators in the construct of perceived quality have a loading factor  $> 0.5$  and the model has a goodness of fit model that is good, so the model has been used to test the validity and reliability

of the construct of perceived quality.

Table 15. CR and AVE of quality perception construct

Variable	Indicator	$\Lambda$	Validity	AVE	CR	Reliability
Quality Perception (PK)	PK5	0.881	valid	0.770	0.951	reliable
	PK4	0.891	Valid			
	PK3	0.886	Valid			
	PK2	0.890	Valid			
	PK1	0.850	Valid			

Based on the results of the calculation of the AVE value has exceeded 0.5 and the construct CR value has exceeded 0.7. This shows that all indicators in the construct of perceived quality have been reliable.

### 3) Purchase decision construct

Purchase decision variable is measured by 5 indicators. The following is a specification of the purchase decision construct measurement model and its estimation results. All of indicators in the purchase decision construct have a loading factor > 0.5 and the model has a goodness of fit model that is good, so the model has been used to test the validity and reliability of the purchase decision construct.

Table 16. CR and AVE of purchase decision construct

Variable	Indicator	$\Lambda$	Validity	AVE	CR	Reliability
Purchase Decision (KP)	KP1	0.922	valid	0.837	0.954	reliable
	KP2	0.920	valid			
	KP3	0.895	valid			
	KP4	0.922	Valid			
	KP5	0.914	Valid			

The calculation result the AVE construct value of purchasing decisions has exceeded 0.5 and the value of construct CR has exceeded 0.7. This shows that all indicators in the construct of purchasing decisions have been reliable.

### 4) Customer satisfaction construct

Customer satisfaction is measured by five indicators. The following is a specification of the measurement model of customer satisfaction construct and the results of its estimation. All of indicators in the construct of consumer satisfaction have a loading factor > 0.5 and the model has a goodness of fit model that is good, so the model has been used to test the validity and reliability of the consumer satisfaction construct.

Table 17. CR and AVE of customer satisfaction construct

Variable	Indicator	$\lambda$	Validity	AVE	CR	Reliability
Consumer Satisfaction (KK)	KP1	0887	valid	0.802	0.952	reliable
	KP2	0.927	valid			
	KP3	0.917	valid			
	KP4	0.913	valid			
	KP5	0839	valid			

Based on the calculation results the AVE construct value of customer satisfaction has exceeded 0.5 and the value of construct CR has exceeded 0.7. This shows that all indicators in the construct of customer satisfaction have been reliable.

## 6) Test Prerequisites SEM Analysis

### a) Outlier

Outliers are observations that arise with extreme values both univariate and multivariate that arise because of the combination of unique characteristics they have and look very much different from other observations. In SEM analysis, outliers can be detected by looking at the mahalanobis distance, in that table the data is referred to as outliers if the mahalanobis d-squared value exceeds 61.098, that is the Chi Square value at 31 degrees of freedom (because there are 31 valid indicators analyzed) and a significant level of 0.001 . Outlier detection results in the following table show that of the 205 analyzed data there are no data that have an expensive aerobic distance above 61.098, this shows that there are no outliers in the analyzed data. All data can be analyzed using SEM analysis.

### b) Normality test

Normality Test in SEM analysis is intended to determine whether or not the research distribution is normal for each variable. Evaluation of normality is done by looking at the value of c.r skewness or kurtosis both univariate and univariate, the data are said to be normally distributed if the value of c.r skewness or c.r kurtosis is below the absolute price of 2.58 (Ghozali; 2016), the value of multivariate c.r at below 8 can still be accepted and the analysis can continue as long as all indicators have c.r kurtosis values  $< \text{in vulnerable } -2.58 < z < 2.58$ . The following are the results of normality test data on the model:

Table 18. Assessment of normality

Variable	min	max	skew	cr	kurtosis	cr
KK5	1,000	5,000	-1,021	-5,106	.779	1,949
KK4	1,000	5,000	-690	-3,452	-.127	-.319
KK3	1,000	5,000	-878	-4,391	.471	1,177
KK2	1,000	5,000	-800	-4,002	.281	703
KK1	1,000	5,000	-854	-4,269	.300	.750

Variable	min	max	skew	cr	kurtosis	cr
KP5	1,000	5,000	-814	-4,071	.003	.008
KP4	1,000	5,000	-658	-3,289	-.070	-.174
KP3	1,000	5,000	-675	-3,376	-.075	-.187
KP2	1,000	5,000	-656	-3,279	-.114	-.286
KP1	1,000	5,000	-.752	-3,760	-.185	-.462
PK1	1,000	5,000	-699	-3,497	.431	1,078
PK2	1,000	5,000	-743	-3,714	.438	1,095
PK3	1,000	5,000	-806	-4,031	.496	1,239
PK4	1,000	5,000	-690	-3,450	.238	.594
PK5	1,000	5,000	-768	-3,838	.403	1,008
KM5	1,000	5,000	-.705	-3,527	-.035	-.088
KM4	1,000	5,000	-.677	-3,333	.206	.515
KM3	1,000	5,000	-.760	-3,800	.316	.791
KM2	1,000	5,000	-.677	-3,387	.150	.375
KM1	1,000	5,000	-.549	-2,744	-.999	-.247
Multivariate					-.7773	-1.366

The results of the normality test showed that the research data were normally distributed because the univariate kurtosis values of all indicators were in the interval  $-2.58 < z < 2.58$  as well as the multivariate c.r value of  $-1.386$  indicating that the multivariate c.r had been in the  $-2$  interval,  $58 < z < 2.58$ , this shows that the data to be analyzed has normal distribution both univariate and multivariate.

#### c) Multicollinearity Test

Multicollinearity test is done by looking at the correlation value between exogenous variables. The model is declared free from multicollinearity if the correlation value between exogenous variables  $< 0.9$ . In this SEM model, what acts as an exogenous variable is brand awareness and perceived quality. The results of the analysis in the following table show that the correlation coefficient between the exogenous variables is nothing that exceeds 0.9; this shows that there is no multicollinearity among the three exogenous variables so that the assumption of the absence of multicollinearity has been fulfilled.



Table 19. Multicollinearity test

	Estimate
KM <--> PK	704

## d) Test of significance

The significance test aims to examine whether there is a significant influence of exogenous variables on endogenous variables.

Table 19. Regression Weights

	Estimate	SE	CR	P.	Label
KP<---KM	.232	.111	2,100	.036	par_25
KP<---PK	.386	102	3,800	***	par_26
KK<---KP	296	.106	2,783	.005	par_29
KK<---KM	102	.123	.829	.407	par_30
KK<---PK	.312	.119	2,625	.009	par_31

Based on the SEM analysis results in the table, the following results are obtained:

- 1) The value of p value of the influence of brand awareness variables on purchasing decisions (KM  $\rightarrow$  KP) is significant (p value = 0.036) with c.r positive sign of 2.100. Because the p value obtained <0.05 and c.r is positive> 1.96, Ho is rejected and it is concluded that brand awareness has a positive and significant effect on purchasing decisions. This shows that the higher the consumer's brand awareness, the higher the purchase decision, and vice versa.
- 2) The p value of the influence of brand awareness variables on customer satisfaction (KM  $\rightarrow$  KK) is significant (p value = 0.407) with c.r of 0.829. Because the p value obtained > 0.05 and c.r <1.96, Ho is not rejected and it is concluded that brand awareness has no significant effect on purchasing decisions. This shows that brand awareness cannot directly affect customer satisfaction.
- 3) The p value of the influence of the variable perceived quality of purchase decisions (PK  $\rightarrow$  KP) is significant (p value = \*\*\*) with a positive c.r marking of 3,800. Because the value of p value obtained <0.05 and c.r is positive> 1.96, Ho is rejected and it is concluded that perceived quality has a positive and significant effect on purchasing decisions. This shows that the higher the perception of consumer quality, the higher the purchase decision, and vice versa.
- 4) The p value of the influence of the variable perceived quality of customer satisfaction (PK  $\rightarrow$  KK) is significant (p value = 0.009) with c.r having a positive sign of 2.625. Because the p value obtained <0.05 and c.r is positive> 1.96, Ho is rejected and it is concluded that

perceived quality has a significant effect on purchasing decisions. This shows that the higher the consumer's perception of product quality, the higher the consumer's purchasing decisions, and vice versa.

- 5) The p value of the effect of the brand loyalty variable on consumer satisfaction (PK → KK) is significant (p value = 0.009) with c.r having a positive sign of 2.625. Because the p value obtained < 0.05 and c.r is positive > 1.96,  $H_0$  is rejected and it is concluded that brand loyalty has a significant effect on purchasing decisions. This shows that the higher the consumer's brand loyalty, the higher the consumer's purchasing decisions, and vice versa.

e) Direct and indirect effects

The purchase decision variable acts as an intervening variable that mediates the indirect effect of brand awareness variables, perceived quality, brand loyalty and brand associations on consumer satisfaction.

Table 20. Direct and indirect effects

	PK	KM	KP	KK
KP	.318	.202	.000	.000
KK	.297	.102	.342	.000

Table 21. Standardized indirect effects

	PK	KM	KP	KK
KP	.000	.000	.000	.000
KK	.109	.069	.000	.000

Based on the test results above, obtained the following results:

- 1) The direct effect of brand awareness on consumer satisfaction is 0.108 (not significant), while the indirect effect of brand awareness on consumer satisfaction mediated by purchasing decisions is 0.071 (significant). Based on the test results, the direct effect is not significant while the significant direct effect is significant, which means that the brand awareness variable cannot directly influence customer satisfaction, but indirectly, the brand awareness variable can affect customer satisfaction. High brand awareness then followed by high consumer purchasing decisions can indicate high consumer satisfaction, while high brand awareness without being followed by consumer purchasing decisions cannot indicate high or low customer satisfaction.
- 2) The magnitude of the direct effect of perceived quality on consumer satisfaction is 0.297 (significant), while the indirect effect of perceived quality on consumer satisfaction mediated by purchasing decisions is 0.109 (significant). Based on the test results, the significant direct effect is significant as well as the significant direct effect which means

that the variable perceived quality can affect customer satisfaction both directly and indirectly.

f) Hypothesis testing

Hypothesis testing with the aim to find out the relationship between the hypothesized variable and the level of significance of causality between the variables shown in the following table:

Table 22. Hypothesis Testing (Yamaha motorbike)

Variable			P-value	Direct Effect	Indirect Effect	Total Effect
Exogenous	Intervening	Endogenous				
KM	-	KK	0.407	0.102	0.069	0.171
PK	-	KK	0.009	0.297	0.109	0.406
KM	-	KP	0.036	0.202	0,000	0.202
PK	-	KP	***	0.318	0,000	0.318
KM	KP	KK	0.09427	0.202	0.069	0.271
PK	KP	KK	0.02464	0.318	0.109	0.427
KP	-	KK	0.005	0.342	0,000	0.342

The hypothesis testing and the value of the path coefficient of direct and indirect influence, show that there are nine models of relationships or direct effects and four relationships or indirect effects produced are as follows:

- 1) Brand awareness has a p-value of  $0.407 > 0.05$ . Thus brand awareness has a positive but not significant effect on customer satisfaction. Accordingly, the first hypothesis of this study was rejected.
- 2) Quality perception has a p-value of  $0.009 < 0.05$ . Thus the perception of quality has a positive and significant effect on customer satisfaction. Accordingly, the second hypothesis of this study was accepted at the 95% confidence level.
- 3) Brand awareness has a p-value of  $0.036 < 0.05$ . Thus brand awareness has a positive and significant effect on purchasing decisions. Accordingly, the fifth hypothesis of this study was accepted at the 95% confidence level.
- 4) Quality perception has a p-value of  $0,000 < 0.05$ . Thus the perception of quality has a positive and significant effect on purchasing decisions. Accordingly, the sixth hypothesis of this study was accepted at the 95% confidence level.
- 5) Brand awareness through purchasing decisions has a p-value of  $0.09427 > 0.05$ . Thus brand awareness has an indirect, positive but not significant effect on customer satisfaction. Accordingly, the ninth hypothesis of this study was rejected.
- 6) Quality perception through purchasing decisions has a p-value of  $0.02464 < 0.05$ . Thus the perception of quality has an indirect, positive and significant effect on customer satisfaction. Accordingly, the tenth hypothesis of this study was accepted at the 95%

confidence level.

- 7) The purchase decision has a p-value of  $0.005 < 0.05$ . Thus the purchase decision has a positive and significant effect on customer satisfaction. Accordingly, the thirteenth hypothesis of this study was accepted at the 95% confidence level.

## 5. Conclusion

### 1. Honda Motorcycle Products

- a) Brand awareness directly cannot significantly influence customer satisfaction on Honda motorbike products. This is because respondents stated that brand awareness on Honda motorcycles does not guarantee consumers will be satisfied just by knowing and remembering the brand of the motorbike.
- b) Quality perception has a significant effect on purchasing decisions. This shows that the higher the consumer's perception of product quality, the higher the consumer's purchasing decisions, and vice versa. Therefore, the respondents stated that the perception of quality in the Honda motorbike highly ensures the consumer will be satisfied just by looking at and considering the motor model.

### 2. Yamaha Motorcycle Products

- a) Brand awareness does not significantly influence the purchase decision. This shows that brand awareness can't directly affect consumer satisfaction with Yamaha motorcycle products. This is because respondents stated that brand awareness on Yamaha motorcycles does not guarantee consumers will be satisfied just by knowing and remembering the brand of the motorbike.
- b) Quality perception significantly influences the purchase decision. This shows that the higher the consumer's perception of product quality, the higher the consumer's purchasing decisions, and vice versa. Therefore, the respondent stated that the perception of quality on Yamaha motorbikes would guarantee consumers would be satisfied just by seeing and remembering the model of the motorbike.

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