

The Influence of Product Quality and After Sales Services on Customer Satisfaction in Mahir Residence Sukabumi

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Abstract

The problem found at Mahir Residence Sukabumi is the emergence of consumer dissatisfaction with the products produced by the company. The problem is thought to have occurred due to poor product quality and less than optimal after-sales service. This study aimed to determine the magnitude of the effect of product quality and after-sales service on consumer satisfaction. The research method used is a descriptive and associative method with the research design is a causality and verification type of investigation. The data analysis technique uses multiple correlation coefficients, multiple linear regression, coefficient of determination, and hypothesis testing with the F test. The most dominant variable affecting consumer satisfaction in this study is product quality. Based on the results of the study, the correlation between product quality and after-sales service was 0.437, the magnitude of the effect of product quality on consumer satisfaction was 31.9%, the magnitude of the effect of after-sales service on consumer satisfaction was 22.3%, and the magnitude of the influence of product quality and after-sales service selling to consumer satisfaction together by 43.7% while the remaining 56.3% is influenced by other factors that are not included in this study. From the results of this study, it can be seen that product quality and after-sales service can affect consumer satisfaction.

Keywords

Product Quality, After Sales Service, Consumer Satisfaction

1. Introduction

Companies must be able to determine the right marketing strategy so that their business can survive and win the competition and achieve the company's goals (Ferrell et al., 2021). A company must work hard to make new strategic policies in selling their products concerning facing intense competition from competitors who can provide greater value to consumers (Hastings et al., 2020). According to Sund & Lindskov (2022), market and consumer-oriented thinking is a necessity that cannot be avoided in the era of hyper-competition business competition. In the process of delivering products to consumers and achieving company goals in the form of optimal product sales, each company uses marketing activities as benchmarks (Zhaomin et al., 2021; Shah, 2022). Before launching a product, the company must be able to see or know what consumers want and need. In choosing a product, consumers will be influenced by the various functions inherent in the product (Cao et al., 2018).

Consumers certainly want the quality of the product they are going to buy is good and guaranteed. Especially with the features or additions that make the product unique or different from other products (Wantara & Tambrin, 2019). The difference in product quality owned by a product is also thought to affect consumer satisfaction because efforts to satisfy consumers do not only stop at the time of purchase, but companies must also pay attention to after-sales services provided to consumers (Syafarudin, 2021; Nani et al., 2022); (Wahyuni & Ginting, 2017).

After-sales service is the seller's responsibility for the quality of the goods he sells, which can be provided in the form of follow-up consultations or guarantees in the form of replacement of damaged goods, maintenance, and soon (Shokouhyar et al., 2020; Wahjudi et al., 2018). According to Balinado et al. (2021), after-sales service becomes useful for the company. It is because after-sales service is expected to satisfy consumers, so the occurrence of a relationship of consumer dissatisfaction will negatively impact the company. Besides there will be no satisfaction from consumers, and new consumers will not be interested in buying or using the company's products.

Mahir Residence Sukabumi is a company engaged in Housing Development Services, with SIUP number: 503.17/2952/10-22/PK-BPPT/2012. Currently, the company Mahir Residence Sukabumi has a business activity by providing better services to buyers or work partners. Providing housing products in the form of plots ready to build. Whereas with this kind of product, it is hoped that the quality of the building will be as desired by consumers because there will be joint control between the developer and the buyer at the time the development process takes place. As well as guarantee the quality and shape or model of the building as expected, without leaving an element of service that is satisfactory and following what is needed by the community at this time.

Based on the initial interviews that the authors conducted with consumers of Mahir Residence Sukabumi, the authors found a problem that consumers were not satisfied with the services Mahir Residence Sukabumi that were not fast and precise. It is reinforced by the results of the initial observations that the authors have done by distributing questionnaires to 20 consumers of Mahir Residence Sukabumi regarding consumer satisfaction. This can be seen from the number of consumers who answered that they were not satisfied with product quality, price, service quality, emotional factors and the convenience that existed in the indicators of the dimensions of consumer satisfaction in the questionnaire that the author distributed.

2. Literature Review

2.1 Product Quality

According to Wensley (2016), quality indicates a product's ability to carry out its functions, including durability, reliability, accuracy, ease of operation and repair, and other valuable attributes. According to Mowen & Minor (1995), performance is related to the functional aspects of the product. It is the main characteristic that customers consider when they want to buy a product, which includes Faster (faster) related to the time dimension that describes the speed and ease or how to obtain this product. Features are the second aspect of performance that adds to the basic functionality related to options and development. Reliability is a characteristic that reflects the probability or probability of success in using the product (Ali, 2019).

Conformance relates to the level of product conformance to predetermined specifications based on customer desires and is often defined as conformance to requirements (Nupus & Ichwanudin, 2021). Durability is a measure of the lifetime of a product, this characteristic is related to the durability of the product. Service ability is a characteristic related to speed, friendliness/politeness, competence, ease and accuracy in repairs. Aesthetics is a subjective characteristic that is related to personal considerations and reflections from individual references or choices. Thus, the aesthetics of a product is more related to personal feelings and includes certain characteristics. Perceived Quality is subjective regarding customer feelings in consuming the product (Mowen & Minor, 1995).

2.2 After-Sales Service

Tjiptono (2007) states that after-sales service is a service provided by producers to consumers after the consumer buys products from the company. The elements of after-sales service, according to Sahir et al. (2021), the basics of marketing that the company will offer to its consumers can be broadly divided into four parts, namely: (a) Warranty, the warranty is intended to assure consumers that the product is in good condition or free from damage. (b) Provision of accessories, in the implementation of after-sales service, the provision of spare parts is very important, because without spare parts, the components of products that have been damaged cannot function properly. (c) Maintenance and repair services are needed if a product has a long consumption period and requires regular maintenance so that it can always function properly. (d) Facilities and equipment of a product is a means to perform after-sales service. Sophisticated equipment and equipment will be able to determine the smooth service of officers in carrying out maintenance and repair of products purchased by consumers.

2.3 Consumer Satisfaction

When consumers buy a product, they have expectations about how the product functions (product performance). According to Sumarwan (2011), the theory that explains how consumer satisfaction or dissatisfaction is The Expectancy Disconfirmation Model, which states that consumer satisfaction and dissatisfaction is the impact of a comparison between consumer expectations before purchase and what is actually obtained by consumers from the purchased product. According to Irawan (2002), the dimensions of consumer satisfaction are as follows: (a) product quality, namely, consumers will feel satisfied if their results show that the products they use are of high quality. (b) price, namely products with the same quality but relatively low price,

will provide higher value to consumers. (c) quality of service, namely, consumers will feel satisfied if they get good service or as expected. (d) emotional factors, namely pride, self-confidence, a symbol of success, being part of an important group of people and soon. (e) convenience, services that do not incur additional costs or do not need to waste time to get a product or service tend to be satisfied with the product or service.

2.4 Research Hypothesis

Based on the framework described above, the researchers state the hypothesis: H₁: The positive and significant influence between Product Quality and After-Sales Service on Consumer Satisfaction at Mahir Residence Sukabumi.

3. Research Methodology

The research method used in this research is the descriptive and associative research method. According to Firdaus (2021), the descriptive research method is conducted to determine the value of independent variables, either one or more variables, without making comparisons or connecting with other variables. Meanwhile, the associative research method is a research method that aims to determine the relationship between two or more variables.

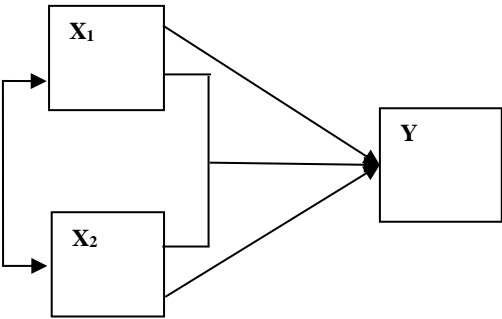


Figure 1. Theoretical Framework

3.1 Population and Sample

Researchers set the population in this study, namely consumers Mahir Residence Sukabumi as many as 60 respondents. The technique used is saturated sampling, where all population members become respondents.

3.2 Data analysis technique

The data analysis technique was carried out after the data from all respondents had been collected. The first step before analyzing the data is measuring attitudes using a Likert scale. With this scale, the variables that can be measured are translated into indicators. Then these indicators are used as a reference for compiling instruments in the form of questions.

"Wrong numbers" 1, 2, and 3 can be answered by describing or describing the data that has been collected as it is without intending to make conclusions that apply to the public. The answer to this problem statement can be presented through a table.

Formulation of problem number 4 can be answered by using multiple correlation analysis techniques. Before the data is analyzed, the data collected in the form of an ordinal scale is first converted into an interval scale using the Method of Successive Interval (MSI).

Table 1. Operationalization of Research Variables

Variable	Dimension	Indicator
Product quality Garvin (Swastha & Handoko, 2002)	a. Performance b. Features c. Reliability d. Conformance e. Durability f. Service Ability g. Aesthetics h. Perceived Quality	a. The speed and ease of getting a house b. Cheaper house prices c. There are special features in the function of the house d. Home use reliability e. Product conformity with consumer desires f. Durable house durability g. Service capability in home improvement h. Trust in the house
After Sales Service (X2) (Sahir et al., 2021).	Warranty Provision of accessories Repair and maintenance services Facilities and equipment	Free service Completeness of providing accessories and home supplies Procurement of home repair and maintenance services Sophisticated equipment equipment home maintenance and repair services wrong number
Consumer Satisfaction Handi Irawan (2002)	Product quality Price Service quality Emotional factors Convenience	The quality of the house as expected Match the price of the house with the quality of service. Matching house prices with consumer expectations Conformity of service quality with consumer expectations. Proud to use the house Speed and accuracy of service. Ease of getting services Ease of problem complaints

Double Correlation

Double Correlation Formula according to Sugiyono (2009):

$$R_{yx_1x_2} = \sqrt{\frac{r_{yx_1}^2 + r_{yx_2}^2 - 2r_{yx_1}r_{yx_2}r_{x_1x_2}}{1 - r_{x_1x_2}^2}}$$

description:

- R_{yx₁x₂} = correlation between variables X₁ and X₂ together with variable Y
- ry_{x₁} = Pearson Product Moment Correlation between X₁ and Y
- ry_{x₂} = Pearson Product Moment Correlation between X₂ and Y
- rx₁x₂ = Pearson Product Moment Correlation between X₁ and X₂

The calculation results that have been obtained can then be interpreted as to the strength of the relationship using the guidelines as shown in the table:

Table 2. Guidelines for Providing Interpretation of Correlation Coefficients According to Guilford

Coefficient interval	Relationship Level
0,00 – 0,199	Very low
2,00 – 0,399	Low
0,40 – 0,599	Currently
0,60 – 0,799	Strong
0,80 – 1,000	Very strong

Source: Sugiyono (2009)

Coefficient of Determination

The coefficient of determination to see how big the percentage (%) of the influence on the variable X1 (training), variable X2 (providing motivation), on variable Y (employee work productivity). The formula is as follows:

$Kd = (rs)^2 \times 100\%$

Information:

Kd = Coefficient of determination

Rs = Correlation coefficient

Criteria to be a coefficient of determination:

- 1. If "d" is close to 0, it means that the influence of variable X on variable Y is weak.
- 2. If "d" is close to 1, it means that the influence of variable X on variable Y is strong.

Multiple linear regression

This analysis is used to find out how the condition (increase) of the dependent variable (the dependent variable), if two independent variables (independent variables) are increased and decreased in value, then the multiple linear regression equation is used.

According to Firdaus (2021), to determine the value of the correlation used multiple regression analysis can be expressed by the following formula:

$Y^* = a + b_1 X_1 + b_2 X_2$

Where:

Y* = dependent/dependent variable

X = independent variables

a = constant (intercept)

b = coefficient of regression direction/ parameter value

Hypothesis testing

Hypothesis Testing Table F was conducted to determine the significance of the independent variables together on the dependent variable. Researchers want to find out how much influence

the independent variables (training and motivation) have on the dependent variable (employee work productivity), so the researcher uses the hypothesis test F. Sugiyono (2009) states to test the significance of the multiple correlation coefficient calculated by the formula:

$$F_h = \frac{R^2 / k}{(1 - R^2) / (n - k - 1)}$$

Description:

R = Double Correlation Coefficient

k = number of independent variables

n = number of sample members

F = F count which is then compared with F table

The multiple correlation significance test was directly consulted with the F table value based on the numerator $dk = k$ and denominator $dk = (n - k - 1)$ and the specified error level. The stipulation is that if the calculated F is greater than the F table, the multiple correlation coefficient tested is significant. That is, it can apply to the entire population.

4. Results

4.1 Correlation Analysis of Product Quality Variables (X1), After Sales Service (X2) and Consumer Satisfaction (Y) at Mahir Residence Sukabumi

The analysis technique is carried out with the help of SPSS 17 software and to calculate the correlation of variables using the multiple correlation formula as follows:

Table 3. Correlation Coefficient between Product Quality (variable X1), After Sales Service (variable X2) and Consumer Satisfaction (variable Y)

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.661a	.437	.417	3.13583
a. Predictors: (Constant), X2, X1				

Table 3 above shows that the correlation between product quality and after-sales service variables is 0.661.

4.2 Determinant Coefficient

Furthermore, to see how big the percentage (%) of the influence on variable X1 (product quality), variable X2 (after-sales service), on variable Y (consumer satisfaction), the coefficient of determination is calculated with the following formula:

$$Kd = (rs)^2 \times 100\%$$

Is known:

$$r = 0,661$$
$$Kd = (0,661)^2 \times 100$$
$$= 0,437$$
$$= 43,7 \%$$

The criteria for the coefficient of determination are as follows:

- 1. If "Kd" is close to 0, then the influence of variables X1 and X2 on variable Y is weak;
- 2. If "Kd" is close to 1, then the influence of the X1 and X2 variables on the Y variable is strong.

Based on the calculation of the coefficient of determination that the researchers have done, it is known that the value of Kd = 43.7%. So it can be concluded that the effect of product quality and after-sales service on consumer satisfaction is strong. As for the results of these calculations, the research paradigm can be described as follows:

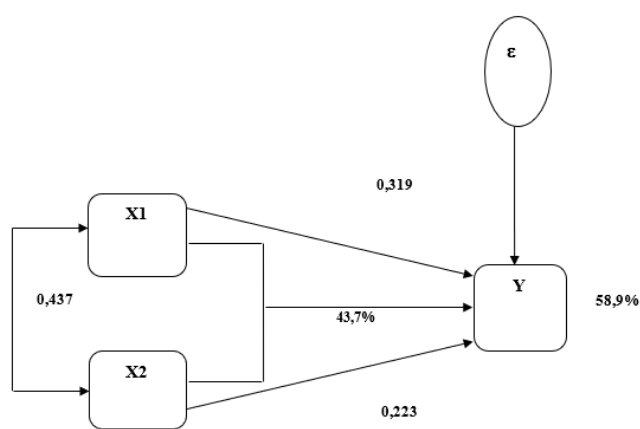


Figure 2. Determinant Coefficient

Description:

$$r_{X_1X_2} = 0,437$$
$$r^2_{X_1Y} = 0,319$$
$$r^2_{X_2Y} = 0,223$$
$$r^2_{X_1X_2Y} = 43,7\%$$
$$\epsilon = 56,3\%$$

Based on the picture above, it can be concluded that the correlation between product quality and after-sales service is 0.437. The effect of product quality on consumer satisfaction is 31.9%. The effect of after-sales service on customer satisfaction is 22.3%. And the magnitude of the influence of product quality and after-sales service on customer satisfaction is 43.7%. In comparison, the remaining 56.3% is influenced by other factors not included in this study.

4.3 Multiple Linear Regression

This multiple linear regression calculation was performed using SPSS 16 software. The results of these calculations can be seen in Table 4.

Dependent Variable Y

Table 4. Multiple Linear Regression Calculation Results

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.721	2.718		1.737	.088
	X1	.328	.118	.333	2.774	.007
	X2	.610	.176	.415	3.461	.001

Based on the table above, the value of the multiple linear regression equation is as follows:

$$a = 4,721$$

$$b_1 = 0,328$$

$$b_2 = 0,610$$

Furthermore, the multiple linear regression equations obtained for the two predictors (product quality and after-sales service) are:

$$\hat{Y} = 4,721 + 0,328 X_1 + 0,610 X_2$$

Based on the above equation, it is known that there is a positive influence between product quality (variable X_1) and after-sales service (X_2) on consumer satisfaction (variable Y).

Mahir Residence Sukabumi's consumer satisfaction will increase if the product quality (variable X_1) and after-sales service (X_2) are improved. The regression coefficient for product quality of 0.328 is smaller than the regression coefficient for after-sales service of 0.610.

4.4 Hypothesis Test

The multiple correlation significance tests are then entered and calculated using the SPSS 16 software. The results are as shown in Table 5.

Table 5. Hypothesis Testing Results (F Test)

ANOVA ^b						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	435.493	2	217.747	22.143	.000a
	Residual	560.507	57	9.833		
	Total	996.000	59			
a. Predictors: (Constant), X2, X1						
b. Dependent Variable: Y						

Based on the above calculations, the results of the calculated F variable X_1 (product quality), X_2 variable (after-sales service), and Y (customer satisfaction) are 22,143. Furthermore, the

calculated F value is compared with F table, F table is searched in the table listed in the appendix based on the numerator dk= k and denominator dk= (n-k-1) and the specified error level. So, the dk of the numerator = 2, and the dk of the denominator = 57, so that the value of F table = 3.16 is obtained. The error rate set is 5%.

From this it can be concluded that there is a significant influence between the variables X_1 , X_2 , and Y. The results of testing the hypothesis are as follows:

$$F_{\text{count}} > F_{\text{table}}$$

$$22,143 > 3.16$$

The results of testing the hypothesis indicate that there is an effect of product quality and after-sales service on consumer satisfaction. The curves for the reception area of H_1 and H_0 are as follows:

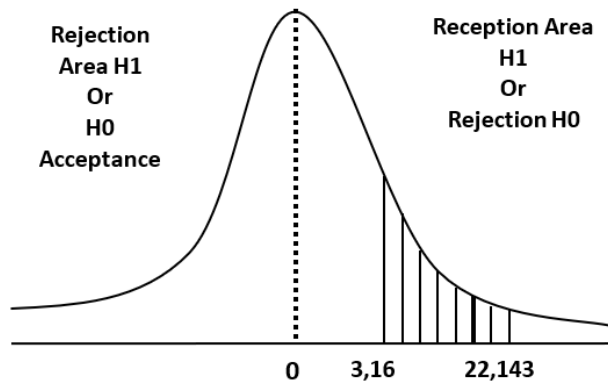


Figure 3. Hypothesis test

Description:

H_0 is located to the left of the critical point while H_1 is located to the right of the critical point, in other words the critical point is 3.16 for $n = 60$ obtained from the influence of the three variables, namely product quality and after-sales service as independent variables on consumer satisfaction as the dependent variable of 22,143 then from the three variables there is a significant influence.

5. Conclusion

Starting from the formulation of the problem, theoretical study, problem discussion, analysis of empirical data, and the results of the hypothesis, in this chapter, the author will put forward several things that the author can conclude. The quality of home products at Mahir Residence Sukabumi is not satisfactory. It can be seen from the product quality indicators that consumers are not satisfied with the quality of the products produced by Mahir Residence Sukabumi. After-sales service carried out by consumers of Mahir Residence Sukabumi has not been satisfactory.

It happens because the company has not provided optimal service when there is damage to the house, and sometimes there are delays in implementing home repair and maintenance services. Mahir Residence Sukabumi has not fully paid attention to customer satisfaction. It happens because customer satisfaction has not been met properly. Companies must always try to meet the wants and needs of consumers so that consumers feel satisfied. The quality of products and after-sales service on consumer satisfaction at Mahir Residence Sukabumi has a positive and significant influence. It can be concluded after testing the hypothesis that other things affect consumer satisfaction at Mahir Residence, which is influenced by other factors which were not examined in this study.

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