

Market Growth Strategy through Consumers' Satisfaction, Product Quality and Brand Image: Evidence from Jakarta Indonesia

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Abstract

Analysis of consumers desire is a very important key. based on the analysis of consumer behavior, entrepreneurs can plan, improve, and sustain business. This paper wants to explain consumer behavior on products from the Apple, US brand in Indonesia. Apple US Brand has been well-known in developing technology to enhance products following consumer desires. Therefore, psychologically, product and brand quality are thought to play a role in consumer satisfaction. Data was collected through questionnaire answers to 210 Apple brand user respondents in the Jakarta area. The data were processed using validity and reliability tests. The analytical method in this study is Robust Least Squared Model. The results of the analysis of this study conclude that an increase in product quality and brand quality can significantly increase consumer satisfaction. Every 1 unit increase scale in product quality will increase the consumer satisfaction by 0.36 scale, then every 1 unit increase scale in brand image will increase the consumer satisfaction by 0.45 scale. This study suggests that the policy of product research and development, and keeping reputation is crucial in all business.

Keywords

market, product quality, brand image, consumer satisfaction.

1. Introduction

Companies that can produce quality goods and services are the hope of many consumers. This is important for businessman to do this because by creating quality products, so it will increase public confidence in the products produced, and further increase public interest (Purba et al, 2020). Furthermore, the company must also conduct

research and development to meet market needs. Taking advantage of survey results and testimonials that have been given by consumers is a powerful way to keep demand high (Purba et al, 2020). Doing research on what the community wants, and then we find out that desire is a form of effort to maintain consumer loyalty. In addition, by studying the results of this research, new ideas will emerge that could lead to new products. In the end, technology is developed to complement both the way the production process and the quality of the final product are made.

Consumer demand looks simply, but if the demand is not fulfilled properly, it will affect business continuity. So, it must be ensured that all requests are fulfilled properly, so that consumers feel satisfied and there is an increase in demand. That way there will be a repeat purchase process that is sustainable (Adirinekso et al, 2020). Therefore, the use of research results raises the quality and development of new products and subsequently to achieve consumer desires. The results of product development research led to new products to be offered as bonuses for newly joined consumers so that consumer demand increased. Entrepreneurs can also cut prices or give small products as souvenirs. This will certainly provoke consumer satisfaction and increase demand for the desired goods and services. In the end, the company not only retains existing consumers, but it can also hire new consumers. Furthermore, the company can increase sales so that the company's revenue increases. The increasing revenue from each company encourages an increase in capital prices and a new investment enthusiasm emerges (Budiono 2011). Therefore, the aggregate national income (GDP) increases, then the people's purchasing power will also increase (Budiono, 2012).

This study aims to analyze consumer behavior regarding Apple brand smartphone products. Smartphones had a function suitable with the development of communication technology and have a compact shape, so it is easier to carry. When it comes to the development of smartphones technology and innovation, users could use smartphones to support their daily activities. Ever since 2010, the development of smartphone technology has been very fast (Purba and Panday 2015). There are many kinds of technological development and innovation that we could use in our smartphones. On top of that, nowadays smartphones have already become a part of people's lifestyle (Purba et al, 2020). In terms of smartphones, people find it hard to get rid of smartphones especially from their lives. Smartphones have already become another factor to consider as an essential thing to carry every day. Without smartphones today's life felt so different and complicated (Adirinekso. G.P., Purba, & Budiono, 2020).

Based on the event, Apple products have capabilities to fill the needs of their users in term of technological needs. We can easily saw many Apple devices users around the cities, started from their most selling product such as iPhone and MacBook. The age of the products also has many varieties from the oldest model until the newest model. The event showed us that Apple has a loyal user of the products. Even though Apple only held 7% from the total of market share, we need to remember that Apple only sell 'High-end' product and not targeting all segment like other companies. The number showed us that even the price of Apple PC product quite expensive, there are some people willing to pay for the price (Budiono et al, 2020).

The progress of the market share that Apple has during the quarterly 2018 - 2019 in Indonesia and global. During 2018 - 2019 the market share of Apple's smartphone products experienced dynamics from quarter to quarter. The Apple company has succeeded to maintain market share in competing in smartphone products (Counterpoint Research, 2020). Apple has conducted research and development not only to develop products but also to improve after-sales service.

Based on the description of the dynamics of consumer behavior, in this study the authors want to prove that the product quality and brand images to increase consumer satisfaction on Apple smartphone in Jakarta Capital Area, Indonesia. Authors wanted to prove that because of the strong brand image people do not consider from where the product is produced and still able to fulfil consumer satisfaction. Hopefully, this research would be a study material in the future.

2. Literature Review

According to Product Quality was the ability of a product to perform as the function, including all the durability, reliability, accuracy, ease of use, and the product reparations. From the definition we can conclude that consumers see a product from many perspectives to determine the quality of the product. There are also many factors affecting product quality such as *reliability*, *conformance to specification* and *durability*. In terms of *durability* there are also many factors that have a role such as materials, how it is made and the manufacturing technologies (Shams et al 2015).

The quality of the product is a crucial thing for a company, here are several things why quality of a product very important to the companies: Escalate company reputation, Cost reducing, Escalate market share, Product

Liability, International Impact, Products or services appearance, and Quality. According to consumers tend to make purchase decisions when there is a significantly better quality than the similar product as the main criterion (Hanaysha & Hilman, 2015). Based on the statement authors can conclude that product quality has an important role when it comes to buying decisions. However, a company needs to pay attention to their product quality to maintain a sustainable business.

Brand image was a bunch of ideas, beliefs, and impressions that every individual has when it comes to think about a brand. Therefore, we can conclude that brand images are a description of a brand when it comes to our minds. Because of the importance of brand images, companies have a strong purpose to build a strong brand image to consumer minds when they hear about the brand. A good image of a brand generates a perspective and appraisal some brands are better than other brands (Budiono, 2011).

There are three things that can construct and made brand images has a meaning: strength, favorability, and uniqueness. With those three things fulfilled of course the brand images of a company will be constructed. In terms of business, brand images are a crucial thing because they give business identity and maintain sustainable growth (Manhas & Tukamushaba, 2015). That is why a strong brand image was considered as a crucial thing for a company, because when a company has weak brand images it is possible if they could not perform well in the competitions.

In terms of sustainable business, of course consumer satisfaction is one of the supporting factors. Consumer satisfaction was a satisfied feeling or disappointed feelings when it comes to performance or result of the product and any other expectations (Adirinekso et al, 2020). It can be concluded that consumers will evaluate the feelings when they are using the products or services. Consumer satisfaction was one of the supporting factors because consumer dissatisfaction could cause business difficulties and sustaining in the competition. In any case of course a company must fulfil their own consumers expectation to keep sustaining in the business (Budiono 2009).

By the explanations above, we can conclude that to measure consumer satisfaction there are many approximations. A good company can be seen by how they fulfil their consumer expectations for the company. Because consumer satisfaction is a fundamental goal of a company. From the explanation above we can conclude that consumer satisfaction is the expectation that consumers wanted to achieve when they used a product (G. J. Greene & Fischer, 2015).

According to Suchánek et al (2014), consumer satisfaction is the reflection of a product quality. Product quality could affect consumer satisfaction when a product can fulfil consumers desire or expectation and it make the consumer satisfied with the product. Nowadays companies need to orientate to the consumer satisfaction. In terms of consumer satisfaction product quality also held a key factor to affecting the consumer satisfaction (Suchánek et al., 2014). Therefore, Product Quality have a positive influence towards Consumer Satisfaction.

The better brand images of a brand it could raise consumers satisfaction towards the brand. However, by building a strong and a good brand image can escalate consumer satisfaction. Also, brand images affect consumers satisfaction partially and altogether. Consumer satisfaction is also affected by the strong brand images of a company. Consumer satisfaction is also constructed by positive description, the brand is well known, and the products are well known. Therefore, brand images have a positive influence towards Consumer Satisfaction (Tan et al 2019).

Thus, achieving consumer satisfaction will increase repurchase interest. Furthermore, automatically it increases sales turnover and company revenue. The company is obliged to pay or use factors of production in the form of wages for labor, interest for capital use, rent for land, and profit for management and entrepreneurship capabilities. In accordance with the macroeconomic perspective, it is certain that the gross domestic product will increase. In the end, the company's success will have an impact on the economic welfare of the community (Budiono & Purba (2019); Purba & Budiono (2019); Budiono et al (2020), Rajagukguk et al (2020)).

3. Methods

Based on the problems and possible causal relationships between product quality with consumer satisfaction and brand image with consumer satisfaction, then we compile a research model as outlined in the figure 1.

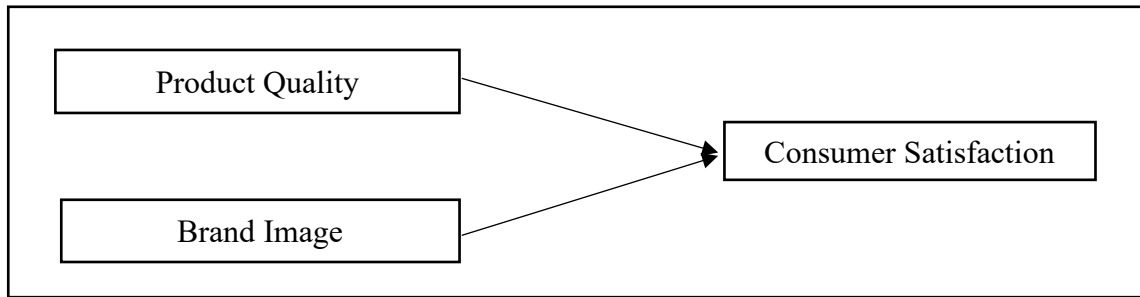


Figure 1 Research Model

Therefore, the conceptual definition and operational definition of variables that used for this research are shown in table 1.

Table 1 Conceptual Definition and Operational Definition

Variables	Conceptual Definition	Operational Definition	Scale
Product Quality	Product Quality is the characteristics of a product or service that bear on its ability to satisfy stated or implied consumer needs.	1. The performance of apple devices is better than other devices. 2. Apple products are reliable. 3. Apple products have strong durability 4. Apple products are made by premium materials.	Likert Scale
Brand Images	Brand images was a representation from overall perspective towards brand and shaped by past experiences with the brand	1. Apple is the best technological company. 2. Apple is the most innovative company. 3. Apple product will not disappoint their consumer	Likert Scale
Consumer Satisfaction	Consumer Satisfaction is the extent to which product’s perceived performance matches a buyer’s expectations.	1. Apple fulfills consumer expectation of the product. 2. Apple products satisfy the users. 3. Apple products are better than competitors	Likert Scale

Source: Kotler and Armstrong (2018).

Sekaran and Bougie (2016) stated that scale is an instrument or system by which people are recognized concerning how they contrast from each other on the factors important to our investigation. There are 4 types of measurement scales named: nominal, ordinal, interval, and ratio scale. For this research, author decided to use interval measurement scale to complete the research. The scale author used for this research is 5 points Likert Scale. Authors decided to use 5 points Likert Scale to find out how strong the agreement or disagreement given by the respondent.

Definition of validity as stated is “validity as the degree to which the observed scale difference represents the true difference between objects on the measured feature”. To get perfect validity, researchers need to gain zero measurement error. Validity consisted in three different type namely content validity, criterion validity, and construct validity. In general, content validity or usually called face validity involves evaluating the new survey instrument to make sure that it contains all the elements that are crucial and eliminates undesirable elements from the specified domain of construction. Criterion validities indicate whether validity indicates whether the scale shows the expected effect on other variables selected as a meaningful criterion. The last type of validity is construct validity. This is the most complicated validity among the other two. Construct validity is a kind of validity, that capable to examine the problem of the structure or characteristics that the scale is measuring. Convergent validity and determinant validity also part of the construct validity.

Reliability is how far a scale generate a consistent result if the measurement is made on some characteristic frequently. However, systematic errors do not have a harmful effect towards reliability. Reliability measurement considered perfect and reliable if $X_R = 0$ it means that the measurement is free from random errors. The internal consistency reliability method is used to evaluate the reliability of the calculated scale, in which multiple items are

added to form a total score. According to explanation stated by Sekaran and Bougie (2016), consistency can be examined by using interitem consistency reliability and split-half reliability tests.

The function of interitem consistency reliability is to test the consistency of the response answered by respondents to all the instrument included in the measure. Cronbach's alpha is the most popular testing in interitem consistency reliability. In Cronbach's alpha testing if the coefficient number is high it capable to give positive effect towards measuring instrument. In the other hand, split-half reliability capable to show us the connection between two halves of instrument. If the Cronbach's Alpha value is more than 0.7, stated as valid and fulfill the reliability measurement.

The least-squares method is generally used for estimation purposes in the multiple-regression model. Once regression coefficients are obtained, a prediction equation can then be used to predict the value of a continuous output (target) as a linear function of one or more independent inputs. Regression models may be attributed to the interpretability of model parameters and ease of use. However, the major conceptual limitation of all regression techniques is that one can only ascertain relationship but can never be sure about underlying causal mechanism (Tso & Yau, 2007).

Next, the analysis tools used are the econometrics and statistics methods to test the models and their respective parameters. Based on the problems and possible causal relationships between product quality with consumer satisfaction and brand image with consumer satisfaction, we are compiling a research model. Next, the analysis tools used are the econometrics and statistical methods to test the model and their respective parameters (W. H. Greene, 2018). The unknown parameters of the stochastic relation $y_i = x_i'\beta + \varepsilon_i$ are the objects of estimation. It is necessary to distinguish between population quantities, such as β and ε_i , and sample estimates of them, denoted b and e_i . the population regression is $E[y_i|x_i] = x_i'\beta$, whereas authors estimate of $E[y_i|x_i]$ denoted

$$\hat{y}_i = x_i'\beta \tag{1}$$

The disturbance associated with the i -th data point is

$$\varepsilon_i = y_i - x_i'\beta \tag{2}$$

For any value of b , we shall estimate ε_i with the residual.

$$e_i = y_i - x_i'\beta \tag{3}$$

From the definitions, so The basic framework for analyzing cross section data is a regression model of the form (W. H. Greene, 2018)

$$y_i = x_i'\beta + \varepsilon_i = x_i'\beta + e_i \tag{4}$$

This study uses cross section data that includes in 210 respondents in Javanese Island, Indonesia. The purpose of this study is to analyze impact of product quality (PQ) and brand image (BI) towards consumer satisfaction (CS). A multiple regression model with more than one explanatory variable may be written as the applied regression model for this study is

$$CS = \beta_0 + \beta_1 PQ + \beta_2 BI \tag{5}$$

Subsequently a calculation is made by estimating the suitability of the econometric model that is the magnitude of the R-squared and F-test with a significance level of 5%.

Based on the theoretical estimates for each parameter to achieve the desired model conditions in mathematical equations are as follows.

$$\beta_1 = \frac{\partial CS}{\partial PQ} > 0 \quad \text{and} \quad \beta_2 = \frac{\partial CS}{\partial BI} > 0 \tag{6}$$

Based on the calculus equation, the partial test of each independent variable is one way. product quality affects consumer satisfaction in the same direction, and brand image also affect consumer satisfaction in the same direction. Thus, the value of each parameter β is expected to be positive.

While the partial testing of each independent variable on the dependent variable is carried out by t-test with a significance level in this study amounting to 5%.

By using the null hypothesis (H_0) and alternative hypothesis (H_1) for partial testing on the β_1 parameter as follows:

$H_0 : \beta_1 = 0$, product quality does not affect consumer satisfaction.

$H_1 : \beta_1 > 0$, product quality affects consumer satisfaction in the same direction.

The null hypothesis (H_0) and the alternative hypothesis (H_1) for partial testing on the β_2 parameter are as follows

$H_0 : \beta_2 = 0$, brand image does not affect consumer satisfaction.

$H_1 : \beta_2 > 0$, brand image influences consumer satisfaction in the same direction.

Thus, it is clear, in practical econometrics there is always outlier data which means the data do not follow general patterns. This problem becomes very serious and complex. A model is considered robust if it meets the requirements of basic assumptions. In regression analysis, a method for estimating parameters is needed to meet the best linear unbiased estimator (BLUE). One popular method used is Ordinary Least Square (OLS). The classic assumption that must be fulfilled in OLS so that the estimation results are robust is homoscedasticity. Violation of the assumption of homoscedasticity is called heteroscedasticity, which means that the error is not constant. The consequence of heteroscedasticity can result in the OLS estimator obtained still meets the requirements of unbiased, but the resulting variant becomes inefficient which means the variant tends to enlarge so that it is no longer the smallest variant. Therefore, the best traits will not be fulfilled (Greene, 2018).

This assumption is very important in the regression analysis because it relates to the estimated standard error of the regression coefficient. Standard error regression has a role in the formation of t-counts and F-counts will be overestimated which may subsequently produce conclusions that appear to be significant but not significant. Therefore, if the assumption of homoscedasticity is not fulfilled the results of the t-test are uncertain (Greene, 2018).

As Greene (2018) suggests the regression method is done by weighting the data with an appropriate multiplier factor. By using the Stata Software application version 15, automatically the selected weighting is the right weighting so that robustness is met the requirements. The results of the t-test and F-test will show the true value and are significant. Data analysis was performed by following the ordinary least square (OLS) as econometric model framework.

4. Data Collection

To gather the data, authors must decide what kind of data that is more suitable for processing the research. Authors decided to use primary data for this research since it is more suitable than secondary data. Primary data is the data that is taken directly from the sample. The method used to collect the data is questionnaire. Questionnaire chosen because of its efficiency and accuracy. The questionnaire will use Likert scale as the measurement scale and the result will be served in numbers.

Based on Sekaran and Bougie (2016) statement questionnaire divided into 3 types of questionnaire named: personal administered questionnaires, mail questionnaires, and electronic and Internet questionnaires. For this research, authors decided to use electronic and internet questionnaires since the condition make it not possible to share the questionnaire directly to the respondents. Author going to use google form as the questionnaire platform and the questionnaire going to be shared through social media such as Line, Instagram, Facebook, and others platform with hope to reach the expected number of respondents.

According to Sekaran and Bougie (2016) sample size for most of the research are approximately around 30-500 samples to be considered as an appropriate. So, authors use non-probability sampling. Respondents fill the questionnaire each sample, need to fill this requirement criteria: (1) Aged 16 (sixteen) or older, (2) An active Apple devices user, and (3) Currently living in Jakarta area or used to live in Jakarta area for the past one year. Every individual who belongs in this group have a well knowledge about Apple devices. This research consisted 10 indicators, it means the amounts of sample needed is 10 times by 10. Which means there are 100 samples minimum needed to complete the research (Hair et al, 2010). However, authors decided to collect 210 samples for this research to retrieve more accurate data from the respondents. The data collected for this were processed by the STATA Application Release 15 version.

5. Results and Discussion

Table 2 are the result of the reliability using Cronbach's Alpha. Based on the result below, there is no result below the measurement standard.

Table 2 Result of Validity and Reliability for 10 Indicators

Test scale = mean(standardized items)						
Item	Obs	Sign	item-test correlation	item-rest correlation	average interitem correlation	alpha
pq1	210	+	0.7058	0.6217	0.4256	0.8696
pq2	210	+	0.6772	0.5870	0.4311	0.8721
pq3	210	+	0.6146	0.5127	0.4432	0.8775
pq4	210	+	0.6570	0.5628	0.4350	0.8739
bi1	210	+	0.7403	0.6638	0.4189	0.8664
bi2	210	+	0.6826	0.5935	0.4301	0.8716
bi3	210	+	0.6615	0.5682	0.4341	0.8735
cs1	210	+	0.7872	0.7220	0.4098	0.8621
cs2	210	+	0.7390	0.6622	0.4191	0.8666
cs3	210	+	0.6967	0.6105	0.4273	0.8704
Test scale					0.4274	0.8819

Source: Data Processing

All test results already passed minimum requirement to declared as valid and reliable. The result of item test-correlation has passed the minimum requirement of r-table so that all indicators of each variable are declared valid. The Cronbach's Alpha test result is 0.88 greater than the required minimum of 0.70.

After all indicators are declared valid and all variables are declared reliable, the researchers estimate the proposed model. By using linear regression and robustness feasibility, the output of data processing is as follows Table 3.

Table 3 Result of Robust Least Square Regression for Consumer Satisfaction

Linear regression		Number of obs	=	210	
		F(2, 207)	=	95.01	
		Prob > F	=	0.0000	
		R-squared	=	0.5090	
		Root MSE	=	.43396	
CS	Coef.	Robust Std. Err.	t	P> t	[95% Conf. Interval]
PQ	.363036	.0775962	4.68	0.000	.2100559 .5160161
BI	.4509349	.0567231	7.95	0.000	.3391059 .5627638
_cons	.7997319	.2960902	2.70	0.007	.2159929 1.383471

Source: Data Processing

Based on the value of R-squared = 0.5050 shows that 50,05% changes in consumer satisfaction are influenced by independent variables in the model, while the influence of variables outside the model is 49.95%. The test results for the proposed model that the results of the value of F-test = 95.01 and probability F = 0.00 smaller than the significance level of 5%, we reject the null hypothesis. The independent variable product quality (PQ) and brand images (BI) simultaneously influence the consumer satisfaction (CS) on Apple device in Indonesia.

Based on the results of partial testing of the product quality (PQ) is t-test = 4.68 and probability value t = 0.000 states that we reject null hypotheses and accept alternative hypotheses. product quality (PQ) significantly influences the consumer satisfaction (CS). Subsequent partial testing of the brand images (BI) variable is t-test = 7.95 and probability value t = 0.000 states that we reject null hypothesis and accept alternative hypotheses. Brand images (BI) significantly influences the consumer satisfaction (CS). So, testing together or partially shows the behavioral model in this study has met the statistically requirements. Next, we construct the equation of the econometric model in this study as follows.

$$CS = 0.799 + 0.36 PQ + 0.45 BI$$

From the results equation the product quality (PQ) and brand images (BI) affects consumer satisfaction (CS) as the foundation of the hiring market strategy in Business. Each increase one scale unit level in product quality will increase by 0.36 level of consumer satisfaction preference scale. So, each increase one scale unit level in brand images will increase by 0.45 level of consumer satisfaction preference scale.

6. Conclusion

Because product quality significantly affects consumer satisfaction, the product quality improvement program must be prioritized. Increasing product reliability can be done through increasing the reliability of its components for products sold under warranty. This method can reduce warranty costs. The reliability improvement that is carried out can reduce the amount of damage during the warranty period, thereby reducing warranty costs. Reliability improvements made to product components can improve overall product reliability. Claims that arise due to product damage can have a detrimental impact on the consumer, so we must consider the interests of the consumer. Increased product durability and premium materials are the key to product quality.

In this study, brand image significantly affects consumer satisfaction. Efforts to increase brand image need to be carried out as follows: promotion, maintaining and enhancing reputation, especially "" the big brand "". Companies must also develop sustainable technology and product innovation. Every technological advancement used by the company must always be reported as good news to all people. Furthermore, companies must be able to prevent consumers from being disappointed in products and services.

Therefore, product quality and brand image affect consumer satisfaction very significantly. Furthermore, the success in creating satisfaction for consumers is the key to success in product marketing. Thus, the market growth strategy will be easier to implement if consumers already have adequate satisfaction. Lastly, support from the government through policies for business groups is crucial in business, however.

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