How Perception of Quality and Brand Awareness Influence Brand Equity in Motorcycle Manufacture in Indonesia with Brand Image as Intervening Variable

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Abstract:

The high demand for transportation equipment that continues to increase makes the automotive industry, especially Yamaha motorcycles, continue to grow rapidly and are in demand by consumers, so manufacturers are competing to attract as many consumers as possible. The aim of this research is to determine and analyze the role of perceived quality and brand awareness on brand image which has an impact on brand equity of PT. Yamaha Indonesia Motor Mfg using a quantitative descriptive approach. The data in the study were obtained from 175 respondents who are consumers of PT. Yamaha Motor Indonesia Mfg. Analysis of the data in this study using multiple linear regression and path analysis. The first stage in this research is to test the validity of each variable's questions along with their reliability. The second stage examines the relationship between variables, namely perceived quality, brand awareness, brand image and brand equity. The results of this study state that the perceived quality variable affects brand image, brand awareness affects brand image, perceived quality affects brand imagebrand equity, brand awareness affect brand equity and brand image affect brand equity PT. Yamaha Motor Indonesia Mfg.

Keywords: *Quality Perception, Brand Awareness, Brand Image, Brand Equity.*

I. INTRODUCTION

Currently, the development of the era is increasingly moving forward along with the development of increasingly rapid technology. In Indonesia itself, as a country that has the fourth largest population in the world, Indonesia must also follow technological developments to facilitate daily activities. One of them is transportation. The most common means of transportation used by Indonesians is motorbikes. Motorcycles are now a mandatory transportation requirement for the Indonesian people because the use of motorbikes is more effective for daily activities. With motorbikes, people's mobility is getting higher. Based on the Ministry of Home Affairs through the Directorate General of Population and Civil Registration (Dukcapil) until 2020, Indonesia's population currently reaches 268,000,000 people (kompas.com). With the large population of Indonesia, Indonesia will become a target or marketing area for goods and services of companies both domestically and abroad. It has become public news that Indonesia

is considered as one of the largest markets in the world. In addition, Indonesia is also the third country with the largest number of motorcycle users in the world. According to the Indonesian Motorcycle Industry Association (AISI) in 2018, there were as many as 80 million motorcycle units spread throughout Indonesia. This means that more than 85% of Indonesian households own at least one motorbike as their means of transportation.

Based on the results of the Jakpat survey, there are 4 brands that are most often used by Indonesian people, including Honda, Yamaha, Suzuki & Kawasaki with a percentage of Honda 61%, Yamaha 32%, Suzuki 4% and Kawasaki 3%. From Figure 1.2, it can be seen that the Yamaha and Honda brands have a fairly large market in Indonesia and it can be seen that Honda is the biggest competitor of Yamaha.

The phenomenon that occurred based on a report from the Indonesian Motorcycle Industry Association (AISI) in 2020, Yamaha's sales performance was only able to rank second under Honda. People prefer to switch to the Honda

brand. This makes Yamaha always in second position. In fact, Yamaha is not the first choice when people decide to buy a motorcycle, which means that the Yamaha brand has not become the only top of minds for the Indonesian people. Based on AISI data in June 2020, it is known that in May 2020, the Domestic Motorcycle Market Indonesiais in the 'Most Down' Position in history. At that time, the distribution in May 2020 only penetrated 20 thousand units throughout Indonesia or 21,851 units to be exact. If in the previous normal months the distribution of the Indonesian motorcycle industry's total sales for the domestic market was at 500 thousand units, this means that sales in May 2020 were less than 5% of normal sales, which means sales are at their lowest point.

Furthermore, as data released by AISI, the distribution of sales of Whole Sales of Indonesian domestic motorcycles in June 2020 was 167,992 units. This means an increase of more than 8 times the sales distribution in May (21,851 units) and even slightly better than the sales distribution figure in April 2020 (123,782) units, this indicates that the opportunity for motorcycle sales will increase. There are many reasons for the decline in domestic motorcycle sales, and this can be seen from several causes, the easiest of which is that manufacturers have to reduce or even temporarily stop their motorcycle production process. This is very logical, because the products produced by motorcycle companies have few buyers, because the country's economy is currently experiencing an extraordinary
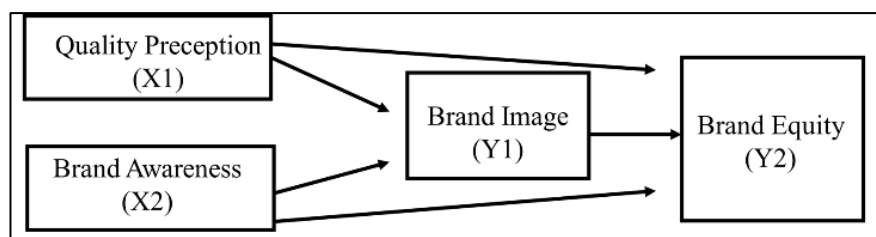
sluggishness during this covid-19 pandemic. Yamaha also experienced a decline in sales ranging from sales of motorcycle products to service services and sales of spare parts. Therefore, Yamaha must develop and innovate so that the Yamaha brand survives and continues to exist in the community despite this pandemic condition. Several previous studies related to perceived quality and brand image were shown by research (Kurniawan, 2017); (Saleem et al., 2015); (Ranjbarian et al., 2012). Presearch on brand awareness is also shown by research (Saleem et al., 2015); (Shabbir et al., 2017). Presearch on brand image with brand equity is shown by research (Severi & Ling, 2013). *Brand image* is the next stage if the perceived quality of a business is high enough (Šerić et al., 2014); (Alhaddad, 2015); (Ginting et al., 2018).

II. RESEARCH METHODS

This study uses a descriptive quantitative approach with survey methods, to describe the relationship between variables (Noor, 2011:34). The survey method was carried out using a structured questionnaire technique given to respondents and designed to produce specific information about perceptions and opinions of an object (Malhotra, 2009:364). This study will analyze the effect of perceived quality and brand awareness on brand image which affects brand equity in PT. Yamaha Indonesia Motor Mfg.

Research Conceptual Model
Figure 1 has shown the research conceptual model of this research:

Figure 1. Research Model

Population and Research Sample

Definition of population according to (Sugiyono, 2014) is, "Population is a generalization area consisting of objects/subjects, which have certain qualities and characteristics determined by researchers to be studied and then drawn conclusions". It can be concluded that the population is an observation made by researchers to find conclusions from the study.The appropriate sample size is determined by (Hair, JF, Hult, GTM, Ringle, CM, & Sarstedt, 2013) is between 100-200 samples, and dependon the estimated number of parameters. The guideline is 5-10 timesparameterestimated. The sample size used is 160 samples, based on the number of indicators multiplied by 5 then (32 x 5 = 160). So the researcher took 165 samples for more accurate data analysis results. In this study, 175 respondents were collected.

Data analysis

After the data is collected, the next step in this research is to analyze the data. The data analysis aims to interpret and draw conclusions from the collected data. The tools used for data analysis are as follows : Testing the data quality instrument, to maintain the reliability and consistency of the questionnaire, the questionnaire as an instrument needs to be tested for quality. The measuring instrument used to test the quality of the instrument is the validity test, reliability test and classical assumption test. The goal is that the instruments used and the data taken are truly valid and reliable. Classical assumption test is also known as multiple regression analysis assumption. according to(Juliandi A, Irfan, 2014) The classical multiple regression assumption test aims to analyze whether the regression model used in the study is the best model according to (Juliandi A, Irfan, 2014). Multiple regression analysis is also used by researchers, if the researcher intends to predict the state (up and down) of the dependent variable, if two or more independent variables as predictor factors are manipulated (increase in value).

III. DISCUSSION AND ANALYSIS

Based on the results of the validity test in the table above, it is explained that the overall statement items on the variables of perceived quality, brand awareness, brand image and brand equity are declared valid. The correlation value of each item in the Pearson Correlation column is greater than 0.148. Based on the results of the reliability test with a number of respondents who were carried out on the questionnaire statement using the Cronbach's alpha method. It is known that the value of Cronbach's alpha variables of perceived quality (0.844), brand awareness (0.838), brand image (0.894), and brand equity (0.858) are already above 0.7 so that all questionnaire statements of quality perception, brand awareness, brand image, and brand equity can be declared reliable. The hypothesis is a provisional assumption so it is necessary to test the hypothesis. In this study, hypothesis testing was carried out using the path analysis method, so that it was divided into 2 sub models. Analysis of hypothesis testing in sub model 1 includes 3 variables, namely perceived quality, brand awareness and brand image.
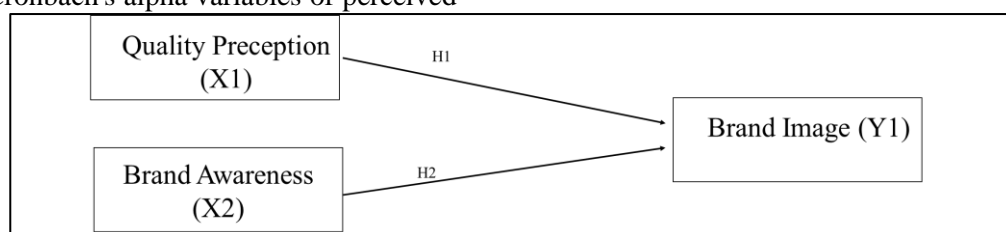

Figure 2. Sub model 1

Table 1. Results of the Coefficient of Determination

Model	R	RSquare	Adjusted R Square	Std. Error of the Estimate
1	,878ᵃ	,770	,767	1,700

Source: Questionnaire Data Processing Results, 2020

Based on table, it is known that the coefficient of determination (Adjusted R square) in this study is 0.767. This figure shows that the variable quality perception (PQ) and brand awareness (BA) is able to explain the brand image variable (BI) by 76.7% while the remaining 23.3% is influenced by other variables not examined in this study.

Table 2. T Test Results

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1,745	1,036		1,684	,094
	PQ	,494	,056	,486	8,902	,000
	BA	,450	,054	,453	8,297	,000

Source: Questionnaire Data Processing Results, 2020

With a significance level of 5% as many as 175 people, the t table value is 1.974. From table 4.22 it can be concluded that H1 and H2 tend to be accepted. This conclusion is based on the criteria, if t count > t table, then H0 is rejected, so H1 and H2 tend to be accepted. In this case, the t-count value of the PQ variable of 8.902 is greater than the t-table, which is 1.974, as well as the t-count of BA of 8.297, which is greater than the table, which is 1.974.

Analysis of Multiple Regression Test Results

It is known that the constant value in sub-structural 1 is 1.745 and the significant value and the magnitude of Beta (coefficient) of the quality perception path (PQ) on brand image (BI) is 0.494 and brand awareness (BA) to brand image (BI) is 0.450, so that it is obtained equality:

$$BI = 1.745 + 0.494PQ + 0.450BA$$

The constant value is 1.745, meaning that if the perceived quality (PQ) and brand awareness (BA) values are 0, then the brand image (BI) value is 1.745. The perceived quality coefficient (PQ) is 0.494, meaning that each additional 1 unit of perceived quality (PQ) will increase the brand image (BI) by 0.494 units. The coefficient of brand awareness (BA) is 0.450, meaning that for every additional 1 unit of brand awareness (BA) it will increase the brand image (BI) of 0.450 units.

Table 3. Results of the Coefficient of Determination

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,853	,727	,722	1,988

Source: Questionnaire Data Processing Results, 2020

Based on table 3, it is known that the value of the coefficient of determination (Adjusted R square) in this study is 0.722. This figure shows that the variable perceived quality (PQ), brand awareness (BA) and brand image (BI) are able to explain the brand equity variable (BE) of 72.2% while the remaining 27.8% is influenced by other variables not examined in this study.

Table 4. T Test Results

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-1,173	1,222		-,960	,338
	PQ	,460	,078	,423	5,865	,000
	BA	,258	,075	,243	3,436	,001
	BI	,268	,089	,251	3,007	,003

Source: Questionnaire Data Processing Results, 2020

With a significance level of 5% as many as 175 people, the t table value is 1.974. From table 4.24 it can be concluded that H3, H4, and H5 tend to be accepted. This conclusion is based on the criteria, if t count > t table, then H0 is rejected, so H3, H4, and H5 tend to be accepted. In this case, the t-count value of the perceived quality (PQ) variable of 5.865 is greater than the t-table, which is 1.974, and also with the t-count of brand awareness (BA) of 3,436, as well as the brand image (BI) of 3,007 which is greater than the table that is 1974.

Analysis of Multiple Regression Test Results
It is known that the constant value in sub-structural 2 is -1.173 and the Beta (coefficient) of the quality perception path (PQ) to brand equity (BE) is 0.460 and brand awareness (BA) to brand equity (BE) is 0.258, then brand image (BI) to brand equity (BE) of 0.268, so that the equation is obtained:

$$BE = -1.173 + 0.460PQ + 0.258BA + 0.268BI$$

The constant value is -1.173, meaning that if the perceived value of quality (PQ), brand awareness (BA) and brand image (BI) is 0, then the value of brand equity (BE) is equal to 0. The perceived quality coefficient (PQ) is 0.460, meaning that each additional 1 unit of perceived quality (PQ) will increase brand equity (BE) by 0.460 units. The coefficient of brand awareness (BA) is 0.258, which means that every additional 1 unit of brand awareness (BA) will increase brand equity (BE) of 0.258 units. The brand image coefficient (BI) is 0.268, which means that every additional 1 unit of brand image (BI) will increase brand equity (BE) of 0.268 units.

Table 5. Path Analysis Calculation Test Results

Varible	Path Coefficient	Impact		Total
		direct	indirect	
Preception Quality (PQ) of Brand Image (BI)	0.486	0.486		0.486
Brand Awareness (BA) of Brand Image (BI)	0.453	0.453		0.453
Preception Quality (PQ) of Brand Equity (BE)	0.423	0.423	(0.486)*(0.251) = 0.122	(0.423+0.122) =0.545
Brand Awareness (BA) of Brand Equity (BE)	0.243	0.243	(0.453)*(0.251)= 0.114	(0,243+0,114=0.357
Brand Image (BI) of Brand Equity (BE)	0.251	0.251		0.251

Source: Researcher Processing Results, 2020

If the direct effect is smaller than the indirect effect, it can be stated that the intervening variable mediates the independent variable on the dependent variable. Conversely, if the direct effect is greater than the indirect effect, it can be stated that the intervening variable does not mediate the independent variable on the dependent variable. Based on table 4.25 it is known that the brand image variable (BI) does Based on the results of the data analysis that has been carried out above, the calculation value of the R-Square (R2) is obtained which shows how well the proposed research model is. From the results of the calculation (R2), it can be seen that the endogenous variable brand equity (Y) can be explained by exogenous variables, namely perceived quality (X1), brand awareness (X2) and brand image (X3) of 72.2% while the remaining 27 .8% is explained by other exogenous variables. Meanwhile, the brand image construct (X3)of 0.667 where the result is shows that the endogenous variable brand image (X3) can be explained by exogenous variables, namely perceived quality (X1) and brand awareness (X2) by 76.7% while the remaining 23.3% is explained by other exogenous variables. According to Carrión et al. (2017) & Madyatmadja et al. (2020)

not mediate the perceived quality variable (PQ) on brand equity (BE) which is stated from the value of the direct influence of perceived quality (PQ) on brand equity (BE) which is 0.423 greater than the indirect effect. that is equal to 0.112. Likewise, brand awareness (BA) on brand equity (BE), brand image (BI) did not mediate brand awareness (BA) on brand equity (BE),

analysing the effect of mediation, it is necessary to look at the change in influence from a direct relationship (direct effects) to an indirect relationship (indirect path). There are three categories for analyzing the mediating effect according to(Carrión et al., 2017) namely no mediation effects, full mediation effects and partial mediation effects.

No Mediation Analysis - This analysis is valid if the direct path (direct relationship) between exogenous and endogenous variables has a significant effect while the indirect path (relationship through mediation) is not significant, it can be concluded that there is no mediating effect or only a direct effect. **Full Mediation Analysis** - This analysis applies if the direct path (direct relationship) between

exogenous and endogenous variables has an insignificant effect while the indirect path (relationship through mediation) is significant, it can be concluded that the mediating variable plays a full role or is called full mediation. **Partial Mediation** - This analysis applies if the direct path (direct relationship) between exogenous and endogenous variables has a significant influence while the indirect path (relationship through mediation) also has a significant influence, it can be concluded that the mediating variable does not play a full role or is called partial mediation.

The Influence of Perceived Quality on Brand Image
Based on the results of the t-test calculation, the t-value of 8.902 and a significance value of 0.000 is smaller than 0.05, so the Ha hypothesis is accepted so that it can be concluded that the perceived quality variable has a significant effect on the brand image of PT. Yamaha Indonesia Motor Mfg. Peter and Olson in Romadhoni (2015), brand image is defined as consumer perceptions and preferences for brands. The components that explain the image also reflect the various kinds of brand associations that exist. PT. Yamaha Indonesia Motor Mfg has a perception about the quality of Yamaha motorcycles including products that are comfortable to drive, have advantages including speed in their class, have variations in product types and so on, so that with these perceptions foster a good image for Yamaha motorcycles. This means that consumers already understand the image owned by Yamaha motorcycles. The results of the study explain that if the perception of the quality of Yamaha motorcycle products increases, the brand image will increase. The results of this hypothesis are in line with research conducted by (Kurniawan, 2017); (Saleem et al., 2015) which shows that partially perceived quality has an effect on brand image.

The Effect of Brand Awareness on Brand Image
Based on the results of the t-test calculation, the t-value of 8.297 and a significance value of 0.000 is smaller than 0.05, so the Ha hypothesis is accepted so that it can be concluded that the brand awareness variable has a significant effect on the

brand image of PT. Yamaha Indonesia Motor Mfg. The concept of brand awareness can be understood through understanding brand depth and concept width. Depth reflects how comfortable the brand is for consumers to remember and recognize, while width reflects how quickly the brand name appears in the customer's mind when making a purchase (Hoeffler & Keller, 2002). The brand name in the customer's mind is a brand image that appears quickly in the customer's mind at that time to remember the brand during the purchase (Severi & Link, 2008). The consumers of PT. Yamaha Indonesia Motor Mfg is well aware of Yamaha motorcycle products, where the product has a distinctive slogan such as "one step ahead", besides that it has symbols that are easily recognizable and this has been embedded in the minds of consumers. This means that without looking at the product name, consumers are aware and recognize the type of motor vehicle that will be used. The results of this hypothesis are in line with research conducted by (Kurniawan, 2017); (Saleem et al., 2015) which shows that partially perceived quality has an effect on brand image.

The Influence of Perceived Quality on Brand Equity
Based on the results of the t-test calculation, the t-value of 5.865 and a significance value of 0.000 is smaller than 0.05, so the Ha hypothesis is accepted so that it can be concluded that the perceived quality variable has a significant effect on brand equity of PT. Yamaha Indonesia Motor Mfg. There is a correlation between perceived quality of brand equity (Severi & Ling. 2013); (Madyatmadja et al., 2021). One of the key elements of brand equity is perceived quality and is a core construct in research to assess brand equity. Furthermore, Yoo (2000) mentions that brand equity will be increased with the help of positive promotion of perceived quality; Perceived quality is part of the brand value that directs consumers to choose a particular brand over other competing brands. The results show that if perceived quality has increased, then brand

equity will increase. The results of this hypothesis are in line with research conducted by (Sasmita & Mohd Suki, 2015) which partially shows that perceived quality has an effect on brand equity.

Effect of Brand Awareness on Brand Equity
Based on the results of the t-test calculation, the t-value of 3.436 and a significance value of 0.001 is smaller than 0.05, so the Ha hypothesis is accepted so that it can be concluded that the brand awareness variable has a significant effect on brand equity of PT. Yamaha Indonesia Motor Mfg. There is a correlation between brand awareness and brand equity (Aryani & Irawanto, 2013). Brand Awareness is able to build brand equity in the consumer mindset (Huang & Sarigöllü, 2012); (Destari et al., 2021) it affects customer perceptions and attitudes. Therefore, Aaker (1996) asserts that to assess brand equity, it is necessary to take into account brand awareness. The results showed that the brand awareness of the consumers of PT. Yamaha Indonesia Motor Mfg has increased so their equity will increase. The results of this hypothesis are in line with research conducted by (Świtała et al., 2018); (Sasmita & Mohd Suki, 2015) which shows that brand awareness partially affects brand equity.

The Effect of Brand Image on Brand Equity
Based on the results of the t-test calculation, the t-value of 3.007 and a significance value of 0.003 is smaller than 0.05, so the Ha hypothesis is accepted so that it can be concluded that the brand image variable has a significant effect on brand equity of PT. Yamaha Indonesia Motor Mfg. Brand image can be interpreted as consumer thoughts and feelings about the brand (Roy & Banerjee, 2007). There is a correlation between brand image and brand equity (Severi & Ling. 2013). Brand image was found to be the most influential factor on brand equity (Mohsina, Azad and Nazneen, 2012). The results showed that the brand image of PT. Yamaha Indonesia Motor Mfg increases and many are embedded in the minds of consumers, their equity will increase. Currently PT. Yamaha Indonesia Motor Mfg has a good brand image in the eyes of consumers. Where the brand image is related to the quality of the products produced by Yamaha motorcycles

that have good quality when driving, comfortable and have an engine that does not heat up even if you drive for a long time. The results of this hypothesis are in line with research conducted by (Świtała et al., 2018); (Hossien Emari, 2012) which partially shows that brand image has an effect on brand equity.

IV. CONCLUSION

The conclusion of this study is to determine the effect of perceived quality and brand awareness on brand image that affects brand equity in customers of PT Yamaha Indonesia Motor MFG. From the results of the research discussion, conclusions of this study are Perceived quality (PQ) has positive effect on brand image (BI), brand awareness (BA) has an positive effect on the variable brand image (BI). Variable of perceived quality (PQ) has an effect on the brand equity (BE). Brand awareness (BA) has an positive effect on the variable brand equity (BE) and brand image (BI) has an positive effect on the variable of brand equity (BE).

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