

INVESTIGATIONS OF CUSTOMER LOYALTY: STRENGTHENING PRODUCT QUALITY, BRAND IMAGE AND CUSTOMER SATISFACTION

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Abstract. The purpose of this study is to increase customer loyalty through improving product quality, brand image and customer satisfaction. The population of this study were 27,378 students in Karawang from 12 universities. The sampling technique used was stratified random sampling, with a total of 550 participants. Data analysis was performed using statistical analysis Structural Equation Model (SEM) using Amos Graphic software version 22. The results obtained that the increase in product quality has a direct effect on customer loyalty, brand image and customer satisfaction is a mediator of product quality factors on the loyalty factor. customer. The implication of this research is that brand image is the biggest factor affecting customer satisfaction. Furthermore, the contribution from this research results for OPPO's company is to consider about their management policy to improve their product quality through technological innovation in terms of using high-quality materials, features, and components to improve brand image, customer satisfaction so that it has a positive impact on customer loyalty.

Keywords: Product Quality, Brand Image, Customer Satisfaction, Customer Loyalty

Abstrak. Tujuan dari penelitian ini adalah untuk meningkatkan loyalitas pelanggan melalui penguatan kualitas produk, citra merek dan kepuasan pelanggan. Populasi penelitian ini adalah Mahasiswa di Kabupaten Karawang dari 12 Perguruan tinggi sebanyak 27,378 mahasiswa, teknik pengambilan sampel menggunakan stratified random sampling diperoleh sebanyak 550 orang. Analisis data dilakukan dengan menggunakan analisis statistik Structural Equation Model (SEM) menggunakan perangkat lunak Amos Graphic versi 22. Hasil penelitian yang diperoleh bahwa penguatan kualitas produk memiliki efek secara langsung terhadap loyalitas pelanggan, citra merek dan kepuasan pelanggan adalah mediator faktor kualitas produk pada faktor loyalitas pelanggan. Implikasi dari penelitian ini bahwa citra merek merupakan faktor terbesar yang mempengaruhi kepuasan pelanggan. Selanjutnya, kontribusi hasil penelitian terhadap perusahaan OPPO adalah untuk pertimbangan kebijakan bagi manajemen dalam hal penguatan kualitas produk yang dilakukan melalui inovasi teknologi dari sisi penggunaan bahan, fitur-fitur, serta komponen berkualitas tinggi agar meningkatkan citra merek, kepuasan pelanggan sehingga berdampak positif terhadap loyalitas pelanggan.

Kata Kunci: Kualitas Produk, Citra Merek, Kepuasan Pelanggan, Loyalitas Pelanggan

INTRODUCTION

Public demand for service quality in the era of globalization is very urgent, therefore, companies must improve their capabilities which oriented towards consumer interests. Competition in market share is needed for the company to be able to survive in producing a product that meet consumer needs and satisfactions. Customer satisfaction is a form of feelings that arise from

products and services. In this study, he wanted to investigate the consumer loyalty of OPPO products through strengthening product quality, brand image and customer satisfaction. Based on the Top Brand Index measurement of a smartphone product brand, in 2017 the highest Brand Index was: Samsung 46%, Nokia 10,9%, Blackberry 9,8%, iPhone 5,8%, Smartfren 5,4%, Lenovo 4%, OPPO 3,4%, ASUS 3,2% (<https://www.topbrand-award.com/top-brand-index/>). Therefore, the marketing performance of 3,4% is a big problem for OPPO. The results of the 2017 top brand survey show that OPPO is ranked 2nd from the bottom after ASUS. Therefore OPPO is required to carry out the research and development of the latest technology to provide the product quality that consumers want (Jindal, 2020). Problems that occur in OPPO product innovations such as the OPPO A7 smartphone is that the product still use micro USB, while competitors such as Samsung and Xiaomi at similar prices have used USB Type C which, is more sophisticated and future proof. In terms of product quality, there are still many assumptions from public that the materials used by OPPO feel cheap compared to competitors such as Samsung which are more solid and rigid, this kind of condition certainly makes the OPPO brand image less attractive for costumers and low customer satisfaction (Rosalina et al, 2019). According Magdalena & Wilzarwan (2019) the problem of low OPPO Smartphone customer loyalty is due to customer expectations that are not fulfilled, product quality that is not competitive, and has no uniqueness so that customers are not satisfied. However, there was an increase in OPPO's market share in 2018 to 18% and in 2019 it reached 21.5%. The increase in market share was due to the company continuing to improve its technological innovations so as to increase competition. This phenomenon makes researchers interested in knowing which variables are more dominant in increasing customer loyalty, whether product quality, brand image, or customer satisfaction. The contribution of from this research results for OPPO's company is to consider about their management policy to improve their product quality through technological innovation in terms of using high-quality materials, features and components to improve brand image, customer satisfaction so that it has a positive impact on customer loyalty. This research participants involved students in Karawang. According to PDDIKTI (2019) there are 11 private universities and 1 state university in Karawang, with a total of 27,378 students as a population consisting of 13,000 public and 14,378 private students.

Product Quality. Product quality is the ability of a product to show its performance including durability, reliability, ease of operation, fresh design, high capacity memory, long battery life and features in accordance with user wishes (Cheng-Ping Li, 2017). The quality of the products own by the company encourages customers to make repeat purchases that are more than one time purchase and will recommend to friends or family (Hanim & Nurjanah, 2019). Product quality is the advantage of the total of features and characteristics of a product or service that depend on its ability to meet customer needs. The performance and the feature dimension are used for competitive advantage marketing strategies. Performance refreshes to main operating characteristics/function of product, while the feature dimension refers to additional characteristics to increase product attractiveness for customers (Chen Hoe & Mansori, 2018). Product quality has a direct influence on customer loyalty (Lestari & Yulianto, 2018).

Brand Image. Brand image is consumer confidence in a brand based on the perception of experience and consumer assessment of a product in the market (Yunaida, 2017). Brand image is a set of customer beliefs about a particular brand. Brand image must be managed carefully because it is an important asset for organizations to create corporate value. Dimensions of the brand image include the user image and product image (Wang et al, 2016). According to Oledepo & Odunlami

(2015) brand image has an influence on customer loyalty. Empirical studies prove that brand image significantly influences customer purchase decision.

Customer Satisfaction. Customer satisfaction is the level of feeling satisfied or dissatisfied after comparing what consumers have received and expected. Customer satisfaction is also based on the Aftersales service of the product (Asyiah, 2019). Feelings are an accumulation of customer purchasing and consumption experiences (Listyawati, 2018). Satisfaction with a brand has a relationship and even has a significant effect on customer loyalty (Sulibhavi & Shivashankar, 2017).

Customer Loyalty. Customer loyalty is the willingness of customers to maintain relationships with the company, continue to buy and use product and services as well as tends to recommend to others (Chen Hoe & Mansori, 2018). Customer loyalty to a company brand depends very much on the company's ability to manage the factors that affect brand loyalty. The results of the study state that there are three factors that shape customer loyalty, namely product quality, brand image and customer satisfaction (Listyawati, 2018). The results of Juhari's (2018) research state that product perspective, brand image and customer satisfaction affect purchasing decisions.

Research Objectives. In connection with the issues raised, the main purposes of this study is to help to make decisions about increasing customer loyalty through strengthening product quality, brand image and customer satisfaction. for OPPO's smartphone brand at College Students in Karawang.

More specific targets from this exploration are:

- a) To determine whether product quality has a significant influence on customer loyalty for OPPO's smartphone brand
- b) To determine whether brand image has a significant influence on customer loyalty for OPPO's smartphone brand
- c) To determine whether the product quality factors has a significant influence on the customer satisfaction factors.
- d) To see the extent to which product quality factors have a significant effect on brand image.
- e) To examine the effect of mediating customer satisfaction factors on the relationship between product quality factors and customer loyalty.
- f) To empirically test the mediating effect of product quality on the relationship between brand image factors and customer loyalty.

LITERATURE REVIEW

Customer Loyalty. Factors that influence customer loyalty are product quality, brand image and customer satisfaction (Chen Hoe & Mansori, 2018). Research results from Andrew, M. (2016) showed that brand image and satisfaction had significant direct effect on loyalty, while the results from Anuraga (2015) research stated that product quality had an indirect significant influence through mediating brand image and satisfaction.

The Relationship Between Brand Image and Customer Loyalty. The relationship between product quality and customer satisfaction has direct impact on a customer loyalty (Surya, 2018). Meanwhile, the result of research by Awal, et al (2018) stated that in an universal understanding,

maintaining a loyal customer base is far more profitable for companies than attracting new customers. So it can be hypothesized as follows:

H1 : Customer satisfaction positively affects on customer loyalty.

The Relationship between Brand Image and Customer Loyalty. There is a significant relationship between brand image and customer loyalty in the context of retail supermarket chains in the United Kingdom (Neupane, R, 2015). Likewise, Dewi (2017) states that brand image and customer confidence have a significant relationship to customer loyalty. so it can be hypothesized:

H2: Brand image positively affects on customer loyalty.

The Relationship between Factors of Product Quality and Brand Image. According to Cheng-Ping Li (2017) product quality is an item offered to the market to get attention as brand image that can satisfy customer needs. Meanwhile, Faizal & Nurjanah stated that there is a direct and significant effect on brand image through product quality indicators such as performance and features and can further increase customer loyalty. So it can be hypothesized:

H3: Product quality factor has a direct effect on brand image factor.

The Relationship between Product Quality and Customer Satisfaction. To increase customer satisfaction the company must try to build product based on the concept of innovation to create value for customers by improving aspects of product quality. (Chen Hoe & Mansori, 2018). The research results from Asyiah (2019) state that there is a relationship between product quality and customer satisfaction, then product quality factors such as performance and features have a direct influence on customer satisfaction. So it can be hypothesized:

H4: Product quality factor has positive effect on customer satisfaction factor

Mediation Effects of Brand Image on the Relationship between Product Quality Factors and Customer Loyalty. According to Moreira et al (2017) brand image mediates between product quality and customer loyalty. While the research findings from Sulibhavi & Shivashankar (2017) there is a significant effect of product quality on customer loyalty with brand image as a mediation so that customers feel confident when repurchasing the product. So it can be hypothesized:

H5: Brand Image as mediator the linkage between product quality factor and customer loyalty.

Mediation Effects of Customer Satisfaction on the Relationship between Product Quality Factors and Customer Loyalty. Customer satisfaction mediates between product quality and customer loyalty (Sitanggang et al, 2019). According to Djumarno et al (2018) customer satisfaction has a mediating effect in the relationship between product quality and customer loyalty because of perceived quality of the product by customers. So it can be hypothesized:

H6: Customer satisfaction as mediator the linkage between product quality factor and customer loyalty.

To examine all hypothesis (H1, H2, H3, H4, H5, H6) for the sake of accomplishing this objective, therefore this study developed the followed framework:

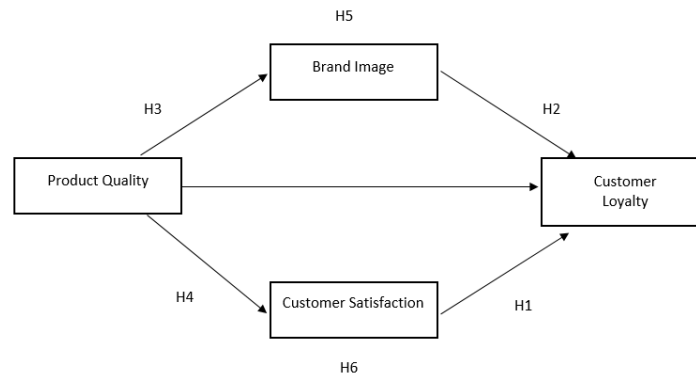


Figure 1. Hypothesis Framework

Conceptual Model. Structural equation model is used in this study to analyze the influence of product quality factor structure, brand image and customer satisfaction on customer loyalty. Therefore, this flowchart provides testing of causality variables. In accordance with the theory, customer loyalty (L) is the dependent variable, while customer satisfaction (S), brand image (BI) and product quality factor (PQ) are independent variables. In addition, customer satisfaction (S) and brand image (BI) are mediating variables between product quality (PQ) and customer loyalty (L). Customer loyalty is measured by two indicators namely use the product (UP) and Recommended to others (R). Product quality is measured based on performance factors (P) and features (F). Customer satisfaction is measured based on output performance (OP) and After-Sales (AS). Brand image is measured based on indicators user image (UI) and product image (PI). These factors are then described in figure 2. as the Proposed Conceptual Framework as follows:

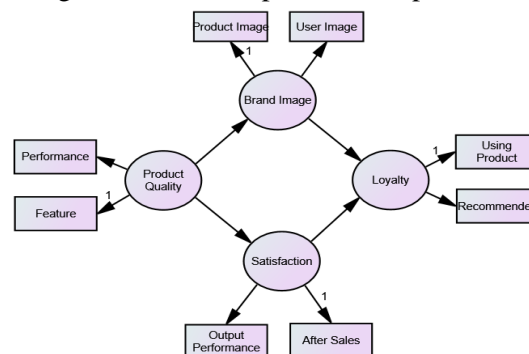


Figure 2. Proposed Conceptual Framework

METHOD

Population. The target population in this study were college student in Karawang, as many as 27,378 students (PDDIKTI, 2019).

Sample and Sampling Procedures. Based on Susanti et al (2018) sample sizes, confidence levels and confidence intervals for random samples, from an accessible population of 27,378 students. Determination of the minimum number of samples taken based on the Krejcie and Morgan tables, the number of samples obtained was 550 samples.

Respondents Profile. Respondents in this study included students in Karawang consist which consist students Universitas Singaperbangsa, Universitas Buana Perjuangan, Sekolah Tinggi Teknik Karawang, STIMIK Kharisma, STIMIK Rosma, STIMIK Pamitran, Universitas Bina Sarana Informatika. Politeknik Tri Mitra, Sekolah Tinggi Ilmu Ekonomi YPN, STIE Budi Pertiwi, Akademi Kebidanan Kharisma, and Akademi Keperawatan Kharisma. Students are taken from 2nd, 4th, 6th grade. The majority of them are women 68,2%. Second grade students have an average age 18-19 years old (36.3%), forth grade average age 20-21 years old (33,8%), sixth grade average age 22-23 years old (26,9%).

Procedure and Design. The first stage is to tabulate the list of universities and the number of students, there are 12 universities in Karawang with a population of 27,378. The second stage is to determine the number of samples using the Krejcie and Morgan tables, the sample obtained was 550. The third stage is distributing and collecting questionnaires. The fourth stage is testing the classical assumptions of the data. The data used was first tested for normality using Kolmogrov-Smirnov, second tested for homogeneity of variance using Levine, third tested for linearity analyzed using analysis of variance (ANOVA). The fifth stage is data analysis done by statistical analysis of SEM (Structural Equation Model) using AMOS version 22 software, consisting of three stages; model identification, the test measurement model and structural model of the test.

Measure. All variables were assessed using Likert scale from 1 = strongly disagree to 5 = strongly agree. Customer loyalty variables were measured against 2 exogenous variables namely Using Product (UP) and Recommended (R) (Chen Hoe & Mansori, 2018). Measured by sample item "OPPO products that I use are according to needs" (UP) and "I would recommend to others to use OPPO (R) products. Measurement instruments are first tested based on construct validity aims to measure how far the test items are able to measure what is really going to be measured in accordance with the conceptual definition that has been set. Obtained construct validity value Using Product $r = 0.701$, Recommended $r = 0.699$ with reliability (Cronbach's alpha = .811). The Product Quality variable is measured against 2 exogenous variables namely Performance (P) and Feature (F1) (Chen Hoe & Mansori, 2018). Measured by sample item "OPPO product performance as expected" (P) and "The features offered by OPPO products are very interesting to use" (F1). The research instrument was tested based on the construct validity, the value obtained Performance $r = 0.707$. Feature $r = 0.673$ with reliability (Cronbach's alpha = .894). Brand Image Variables are measured against 2 exogenous variables namely Product Image (PI) and User Image (UI) (Wang et al, 2016). Measured by sample items, namely "Products issued by OPPO are of good quality and have good durability" (PI) and "People who use or buy OPPO products are people who understand good quality" (UI). The research instrument was tested based on the construct validity, the value obtained Product Image $r = 0,712$, User Image $r = 0,704$ with reliability (Cronbach's alpha = .867). Customer Satisfaction variables are measured against 2 exogenous variables namely output performance (OP) and after sales (US). Measured by sample items "work / activity (taking pictures, playing games, multitasking) carried out using OPPO products has better quality than other branded products" (UP) and "OPPO products have fast respond and reliable after-sales service"(AS). The research instrument was tested based on the construct validity, the value obtained output performance $r = 0,689$, after sales $r = 0,666$ with reliability (Cronbach's alpha = .858).

RESULTS AND DISCUSSION

Reliability and Validity Test. In this study, questionnaires were distributed to 550 college students in Karawang. The results are shown in table 1. The result of the questionnaires validity test are measured based on the coefficient of validity when the value is greater than 0.5. Meanwhile, to test reliability of the instruments is by looking at the Cronbach's Alpha values. Cronbach's Alpha values higher than 0.7 are considered satisfactory (Taber, 2017).

Table 1. Reliability and Validity Tests Results

Variables	Dimension	Construct Validity	Reliability
Product quality	Performance	0.707	0.894
	Feature	0.673	
Brand image	Product image	0.712	0.867
	User image	0.704	
Customer satisfaction	Output performance	0.689	0.858
	After sales	0.666	
Customer loyalty	Using product	0.701	0.811
	Recommended	0.699	

Based on the results in table above, all items are valid because the values all above 0.5, for the reliability test, the result obtained was all variable Cronbach's alpha value is above 0.7, namely, product quality (0.867), customer satisfaction (0.859) and customer loyalty (0.811).

Test of Assumption. The test of assumption is absolutely necessary before SEM analysis performed. Namely, a normality test and linearity test (Taber, 2017).

Normality Test. According to Das (2016) normality is the most fundamental assumption in multivariate analysis that is the form of data distribution on a single matrix variable in producing normal distribution. Data has a normal distribution if p value > 0.05 at the level of $\alpha = 0.05$.

Table 2. Normality Test Results

Variables	P Value	Result
Performance	0.192	Normal
Feature	0.204	Normal
Product Image	0.178	Normal
User Image	0.223	Normal
Output Performance	0.221	Normal
After Sales	0.192	Normal
Using Product	0.101	Normal
Recommended	0.157	Normal

From the normality test, it can be seen that all the variable are normally distributed, which is due to the significance of results of each variable. The result is: Performance (0.192), Feature (0.204), Product Image (0.178), User Image (0.223), Output Performance (0.221), After sales (0.192), Using Product (0.101), Recommended (0.157) all variables are greater than 0.05 which means the data are normally distributed.

Linearity Test. Data can be said to be linear if the data has a p-value > 0.05 at the level of $\alpha = 0.05$, if the p-value < 0.05 then the data is not linear. In addition, linearity can be seen from the

calculated F value, if the F count is smaller than the F table then there is a linear relationship. F table = 2.6049 (Uttley, 2019).

Table 3. Linearity Test Results

Independent	Dependent	p Value	F
Performance	Using Product	.097	2.127
	Recommended	.201	1.781
Feature	Using Product	.159	1.906
	Recommended	.155	1.928
Product Image	Using Product	.105	2.054
	Recommended	.110	2.019
User Image	Using Product	.073	2.302
	Recommended	.112	2.008
Output Performance	Using Product	.277	1.563
	Recommended	.142	1.991
After Sales	Using Product	.404	.975
	Recommended	.080	2.265

Based on table 3. It can be concluded that there is a linear relationship between dependent variable and independent variable where all variable F count < F table 2.6049. in other words linearity test assumption accepted.

Multi-Correlation. Test the significance of the correlation of independent variables with the dependent analyzed based on the value of r (Pearson Correlations) with an r table value of 0.0875 presented in table 4.

Table 4. Correlation Coefficient Among Variables

	OP	AS	F	P	R	UP	UI	PI
OP	1.000							
AS	.349	1.000						
F	.343	.336	1.000					
P	.265	.240	.446	1.000				
R	.275	.274	.507	.455	1.000			
UP	.175	.153	.256	.250	.217	1.000		
UI	.191	.174	.234	.166	.288	.154	1.000	
PI	.163	.160	.237	.160	.180	.283	.376	1.000

Based on the table above, it can be stated that there is a positive and significant relationship exists between the independent variables (Performance, Feature, Product Image, User Image, Output Performance, After Sales) and dependent variable (Using Product, Recommended). r table < r count. From the results of the analysis it can be concluded that: (1) there is a positive and significant relationship between product quality and brand image indicated by the correlation coefficient $r = .237$ and $r = .234$ this explains that there is a positive relationship between product variables quality (performance and features) with Brand image variables (user image and product image). The results of this study are still relevant to the research of Anuraga (2015) and Anjani (2017); (2) there is a positive and significant relationship between product quality and customer satisfaction with a correlation coefficient of $r = .343$ and $r = .336$. The results of this study prove that there is a significant relationship between product quality on performance indicators and

features with customer satisfaction (performance output indicators and after completion) with customer loyalty variables (using product and recommended). The results of this study are still in accordance with the research of Andrew (2016), Juhari (2018), Chen Hoe & Mansori (2018) and Cheng-Ping Li (2017); (3) there is a positive and significant relationship between customer satisfaction and customer loyalty with a correlation coefficient of $r = .275$ and $r = .274$. the results of this study prove that there is a significant relationship between the results of this study according to the research of Listyawati (2018); (4) there is a positive and significant relationship between brand image and customer loyalty with a correlation coefficient of $r = .288$ and $r = .283$ this proves that there is a significant relationship between brand image (user image and product image) and customer loyalty (use product and recommended). The results of this study are still in accordance with the research of Yunaida (2017) and Leninkumar (2017).

Generated Structural Model. Because the $p > 0.00$ ($p\text{-value} > 0.01$), the research produces a structural model better and more appropriate. Therefore, the explanation will be based on the results of the hypothesis in figure 2.

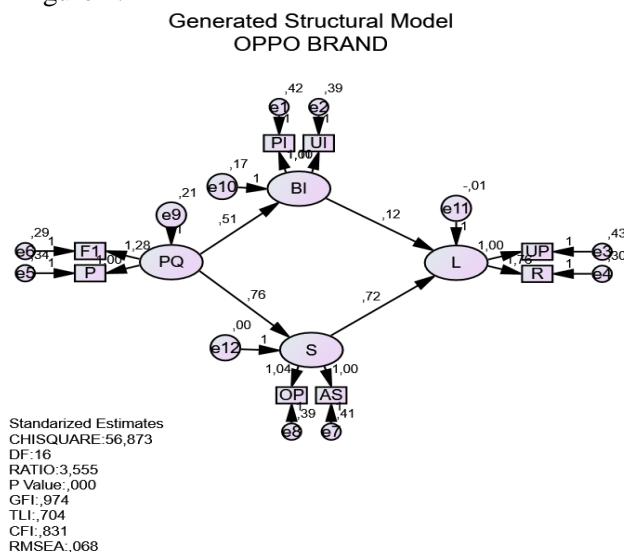


Figure 3. Generated Structural Model for OPPO Brand

Regression Estimates. The generated structural model produces regression standardized beta estimates as in table 5.

Table 5. Direct Effects Regression Estimates (Beta)

	Hypothesis	Endogenous	Exogenous	Beta	Standard Error	C.R.	p-value	Significance
1	H1	Loyalty	Satisfaction	0.723	0.120	6.025	**	Accepted
2	H2	Loyalty	Brand Image	0.123	0.053	2.323	0.020	Accepted
3	H3	Brand Image	Product Quality	0.508	0.091	5.582	**	Accepted
4	H4	Satisfaction	Product Quality	0.757	0.096	7.901	**	Accepted

From the data in table 5. Illustrating customer satisfaction has a significant direct effect on customer loyalty ($\beta = 0.723$; C.R = 6.025; $p < 0.00$), or H1 is accepted. This finding is consistent with the results of the study Chen Hoe & Mansori, (2018) which states that the dimension of customer satisfaction effecting the customer loyalty. Other findings from as Asyiah (2019), state that the variable customer satisfaction is measured through the Output Performance (OP) and After-sales (AS) indicators, while the customer loyalty variable is measured through the Using Product (UP) and Recommended (R) indicators. There is positive relationship between customer satisfaction and customer loyalty. The impact of product quality on the customer satisfaction affects the value of the company in the long run. While the results of research by Khoroni et al (2018) stated that the effect of customer satisfaction on customer loyalty contributed 16,48% so that the total effect of customer satisfaction on customer loyalty contributed 34,12%. Meanwhile, the research results from Asyiah (2019) mention that customer satisfaction affect customer loyalty, the strategy improving product quality through improved performance and features can maintain a higher level of customer satisfaction and customer loyalty

Secondly, Brand image has a significant positive effect on customer loyalty ($\beta = 0.123$; C.R = 2.323 ; $p < 0.005$), or H2 is accepted. The results of this study are in line with Neupane (2015); Surya (2018), brand image has a significant influence on customer loyalty, through brand image costumers realize and are interested in making product purchases and even recommend to others, which in the end the company's profitability becomes optimal. This study found that the overall brand image indicators Product Image (PI) and User Image (UI) have a significant positive effect on customer loyalty. the brand image variable instrument used can provide an overview of Product Image and User Image have an influence on customer loyalty

Thirdly, product quality has a positive effect on brand image factor ($\beta = 0.508$; C.R = 5.582; $p < 0.00$), or H3 is accepted, the result of this study are in line with Waluya, et al (2019) states that brand image has a direct positive effect on customer loyalty. Likewise, Juhari (2018) research result state that product quality and brand image have a positive effect on purchasing decisions. The findings in this study are that the indicators of product quality include Performance (P) and feature (F). Based on the instrument developed, the performance indicators in terms of design, software and hardware performance are as follows: high memory capacity, fast charging, long battery life, powerful processor. While instruments for feature indicators include; features that suit the user's desires such as a camera quality, high security, power saving feature and gesture feature.

Lastly, product quality factor has a major direct effect on customer satisfaction factor ($\beta = 0.757$; C.R= 7.901; $p < 0.00$) or H4 is accepted. This results are still in accordance with Waluya et al (2019) shows that product quality and brand image influence customer satisfaction, product

quality and brand image have direct impact on the purchasing decision process. In addition, product quality and brand image influence purchasing decisions, mediated by customer satisfaction. Meanwhile, the results of the research by Listyawati (2018); Lestari & Yulianto (2018) stated that product quality factors have a positive and significant impact on customer satisfaction. The findings in this study indicate that the performance and advance features according to the user's wishes can increase customer satisfaction.

Customer Satisfaction Mediation and Brand Image on Product Quality and the Customer Loyalty. Furthermore, to examine mediating factors between the customer satisfaction and brand image on product quality and the customer loyalty. The test results will be compared to the direct and indirect effect once inserted product quality factor. Model and standard regression coefficient of the estimate can be seen in figure 4. And table 6 below.

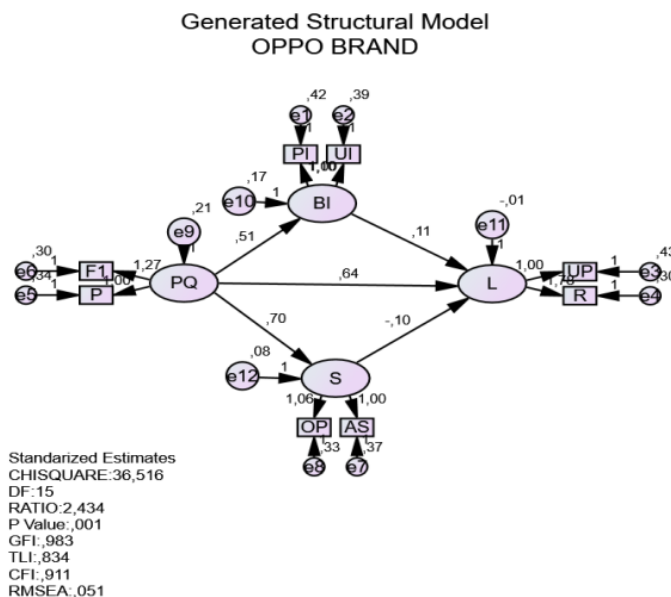


Figure 3. Generated Structural Model for OPPO Brand with Direct Effect

Table 6. Direct Effect Regression Estimates (Beta) After Product Quality Direct to The Customer Loyalty

Hypothesis	Endogenous	Relationship	Exogenous	Beta	SE	CR	P	Status
1	Loyalty	<	Satisfaction	.104	.112	.930	.035	sig.
2	Loyalty	<	Brand Image	.108	.053	.032	.042	sig.
3	Satisfaction	<	Product Quality	.697	.093	.462	**	sig.
4	Brand Image	<	Product Quality	.515	.092	.592	**	sig.
	Loyalty	<	Product Quality	.515	.092	.592	**	sig.

From the test results it can be seen the model support the finding that that brand image factor mediate significantly in the relationship between product quality and customer loyalty ($\beta = .515$; C.R = 5.592; $p < 0.00$). It can be concluded that H5 is accepted. This finding is still in accordance with the research result of Lestari & Yulianto (2018) which states that good product quality has a significant effect on customer loyalty by mediating brand image. Brand image has a positive and significant effect on customer loyalty. When the brand image is good in customer minds, then these customers want to have a longer relationship with the company, because they are sure about the company's brand image (Awal *et al.*, 2018).

The next finding, the model supports that the customer satisfaction mediates significantly in the relationship between product quality and customer loyalty ($\beta = .697$; C.R = 7.462; $p < 0.000$). It can be concluded that H6 is accepted. This finding is accordance with Liemena (2019); Hanim & Nurjannah (2019) states that product quality and service quality mediated by customer satisfaction have positive impact on customer loyalty.

Table 7. Brand Image Mediation on Product Quality and Customer Loyalty

Model Element	Test Mediation in Customer Loyalty	Revised Model with Direct Effect
Model Fit		
Chi-Square	56.873	36.516
Df	16	15
p-value	.000	.001
RMSEA	.068	.051
CFI	.831	.911
Std Estimates		
Product Quality → Brand Image	.508***	.515***
Brand Image → Loyalty	.123	.108
Product Quality → Loyalty		.515***
Indirect	.601	-.017
Direct	.000	.640
Total	.610	.623
Effect		

According to table 7. It can be described that product quality has an indirect influence on customer loyalty through brand image (61.0%) and direct influence (62.3%). The findings of this study can be illustrated that product quality such as performance and features can increase customer loyalty after they have a perception of the brand image of the product, thus product quality has an indirect effect through brand image on increasing customer loyalty. This is in accordance with the results of research (Sulibhavi & Shivashankar, 2017; Hanim & Nurjanah, 2019). Stated that brand image contributes to customer loyalty and mediates the relationship between product quality and customer loyalty.

Table 8. Customer Satisfaction Mediation on Product Quality and Customer Loyalty

Model Element	Test Mediation in Customer Loyalty	Revised Model with Direct Effect
Model Fit		
Chi-Square	56.873	36.516
Df	16	15
p-value	.000	.001
RMSEA	.068	.051
CFI	.831	.911
Std Estimates		
Product Quality → Customer Satisfaction	.757***	.697***
Customer Satisfaction → Loyalty	.723***	.104
Product Quality → Loyalty		.515***
Indirect Effect	.355	-.104
Direct Effect	.000	.697
Total Effect	.355	.593

According to table 8. It can be described that product quality has an indirect influence on customer loyalty through customer satisfaction (35.5%) and direct influence (59.3%). The findings can be explained that when a product quality is in accordance with customer expectations such as OPPO products that have performance and features that are qualified with the instruments developed. The results is still in accordance with previous research, such as research of Wideaswara (2017) which states that product quality has an indirect effect on customer loyalty through customer satisfaction. Meanwhile Waluya et al (2019) state that product quality, brand image and customer satisfaction have an influence on customer loyalty. Another research finding by Sitanggang, et al., (2019) there are direct and indirect influence of product quality on customer loyalty through customer satisfaction and it can be stated that customer satisfaction is useful as an intervening variable between product quality and customer loyalty.

CONCLUSION

Conclusion. Brand image and customer satisfaction factors are key in improving customer loyalty. Brand image and customer satisfaction factors are the mediators of product quality factors on customer loyalty factors. For more detail, the conclusions are described as follows:

1. There is a positive effect of customer satisfaction on customer loyalty.

2. There is a positive effect of brand image on customer loyalty.
3. Product quality factors have a direct effect on brand image.
4. Product quality factors have a positive effect on customer satisfaction.
5. Brand image as a mediator between the factors of product quality and customer loyalty.
6. Customer satisfaction as a mediator of the relationship between product quality factors and customer loyalty.

Contribution & Suggestion. Based on the research findings, from this research results for OPPO's company is to consider about their management policy to improve their product quality through technological innovation in terms of the use of high-quality materials, features, and components in order to improve brand image, customer satisfaction so that it has an impact. positive on customer loyalty. Suggestion for decision making are to improve product quality in terms of materials, design, software and hardware performance are as follows: high memory capacity, fast charging, long battery life, powerful processor. While for feature includes features that suit the user's desires such as a camera quality, high standard security, power saving feature and gesture feature. These suggestions if implemented based on the instruments developed will improve the brand image, customer satisfaction and customer loyalty which ultimately increases the company's profit.

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