

The impact of product quality on consumer satisfaction at PT. Siantar Top, Tbk Medan

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ABSTRACT

This research to look at the effect of product quality on customer satisfaction. the sample in this study amounted to 50 consumers of PT Siantar Top, Tbk Medan who were taken by random sampling technique. The analysis method uses descriptive quantitative with data testing using simple linear regression analysis. hypothesis testing uses validity and reliability, coefficient of determination and partial test. the test tool used SPSS version 22. the results of this study indicate that there is an effect of product quality on customer satisfaction with a partial test value of 11.542. good product quality will bring satisfaction to consumers.

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1. Introduction

The development of the business world today is characterized by increasingly close competition, especially in the management of the company's business units and the goals that a company wants to achieve. Business competition in this era of globalization is very tight, where each company is required to be able to meet consumer needs and strive to create a product that has advantages and create products that are different from competitors. Product quality is an advantage possessed by the product. Through superior product quality, consumer satisfaction is also created. Customer satisfaction is the level of consumer feelings after comparing with their expectations. Many things influence consumers to choose a product, one of which is product quality. Some consumers state that a high price guarantees quality. Product quality can be seen from the number of people who use the product, dancing packaging or other advantages offered. These things can attract consumers' interest in choosing products for their use.

Based on observations made by researchers, there are complaints filed by consumers who have received products that have been distributed such as product delays and improper packaging when received. This causes consumer dissatisfaction. Before the product is distributed, its eligibility has been checked by the section that handles product eligibility, but when in distribution it may experience several obstacles. things that are out of the company's control like this can become a gap for consumer dissatisfaction with the product. The purpose of this study is to see if there is an effect of product quality on customer satisfaction.

Quality is the totality of features and characteristics of a product or service that has the ability to fulfill stated or implied needs (Kotler & Keller, 2019). Product quality is a factor contained in a product that causes the product to be valuable in accordance with the purpose for which it was produced (Musfar, 2020). The conventional definition of quality is performance as a direct description of a product, reliability, ease of use, aesthetics and so on. In a strategic sense, quality is everything that can provide consumer needs in

accordance with what consumers want (Tjiptono, 2020). If the company wants to maintain its competitive advantage in the market, the company must understand what dimensional aspects are used by consumers to distinguish the products sold by the company from competitors' products. Quality reflects all dimensions of a product offering that generate benefits for customers. Product quality consists of several indicators, namely (Sopiah & Sangadji, 2018): a) Performance b) Reliability c) Features d) Durability f) Design. The attributes that accompany the product include several things, namely as follows (Kotler & Armstrong, 2018): a) Product quality b) Product features c) Product Style and Design d) Brand e) Packaging f) Labels. The characteristics of product quality that can be included to have superior products are as follows (Wijaya, 2018): a) Good design b) Excellence in competition c) Physical attractiveness d) Authenticity. Products are the core of a marketing activity because products are outputs or results of one of the company's activities or activities that can be offered to target markets to meet consumer needs and desires. Basically, in buying a product, a consumer does not only buy a product, but consumers also buy the benefits or advantages that can be obtained from the product they buy. The factors that affect product quality are as follows (Assauri, 2018): a) Function of a Product b) Outer Shape of the Product c). The cost of the product

The importance of reducing the difficulty of improving product quality for enhancing the platforms' profitability and consumer surplus (Wen & Siqin, 2020). Product quality may depend on consumer taste (Baranchuk & Prasad, 2023). That when a manufacturer wishing to sell its entire product line through a retailer provides demand-enhancing services to consumers, then it chooses higher product quality levels and channel member profits and consumer welfare are higher. However, when the retailer selling the manufacturer's product line is the one who provides the demand-enhancing services, then the manufacturer may choose a lower product quality level and retailer profit and consumer welfare may be lower (Kolay, 2018). Ethnic differences can influence a person to buy or use a product (Baskentli et al., 2023).

Customer satisfaction is a customer feeling in response to goods or services that have been consumed (Irawan, 2021). Then customer satisfaction is one of the reasons why consumers decide to shop at a place (Sunyoto, 2018). If consumers are satisfied with a product, they are likely to continue to buy and use it and tell others about their pleasant experience with the product. Based on several definitions from the experts above, it can be concluded that customer satisfaction is a result of the comparison between expectations and performance obtained in using a product or service. Five elements that are related to customer satisfaction are as follows (Priansa, 2017): a) Expectations b) Performance c) Comparison d) Experience e) Confirmation. Indicators for measuring customer satisfaction are (Indrasari, 2019): a) Expectation conformity b) Interest in revisiting.

That functional company characteristics are not effective in creating customer-company identification per se, but that their influence depends on whether they match with a self-definitional need that is important to the customer (i.e., self-continuity, self-distinctiveness, or self-enhancement). The findings also reveal the underlying mechanism of this contingency by showing that a self-definitional need fosters customer-company identification because it strengthens the symbolic value of a matching functional characteristic. By identifying specific characteristics-need matches, this research offers novel insights into how managers can leverage functional company characteristics in their targeting and communication efforts to establish meaningful long-term relationships with customers (Kassemeier et al., 2022). Recommendations, product image and company performance affect customer satisfaction (Schofield et al., 2020). From research conducted by (Ibrahim & Thawil, 2019) there is an effect of product quality on consumer satisfaction with an increase in the quality of these products. In other studies, it shows the effect of product quality and service quality on customer satisfaction (Lesmana & Ratnasari, 2019). Other research shows that there is an effect of service quality and price on customer satisfaction but product quality has no effect on customer satisfaction (Asti & Ayuningtyas, 2020). The results are robust across shopping motivations and product categories. Theoretical implications and proposals for effective channel integration are offered (Flavián et al., 2019).

2. Research Method

This research was conducted in April 2023 at PT Siantar Top, Tbk Medan. The research method used is descriptive method with a quantitative approach. This descriptive method involves collecting data to test hypotheses or answer questions about people's opinions on an issue or topic. Quantitative research is research based on the collection and analysis of numerical data to explain, predict, and control phenomena of interest. Quantitative research emphasises its analysis on numerical data processed by statistical methods. With

quantitative methods, the significance of the relationship between variables will be obtained. The sample in this study were consumers of PT Siantar Top, Tbk Medan, the sampling technique was random sampling.

The data used are primary and secondary data. Primary data is data obtained directly from the agency under study, through observation and distribution of questionnaires. The data collected is quantitative in the form of data on matters relating to the effect of product quality on customer satisfaction at PT Siantar Top Tbk Medan. Secondary data is data collected by researchers from companies in the form of a general description of the company and library data. Data collection techniques using observation, documentation study and questionnaire distribution.

The data analysis method used in this research is quantitative descriptive method. While the analysis model used in this research is simple linear regression with the following equation method:

$$Y=a+bX+e \quad (1)$$

Description:

Y= Consumer satisfaction

a= Constant

b= Refression coefficient of variable

X= Quality product

e= Error of term

To see whether the research instrument is valid or not, validity and reliability tests are carried out, and partial tests are carried out. The hypothesis in this study is that there is an effect of product quality on customer satisfaction (Maramis et al., 2018).

3. Results And Discussions

Respondent Characteristics

The characteristics of the respondent are the identity of the respondent who is the research sample. The research sample was 50 consumers who used and bought PT Siantar Top Tbk Medan products and who filled out questionnaires based on gender, age and education. The following presents data on the characteristics of respondents as follows:

Table 1. Characteristic of respondents based on gender

No	Gender	Quantity
1	Male	20
2	Female	30
Total		50

Table 2. Characteristic of respondents based on age

No	Age	Quantity
1	< 25	10
2	25-35	15
3	36-45	15
4	>46	10
Total		50

Table 3. Characteristic respondents base on education level

No	Education	Quantity
1	Senior High School	25
2	Diploma	15
3	Bachelor	5
4	Postgraduate	5
Total		50

The data above shows the results of the questionnaire that has been given to 50 respondents. The results show that respondents with female gender are more dominant, because company respondents are people who open a buying and selling business, which is dominated by women. Respondents with ages 25-45 years are more dominant, because at this age people need additional funds for survival and selling is chosen

as a business, and respondents with high school education are more dominant because currently only completing high school cannot be many job options.

Validity and Reliability Test

The validity test is used to measure whether a questionnaire is valid or not. To measure validity, it can be done by correlating the score of the statement items with the total score of the construct or variable. The instrument is said to be a valid statement if the value of $r_{count} > r_{table}$. The following validity results of each instrument can be seen in the table below:

Table 4. Product quality variable validity test results (X)

Statement	r_{count}	r_{table}	Conclusion
Statement1	0,451		Valid
Statement2	0,633		Valid
Statement3	0,619		Valid
Statement4	0,809		Valid
Statement5	0,615		Valid
Statement6	0,809		Valid
Statement7	0,723		Valid
Statement8	0,661	0,2787	Valid
Statement9	0,615		Valid
Statement10	0,809		Valid
Statement11	0,615		Valid
Statement12	0,486		Valid

Based on the table above, it can be seen that testing each statement of the product quality variable (X) has a r_{count} value $>$ r_{table} value of 0.2787. This it can be concluded that all product quality (X) statements used are valid.

Table 5. Results of the consumer satisfaction variable validity test (Y)

Statement	r_{count}	r_{table}	Conclusion
Statement1	0,670		Valid
Statement2	0,756		Valid
Statement3	0,771	0,2787	Valid
Statement4	0,518		Valid
Statement5	0,670		Valid
Statement6	0,501		Valid

Based on the table above, it can be seen that testing each statement of the customer satisfaction variable (Y) has a $r_{count} >$ r_{table} value of 0.2787. Thus it can be concluded that all statements of the consumer satisfaction variable (Y) used are valid.

Then the reliability test is carried out to ensure that the instrument or statement used is reliable, consistent and stable if used repeatedly at different times. The instrument or statement is said to be reliable if the Cronbach Alpha value is $>$ 0.6. Then the results of the reliability test can be seen in the table below:

Table 6. Reliability test result

Variable	Cronbach Alpha	Alpha	Conclusion
Product Quality (X)	0,915		Reliable
Consumer Satisfaction (Y)	0,858	0,6	Reliable

The reliability test results show that the Cronbach Alpha value of all variables is greater than 0.6. Thus, it can be concluded that the entire research questionnaire is said to be reliable.

Simple Regression Linear Test Result

This test was conducted to determine the effect of product quality on customer satisfaction at PT Siantar Top Tbk Medan. The following below is a table of simple linear regression test results, namely:

Table 7. Simple regression test result
Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients Beta	T	Sig.
	B	Std. Error			
1 (Constant)	4,996	1,869		2,673	,010
Product Quality	,421	,036	,857	11,542	,000

a. Dependent Variable: Consumer Satisfaction

Based on the results above, the simple linear regression equation in this study is:

$$Y = 4,996 + 0,421X + e \quad (2)$$

In this regression model, the constant value (customer satisfaction) listed at 4.996 means that if the independent variables in the model are assumed to be equal to zero, on average, the variables outside the model will still increase customer satisfaction by 4.996 one unit, or in other words, if the product quality variable is not increased, then customer satisfaction is still at 4.996 units.

Determinate Coefficient Test Result (R²)

The coefficient of determination (R²) is used to measure the magnitude of the relationship between independent variables consisting of product quality variables that have a positive and significant effect on customer satisfaction at PT Siantar Top Tbk Medan. The results of the determination test can be seen in the following:

Table 8. Determinate coefficient test result (R²)
Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,857 ^a	,735	,730	1,53718	1,539

a. Predictors: (Constant), Product Quality

b. Dependent Variable: Consumer Satisfaction

The coefficient of determination is 0.735 (73.5%). So it can be said that 73.5% of the variation in the independent variable product quality in the model has a close contribution to the customer satisfaction variable at PT Siantar Top Tbk Medan while the remaining 26.5% is influenced by other variables outside the above variables.

Partial Test (t test)

Partial test (t test) aims to see the effect of product quality variables on customer satisfaction at PT Siantar Top Tbk Medan. The t test results can be seen in the table below:

Table 9. Partial test result
Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.
	B	Std. Error			
1 (Constant)	4,996	1,869		2,673	,010
Product Quality	,421	,036	,857	11,542	,000

b. Dependent Variable: Consumer Satisfaction

Based on the table above, the results show that the significance value for the product quality variable (0.000) is smaller than the alpha 5% (0.05) and the t_{count} value is $11.542 > t_{table} 2.0106$. Based on the results obtained, it accepts H_1 and rejects H_0 for the product quality variable. Thus, partially that the product quality variable has a positive and significant effect on customer satisfaction at PT Siantar Top Tbk Medan.

4. Conclusion

The results of testing the first hypothesis show that the coefficient of determination is 0.735 (73.5%). So it can be said that 73.5% of the variation in the independent variable product quality in the model has a close contribution to the customer satisfaction variable at PT Siantar Top Tbk Medan while the remaining 26.5% is influenced by other variables outside the above variables. While the results of testing the second hypothesis

show that, the significance value for the product quality variable (0.000) is smaller than that of alpha 5% (0.05) or $t_{\text{count}} 11.542 > t_{\text{table}} 2.0106$. Based on the results obtained, accept H1 and reject H0 for the product quality variable. Thus, partially that the product quality variable has a positive and significant effect on customer satisfaction at PT Siantar Top Tbk Medan. Based on the results and theory above, it can be concluded that product quality has a positive and significant effect on customer satisfaction and has a close relationship. Therefore, PT Siantar Top Tbk Medan must continue to improve the quality of the company's products to be marketed, because if product quality is not guaranteed, customer satisfaction will also decrease. So that this greatly affects the level of sales and revenue of PT Siantar Top Tbk Medan. Therefore, if product quality is guaranteed, customer satisfaction will also increase. So that what is expected by the company can be achieved as desired. With this research, it is hoped that the company can continue to maintain product quality when it will be distributed and reach consumers. Because if consumers are satisfied, then they will indirectly offer the product to others. and it is hoped that further researchers can research about, price, brand and packaging to increase customer satisfaction.

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