

STUDY OF STUDENT SATISFACTION FROM THE MARKETING MIX ASPECT

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Abstract : In 2019 Kemenristekdikti [1] had closed 79 PTS, the lack of students was one of the reasons Kemenristekdikti closed private universities (PTS) among a number of other reasons. Higher education is a service industry and service quality is an important determinant of the success of higher education institutions (Landrum et al [2]). Donlagic and Fazlic [3] suggest that service quality is one of the main objectives of the university to attract students and improve institutional processes. In addition, according to Durkin & McKenna [4] universities need to pay attention to marketing principles in order to win the competition, create a brand image and attract prospective students. According to Kotler et al. [5] Instruments that can be used to develop marketing strategies for PTS are 7P marketing mix models with seven dimensions, namely product, price, promotion, place, process, people, physical evidence. Filip [6] recommends that universities use a set of marketing mix variables in designing their marketing strategies. Therefore this study will measure how far the influence of aspects of the marketing mix on student satisfaction. This research was conducted at one private university in the city of Bandung with the number of samples following the Slovin formula. From the results of data processing all the values of r-count variable are greater than r-tables. The reliability test results concluded that all research data were feasible to be used to measure the same concept. Based on the data processing, the results show that 73.6% of Student Satisfaction (Y) is influenced by marketing mix variables, namely product (X1), place (X2), price (X3), promotion (X4), people (X5), process (X6), and physical evidence (X7). The partial test results using the t test the result is $Y = 0.04 + 0.148X1 + 0.184X2 + 0.098X3 + 0.127X4 + 0.142X5 + 0.171X6 + 0.116X7$.

1 INTRODUCTION

In 2019 Kemenristekdikti has closed 79 PTS, the lack of students is one of the reasons Kemenristekdikti closed private universities (PTS) among a number of other reasons. Higher education is a service industry and service quality is an important determinant of the success of higher education institutions (Landrum et al [2]). Donlagic and Fazlic [3] suggest that service quality is one of the main objectives of the university to attract students and improve institutional processes.

In addition, according to Durkin & McKenna [4] universities need to pay attention to marketing principles in order to win the competition, create a brand image and attract prospective students. According to Kotler et al. [5] Instruments that can be used to develop marketing strategies for PTS are 7P marketing mix models with seven dimensions, namely product, price, promotion, place, process, people, physical evidence. Filip [6] recommends that universities use a set of marketing mix variables in designing their marketing strategies. Therefore, this study will measure how far the influence of aspects of the marketing mix on student satisfaction.

2 LITERATURE REVIEW

Student Satisfaction

According to Kotler et al [5] said consumer satisfaction is the level of a person's feeling after comparing the performance or results that he feels compared to his expectations. If performance fails to meet customer expectations, it will not be satisfied. If performance is in line with expectations, the customer will be satisfied, if the performance exceeds expectations, the customer will be very satisfied or happy. Customer ratings of product performance depend on many factors, especially the type of loyalty relationship customers have with a brand. Consumers often form more pleasant perceptions about a product with a brand that they already consider positive.

According to Kotler et al [5] to formulate customer satisfaction as "customer's evaluation of a product or service in terms of whether that product or service has met their needs and expectations" This customer satisfaction is very important because it will have an impact on the smooth running of the business or company. Achieving satisfaction can be a simple or complex and complicated process. In this case the role of each individual and service counters is very important and influences customer satisfaction better, so it is necessary to understand the causes of satisfaction.

Conceptually, customer satisfaction can be described as shown in the following figure 1.



Figure 1. The concept of customer satisfaction

Source: Researcher data, 2019.

So satisfaction is the response of consumers who have fulfilled their desires. Satisfaction is a function of perceived performance and expectation

$$S = f(E, P)$$

Where:

S = satisfaction

E = expectation

P = product quality (product perceived performance)

The level of customer satisfaction is a function of the difference between the perceived performance of customers (consumers) and the expectations of customers who use one of the company's performance levels. Customers will feel less satisfied if the company's performance is below customer expectations. And customers are satisfied when the level of performance is equal or exceeds customer expectations. Customer expectation (expectation) is obtained from customer experience in previous purchases, namely: comments from other customers, promises marketers, and similar competitors. If the company raises the level of customer expectations too high and in inappropriate purchases, the customer will feel dissatisfied with the company's performance.

The aim of the company is to achieve total customer satisfaction by increasing company performance in accordance with customer expectations in order to have high competitiveness in the market. This can be obtained by building a company culture where all relevant parts of the company work together to serve customers.

If the customer appraisal is satisfied with the value of the company's services, then they (consumers) will re-use the service, even further, they will carry out word of mouth promotion to their colleagues, relatives or closest acquaintances so that they both use the company's services. Such satisfaction varies depending on consumer perception and consumer expectations. All of that is influenced by several factors, including

- a) Needs and desires related to things that are felt by consumers when trying to make transactions with product manufacturers.
- b) Past experience when consuming products from the company or its competitors
- c) Friends experience

In addition, customer satisfaction also leads to three main components, namely:

- a) Response: type and intensity

Consumer satisfaction is an emotional and cognitive response. The intensity of the response starts from being very satisfied and like the product until an apathy towards certain products.

- b) Focus

Focus on object performance adjusted to several standards. This standard value is directly related to the product, consumption and decision to choose.

- c) Time and response

The response occurs at certain times, including: after consumption, after Z services, based on accumulative experience.

Marketing Mix

Identification of criteria in the selection of private tertiary institutions, based on marketing mix dimensions. According to Kotler and Keller in Pardiyono and Indrayani [7] Marketing Mix is a set of marketing tools that are integrated by companies to produce the desired response of the target market. The dimensions of the marketing mix are:

- Place is a place where private universities are located.
- Products are all majors and study programs that are available at private tertiary institutions.
- Promotion, is all the efforts carried out by private universities to introduce their products to the market.
- Price, is the amount paid by students for tuition fees and living expenses
- People, are people who are directly involved in carrying out all activities of private universities and are factors that play an important role for the organization.
- Physical Evidence is real / physical things like buildings, equipment and college facilities.
- The process is an effort of private universities in carrying out and carrying out their activities to meet the needs and desires of their consumers quickly and accurately.

3 METHODOLOGY

According to Sugiyono [8] the population is a generalization area that consists of objects / subjects that have certain qualities and characteristics determined by researchers to be studied and then drawn conclusions. The population in this study were students at private universities X in the city of Bandung. Data collection in this study was carried out using a questionnaire, which is a list of questions or written statements arranged according to the variables to be studied (Jogiyanto [9]). The questionnaire in this study uses closed questions. Closed questions are questions that limit respondents to answer questions.

The number of research sample units is determined through the formula developed by Slovin:

$$n = \frac{N}{1 + N(d)^2}$$

N: Total population and d: desired level of mistrust

According to Sugiyono [8] Validity Test was carried out using two methods with the help of SPSS software. Test the validity of the initial questionnaire using the scale reliability method. The validity of the statement / question item can be seen from the number of corrected items total correlation. The correlation number obtained is then compared with the critical number $r = 0.3$, if the correlation number is higher than the critical number in the table, the items are considered valid. 2) Test the validity of the instrument using the Spearman Rho correlation. The question / statement item is declared valid if the value of r-count (> 0.5) with a two-sided significance test is worth (< 0.05).

The reliability test is an instrument reliability test, so that the instrument used in research to obtain the desired information can be trusted as a data collection tool and is able to reveal the real information in the field. Analysis of instrument testing was performed using the Cronbach method which was calculated using SPSS v.17 software. The measure used to indicate the question of each variable is called reliable, if Cronbach's Alpha is > 0.6 .

The above research model essentially shows that Product (X1), place (X2), price (X3), promotion (X4), people (X5), process (X6) and physical evidence (X7) are exogenous variables that directly affect Student satisfaction scores (Y) as a consequence are referred to as endogenous variables according to the following mathematical model equation:

$$Y = \rho_{yx1}X1 + \rho_{yx2}X2 + \rho_{yx3}X3 + \rho_{yx4}X4 + \rho_{yx5}X5 + \rho_{yx6}X6 + \rho_{yx7}X7 + \varepsilon$$

In this case $\rho_{yx1}, \rho_{yx2}, \rho_{yx3}, \rho_{yx4}, \rho_{yx5}, \rho_{yx6}, \rho_{yx7}$ it is a path coefficient where for example ρ_{yx1} is the magnitude of the direct (relative) influence from X1 to Y. While ε is the residual variable of:

- 1) Other variables outside of X1 that might affect Y were identified by the theory but were not included in the model.
- 2) Other variables, outside X1 that might affect Y, but have not been identified by theory.
- 3) Error measurement (error measurement).
- 4) Components that are uncertain (random component)

The steps taken to analyze are as follows Sugiyono [8]:

1. Calculate the amount of direct influence between the X variables or the independent variables with the Y independent variable by using the correlation coefficient with the following formula

$$r_{X_i X_j} = \frac{n \sum_{h=1}^n X_{ih} X_{jh} - (\sum_{h=1}^n X_{ih})(\sum_{h=1}^n X_{jh})}{\sqrt{\{n \sum_{h=1}^n X_{ih}^2 - [\sum_{h=1}^n X_{ih}]^2\} \{n \sum_{h=1}^n X_{jh}^2 - [\sum_{h=1}^n X_{jh}]^2\}}}; j=1,2,\dots,k$$

2. Calculates the correlation matrix between variables

$$R = \begin{bmatrix} 1 & r_{x1x2} & r_{x1y} \\ & 1 & r_{x2y} \\ & & 1 \end{bmatrix}$$

3. Calculates the inverse correlation matrix of cause variables (R-1)

$$R^{-1} = \begin{bmatrix} C_{11} & C_{12} \\ C_{21} & C_{22} \end{bmatrix}$$

4. Calculates the path coefficient of P_{YX_i} where $i = 1,2$ through the formula

$$P_{YX_i} = R^{-1} \times \begin{bmatrix} r_{x1y} \\ r_{x2y} \end{bmatrix}; i=1,2,3$$

5. Calculate the total determination by the formula

$$R_{r(x1,x2)}^2 = [P_{YX1} \ P_{YX2}] \times \begin{bmatrix} r_{x1y} \\ r_{x2y} \end{bmatrix}$$

6. Calculate $P_{Y\varepsilon}$ or the influence of other variables outside the variables studied according to the formula

$$P_{Y\varepsilon} = \sqrt{1 - R_{Y(x1,x2)}^2}$$

Test the significance (test of significance) of each path coefficient that has been calculated, both individually and together, and test the difference in the magnitude of influence of each exogenous variable on endogenous variables

4 FINDINGS AND DISCUSSION

Validity and Reliability Test

Test the validity of the initial questionnaire using the scale reliability method. The validity of the statement / question item can be seen from the number of corrected items total correlation. The correlation number obtained is then compared with the critical number $r = 0.3$, if the correlation number is higher than the critical number in the table, the items are considered valid. Test the validity of the instrument using the Spearman Rho correlation. The question / statement item is declared valid if the value of r -count (> 0.5) with a two-sided significance test is worth (< 0.05). From the results of data processing all the values of r -count variable are greater than r -tables. (Sugiyono [8])

A group of data is declared to be reliable if its Cronbach's Alpha value is greater than 0.70. The reliability test results conclude that all research data are feasible to use to measure the same concept because the Cronbach's Alpha value as shown in Table 3.2 is (0.873) greater the determined reliability value, which is 0.70.

Table 1. Variable Reliability Tests

Cronbach's Alpha	Standardized Items	N of Items
.873	.880	30

Source: Output SPSS, 2019.

Verification Analysis Results

Hypothesis: There is an effect of marketing mix on student satisfaction both simultaneously and partially
Criteria

a. If $F_{hit} \geq F_{table}$ with a significance level of 5%, then the test is significant or there is a real influence of X1, X2, X3, X4, X5, X6 and X7 or at least from one of them to the dependent variable Y.

b. If $F_{hit} < F_{table}$ with a 5% significance level then the test is not significant or there is no real effect of X1, X2, X3, X4, X5, X6 and X7 on the dependent variable Y.

Simultaneously

To determine the effect of product (X1), place (X2), price (X3), promotion (X4), people (X5), process (X6), and physical evidence (X7) simultaneously on Student Satisfaction (Y), processing data that has been obtained from distributing questionnaires and using the SPSS for windows program. From the results of data processing with SPSS for windows obtained the following results:

Table 2. Coefficient Correlation

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.858 ^a	.736	.721	.06794	.736	49,680	7	125	.000

a. Predictors: (Constant), X7.PHYSICAL, X4.PROMOTION, X1.PRODUCT, X6.PROCESS, X2.PLACE, X5.PEOPLE, X3.PRICE

Source: Output SPSS, 2018.

When viewed from R square of 0.736, it shows that the effect of all variables of the marketing mix are product (X1), place (X2), price (X3), promotion (X4), people (X5), process (X6), and physical evidence (X7) simultaneously on Student Satisfaction (Y) is 0.736. Meanwhile, to find out how much influence the product

variable (X1), place (X2), price (X3), promotion (X4), people (X5), process (X6), and physical evidence (X7) on Student Satisfaction (Y) then It is necessary to use a coefficient of determination analysis using the following formula:

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

$$Kd = (0.736)^2 \times 100\%$$

$$Kd = 73.6\%$$

Where: Kd = coefficient of determination
(R_x)² = correlation coefficient

From the results obtained it can be seen that 73.6% of Student Satisfaction (Y) is influenced by marketing mix variables namely product (X1), place (X2), price (X3), promotion (X4), people (X5), process (X6), and physical evidence (X7). Furthermore, it is necessary to test whether there is a strong influence simultaneously between product (X1), place (X2), price (X3), promotion (X4), people (X5), process (X6), and physical evidence (X7) on satisfaction Student (Y), can be seen from the following picture:

Table 3. Feasibility Test

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1,605	7	,229	49,680	,000 ^a
	Residual	,577	125	,005		
	Total	2,182	132			

a. Predictors: (Constant), X7.PHYSICAL, X4.PROMOTION, X1.PRODUCT, X6.PROCESS, X2.PLACE, X5.PEOPLE, X3.PRICE
b. Dependent Variable: Y.KEP.PEMILIHAN

Based on calculations using SPSS obtained an F count of 49,680. Where is the rejection criterion Ho, if F count is greater than F table, by taking a significance level of % by 5%, then from the distribution table F obtained a table F value = 1.96 or can simply see a sig F value of 0.017 which means that α is smaller than 5% still shows significant.

Because 49,680 is greater than 1.96 and sig F of 0.017, Ho is accepted, meaning that it can be concluded that there is a linear relationship between product (X1), place (X2), price (X3), promotion (X4), people (X5), process (X6), and physical evidence (X7) on Student Satisfaction (Y) of the coefficient of determination (R²) = 0.736 or 73.6% or this can also be interpreted that the influence of variables outside the small model namely 1-R² = 1-0,736 = 0.264 (error).

Partially

To test partially or to find out the product independent variables (X1), place (X2), price (X3), promotion (X4), people (X5), process (X6), and physical evidence (X7) which have a significant effect on Student satisfaction (Y) was tested using the t test. The results are as follows:

$$Y = 0.04 + 0.148X1 + 0.184X2 + 0.098X3 + 0.127X4 + 0.142X5 + 0.171X6 + 0.116X7$$

Table 4. Coefficient
Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	,040	,132		,303	,763
X1.PRODUCT	,148	,036	,193	4,099	,000
X2.PLACE	,184	,030	,449	6,117	,000
X3.PRICE	,098	,037	,196	2,669	,009
X4.PROMOTION	,127	,042	,156	3,060	,003
X5.PEOPLE	,142	,040	,186	3,579	,000
X6.PROCESS	,171	,021	,386	8,132	,000
X7.PHYSICAL	,116	,032	,170	3,627	,000

a. Dependent Variable: Y.KEP.PEMILIHAN

Source: Output SPSS, 2018.

Criteria:

- If $t_{hit} \geq t_{table}$ with a significant level of 5%, then the test is significant or there is an influence of each of X1, X2, X3, X4, X5, X6 and X7 on the dependent variable Y.
- If $t_{hit} \leq t_{table}$ with a significant level of 5%, then the test is not significant or there is no effect of each of X1, X2, X3, X4, X5, X6 and X7 on the dependent variable Y.
- Based on data processing, all Product Coefficient Values (X1), Place (X2), Price (X3), Promotion (X4), People (X5), Process (X6) and Physical Evidence (X7) show that they directly influence Student Satisfaction (Y). By taking a significant level of 5%, then the table value of 1.96, then $t_{hit} > t_{table}$ then the test is significant or there is an influence of Product (X1), Place (X2), Price (X3), Promotion (X4), People (X5), Process (X6) and Physical evidence (X7) on Student Satisfaction (Y).

5 CONCLUSION

From the previous description of this study it can be concluded that simultaneously there is an influence of the marketing mix on student satisfaction. partially there is a relationship between product variables, place, promotion, process, price, people, and physical evidence on student satisfaction. The mathematical model equation for student satisfaction is $Y = 2,433 + 0.052X1 + 0.028X2 + 0.07X3 + 0.06X4 + 0.146X5 - 0.058X6 + 0.129X7$.

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