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# The Influence of Price, Facilities and Service Quality on Student Satisfaction Studying at Muhammadiyah University of Pontianak

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## Abstract

This study aims to examine the effect of price, facilities, and service quality on student satisfaction at the Muhammadiyah University of Pontianak. The method used is quantitative associative with a multiple linear regression analysis approach. Primary data were obtained through interviews with the Bureau of Financial Administration and Student Affairs (BAAK) and questionnaires distributed to 100 active students. The results of the validity and reliability tests indicate that all research instruments are valid and reliable. The classical assumption test shows that the data is normally distributed, there is no multicollinearity, and the relationship between variables is linear. The results of the multiple linear regression analysis produce the equation $Y = 1.381 + 0.146X_1 + 0.301X_2 + 0.615X_3$, with all three variables (price, facilities, and service quality) having a positive effect on student satisfaction. The simultaneous test (F Test) shows that price, facilities, and service quality together have a significant effect on satisfaction, and the partial test (T Test) shows that each variable also has a significant effect. The coefficient of determination ($R^2$) of 42.1% indicates that the variables of price, facilities, and service quality can explain the variation in student satisfaction by 42.1%. This study provides an important contribution in identifying factors that influence student satisfaction in private universities.

**Keywords:** Price, Facilities, Service Quality, Student Satisfaction, Multiple Linear Regression

## Introduction

According to Robbaniyah et al. (2022), higher education is a level of education that is close to the world of work. Private higher education (PTS) is one of the strategic partners provided by the government to realize educational goals, which has responsibility for the sustainability of educational programs (Sarofah et al., 2021). The challenges faced by Private Higher Education are not only to provide a vision and mission in producing the best and quality graduates, but the challenges faced are related to price and quality service.

Align with research from Wahyudin (2015), the development of the world of education has increased from time to time, with the increasing number of private universities, making the role of private universities very important for education in Indonesia. The increasing competition between PTS has a positive impact in the form of improving the quality of service, the quality of education but also has a negative impact in the form of a decrease in the number of students in several PTS, so that it can kill the PTS.

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This condition is generally because PTS is still very dependent on contributions from educational infrastructure contributions (SPP), institutional development contributions (SPI) and student tuition fees (Wachjuni, 2010). Price is a component that directly affects a company's profit (Nasution, 2019). In addition, price also indirectly affects costs, because the quantity sold affects the costs incurred in relation to production efficiency. Price is often used as an indicator of value when the price is related to the perceived benefits of a good or service. In addition, price is a flexible element, meaning it can be changed quickly.

Marlius & Jovanka (2023), defines price as the amount of money charged for a product and service or the amount of value exchanged by customers to obtain the benefits of having or using a product or service. Meanwhile, Bulan & Azmi (2019) define price as one element of the marketing mix that generates revenue, other elements generate costs. Facilities are everything that makes it easier for consumers to use the company's services. Facilities are physical resources that exist before a service can be offered to consumers (Kurniawan & Soliha, 2022).

Frisdiantara & Graha (2013), stated that if a service company has adequate facilities so that it can facilitate consumers in using its services and make consumers comfortable in using its services, it will be able to influence consumers in making service purchases. Samosir (2005) stated that "service quality is a comparison between the service expected by consumers and the service received." In other words, if the service received or felt is in accordance with what is expected by library users, the service quality is perceived as good and satisfying. If the service or service received exceeds user expectations, the service quality is perceived as ideal quality (Septiani et al., 2020).

But on the contrary, if the service received is lower than expected, the service quality is perceived as poor. Service quality must start from user needs and end with user responses. User responses to the quality of service itself are a comprehensive assessment of the excellence of a service (Wibowo, 2014). Customer satisfaction is the main focus for many universities in deciding strategies to win the competition (Ariska, 2019). Complete facilities and satisfactory services, prices that are in accordance with the customer's economic level are one way to satisfy customers.

Muhammadiyah University of Pontianak faces challenges from various competitors who offer prices, innovations and quality of education, but UM Pontianak has advantages that make it the main choice for students, in addition, UM Pontianak's commitment to Islamic values and character development provides a strong moral foundation for students. In implementing the catur dharma of higher education, UM Pontianak is supported by various elements of the academic community and institutions under it. The institutions that support the implementation of the catur dharma PTM at UM Pontianak are called faculties and study programs (Prodi).

Muhammadiyah University of Pontianak offers various conveniences for its students, one of which is a flexible installment payment method. UMP also provides several installment payment options, such as cash payments, campus infrastructure installments, and semester installments. Installment payments allow students to pay tuition fees in stages with a flexible period of time, making it easier for students to manage their finances (Fadila & Kurniawan, 2025). Based on interviews conducted by researchers.

The phenomenon that occurs at the Muhammadiyah University of Pontianak regarding prices is that technical constraints in the semester fee payment system often make the payment process difficult. The next phenomenon that occurs in facilities is related to the limited learning support facilities. The third phenomenon regarding service quality is related to academic services that are considered less responsive and efficient, the learning process is less innovative and inadequate. This phenomenon shows that universities need to conduct a comprehensive evaluation to improve the quality of services and facilities, in order to meet student expectations and maintain the university's good reputation (Firmanto, 2023).

## Methods

This study uses a quantitative associative method to determine the effect of price, facilities, and service quality on student satisfaction at the University of Muhammadiyah Pontianak. Primary data were obtained through interviews with the Bureau of Financial Administration and Student Affairs (BAAK) and questionnaires to active students of various study programs, while secondary data were obtained from the Kopertis XI website and internal university documentation. The population of the study was all active students of UM Pontianak with a sample of 100 respondents determined using the Slovin formula and proportional stratified sampling technique. The research variables consist of independent variables (price, facilities, service quality) and dependent variables (student satisfaction), which are measured using the Likert Scale.

## Data Analysis Techniques

The instrument test in this study was conducted to ensure that the measuring instrument used was valid and reliable, in accordance with Sugiyono's opinion (2019). The validity test aims to measure the extent to which the questionnaire is able to reveal the variables to be studied, using the SPSS application and comparing the calculated r value with the r table at a significance level of 5%. Meanwhile, the reliability test uses the Alpha Cronbach technique to measure the consistency of the instrument, with reliable criteria if the coefficient is> 0.6. Before the regression analysis was carried out, the data was tested for classical assumptions through the normality test (using Kolmogorov Smirnov), multicollinearity test (with a tolerance value> 0.1 and VIF <10), and linearity test to ensure that the relationship between variables is linear. Multiple linear regression analysis was used to determine the effect of price (X1), facilities (X2), and service quality (X3) on student satisfaction (Y) using the formula Y = a + b1X1 + b2X2 + b3X3 + e. The multiple correlation coefficient is interpreted to determine the strength of the relationship between variables, while the coefficient of determination ($R^2$) is used to measure the contribution of independent variables to the dependent variable. Simultaneous test (F test) is conducted to determine the joint influence of independent variables on student satisfaction, with the hypothesis Ho rejected if F count > F table at a significance level of 5%. Partial test (t test) is used to measure the influence of each independent variable on the dependent variable individually, with Ho rejected if t count > t table, which was previously calculated by dividing the constant value bi by the standard error Sbi.

## Results and Discussion

## Research Instrument Test

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*Validity Test*

The validity test in this study aims to determine the level of validity of the statement instrument in the questionnaire by correlating the score of each item to the total score, where the calculated r value is compared with the table r of 0.196 (df = 98, significance 0.05). Based on the results of the validity test, all items in the variables Price (X1), Facilities (X2), Service Quality (X3), and Satisfaction (Y) are declared valid because all calculated r values are greater than the table r. In the Price variable (X1), the calculated r value ranges from 0.727 to 0.860; in the Facilities variable (X2), between 0.613 to 0.774; in the Service Quality variable (X3), between 0.639 to 0.816; and in the Satisfaction variable (Y), between 0.584 to 0.783. Thus, all statement items in the questionnaire are suitable for further analysis.

Table 1. Summary of Validity Test Results

| Variables | Number of Items | Range r Count | r Table | Description |
|---|---|---|---|---|
| Price (X1) | 9 | 0,727 - 0,860 | 0,196 | Valid |
| Facilities (X2) | 14 | 0,613 - 0,774 | 0,196 | Valid |
| Service Quality (X3) | 15 | 0,639 - 0,816 | 0,196 | Valid |
| Satisfaction (Y) | 9 | 0,584 - 0,783 | 0,196 | Valid |

*Reliability Test*

Reliability testing was conducted to determine the level of reliability of statements in the questionnaire as a measuring instrument, using the Cronbach's Alpha method. An instrument is declared reliable if the Cronbach's Alpha value is greater than 0.60. Based on the results of the reliability test, all variables in this study, namely Price (X1), Facilities (X2), Service Quality (X3), and Satisfaction (Y), have Cronbach's Alpha values above 0.60. The Price variable (X1) has a value of 0.811 with 9 items, the Facilities variable (X2) is 0.884 with 14 items, the Service Quality variable (X3) is 0.879 with 15 items, and the Satisfaction variable (Y) is 0.855 with 9 items. Thus, it can be concluded that all items in each variable in this study are reliable and suitable for further analysis.

Table 2. Summary of Reliability Test Results

| Variabel | Cronbach's Alpha | Number of Items | Description |
|---|---|---|---|
| Price (X1) | 0,811 | 9 | Reliabel |
| Facilities (X2) | 0,884 | 14 | Reliabel |
| Service Quality (X3) | 0,879 | 15 | Reliabel |
| Satisfaction (Y) | 0,855 | 9 | Reliabel |

Classical Assumption Test

*Normality Test*

Based on the results of the analysis using SPSS, the results of the normality test can be seen in 3 below:

Table 3. Results of the Normality Test

| One-Sample Kolmogorov-Smirnov Test |
|---|

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| | | Unstandardized Residual |
|---|---|---|
| N | | 100 |
| Normal Parameters[a,b] | Mean | .0000000 |
| | Std. Deviation | 3.55285799 |
| Most Extreme Differences | Absolute | .067 |
| | Positive | .067 |
| | Negative | -.035 |
| Test Statistic | | . 067 |
| Asymp. Sig. (2-tailed) | | .200[c] |
| a. Test distribution is Normal.<br>b. Calculated from data.<br>c. Lilliefors Significance Correction. | | |

Source: Processed Data, 2025

Based on the results of the normality test in Table 3 above, it can be seen that the Asymp. Sig. (2-tailed) value in this study has a value of 0.200 which is greater than 0.05. So it can be concluded that the data in this study is normally distributed.

*Linearity Test*

Based on the results of the analysis using SPSS, the results of the linearity test for the variables Price (X1), Facilities (X2), and Service Quality (X3) on the Satisfaction variable (Y) were obtained. In the relationship between Price and Satisfaction, a linearity significance value of 0.000 <0.05 was obtained, which indicates a linear relationship between the two variables. Likewise, in the relationship between Facilities and Satisfaction, a linearity significance value of 0.000 <0.05 was obtained, so that the relationship between Facilities and Satisfaction was also stated as linear. Furthermore, in the relationship between Service Quality and Satisfaction, the linearity significance value obtained is also 0.000 <0.05, which means there is a linear relationship between the two variables. Thus, all relationships between independent variables (Price, Facilities, and Service Quality) to the dependent variable (Satisfaction) in this study meet the linearity assumption.

Table 4. Summary of Linearity Test Results

| Relationship of Variables | Significance Linearity | Description |
|---|---|---|
| Price (X1) → Satisfaction (Y) | 0,000 | Linier |
| Facilities (X2) → Satisfaction (Y) | 0,000 | Linier |
| Service Quality (X3) → Satisfaction (Y) | 0,000 | Linier |

*Multicollinearity Test*

Based on the results of the analysis using SPSS, the results of the multicollinearity test are shown in Table 4.18. The Tolerance value for the Price variable (X1) is 0.799, Facilities (X2) is 0.577, and Service Quality (X3) is 0.531, all of which are greater than 0.10. In addition, the Variance Inflation

Factor (VIF) value for each variable, namely Price is 1.252, Facilities is 1.733, and Service Quality is 1.883, all of which are less than 10.00. Based on these criteria, it can be concluded that there are no symptoms of multicollinearity between the three independent variables (Price, Facilities, and Service Quality) on the Satisfaction variable (Y), so that the regression model is feasible to be used in this study.

Table 5. Summary of Multicollinearity Test Results

| Variable | Tolerance | VIF | Description |
|---|---|---|---|
| Price (X1) | 0,799 | 1,252 | Tidak terjadi multikolinearitas |
| Facilities (X2) | 0,577 | 1,733 | Tidak terjadi multikolinearitas |
| Service Quality (X3) | 0,531 | 1,883 | Tidak terjadi multikolinearitas |

## Multiple Linear Regression Analysis

Multiple linear regression analysis is used to determine the effect of independent variables on dependent variables. Based on the results of the analysis using SPSS shown in Table 5, the multiple linear regression equation is obtained:

$$Y = 1.381 + 0.146X_1 + 0.301X_2 + 0.615X_3.$$

The constant value of 1.381 indicates that if the variables Price ($X_1$), Facilities ($X_2$), and Service Quality ($X_3$) are zero, then Satisfaction (Y) remains at 1.381. The coefficient of the Price variable is 0.146 and has a positive value, which means that each increase in Price will increase Satisfaction by 0.146, assuming that the better the price offered, the higher the customer satisfaction. The coefficient of the Facility variable of 0.301 is also positive, meaning that each increase in Facilities will increase Satisfaction by 0.301, assuming that the better the facilities provided, the higher the level of satisfaction. Meanwhile, the coefficient of the Service Quality variable is 0.615, which is also positive, indicating that increasing Service Quality will increase Satisfaction by 0.615, with the assumption that the better the quality of service provided, the higher the level of customer satisfaction.

Tabel 6. Summary of Multiple Linear Regression Analysis Results

| Variable | Coefficient B | Significance (Sig.) | Interpretation |
|---|---|---|---|
| Constant | 1,381 | 0,000 | Core Value of Satisfaction |
| Price ($X_1$) | 0,146 | 0,042 | Price has a positive effect on Satisfaction |
| Facilities ($X_2$) | 0,301 | 0,001 | Facilities have a positive effect on Satisfaction |
| Service Quality ($X_3$) | 0,615 | 0,000 | Service Quality has a positive effect on Satisfaction |

## Multiple Correlation Coefficient

Multiple correlation coefficient is used to determine the level of strength of the relationship between two or more variables, and can determine the direction of the relationship between variables. The technique used is Product Moment correlation. The results of the correlation

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coefficient test can be seen in Table 7 below.

Table 7. Results of Multiple Correlation Coefficient Test

| Model Summary | | | | |
|---|---|---|---|---|
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
| 1 | .649[a] | .421 | .403 | .58843 |
| a. Predictors: (Constant), Quality of Service, Facilities, Price | | | | |

Source: Processed Data, 2025

Based on the results of the multiple correlation coefficient test in Table 7 above, it can be seen that the correlation coefficient (R) value is 0.649, which means that the relationship between Price, Facilities and Service Quality on Satisfaction has a strong relationship level, this is because the value is in the interval 0.60-0.799.

## Determination Coefficient

The results of the determination coefficient test (R2) in Table 7 above, obtained the results that the R-Square value is 0.421, which means that the variables Price, Facilities and Service Quality in explaining their influence on Satisfaction are 42.1% (1x0.421x100%) while the remaining 57.9% Satisfaction is influenced by other variables outside this study.

## Simultaneous Influence Test (F Test)

Berdasarkan hasil uji hipotesis secara simultan (Uji F) menggunakan SPSS, didapatkan hasil pengujian secara simultan yang dapat dilihat pada Tabel 8 dibawah ini:

Table 8. Simultaneous Test Results (F Test)

| ANOVA[a] | | | | | | |
|---|---|---|---|---|---|---|
| Model | | Sum of Squares | df | Mean Square | F | Sig. |
| 1 | Regression | 17.345 | 3 | 5.782 | 13.849 | .000[b] |
| | Residual | 40.080 | 96 | .418 | | |
| | Total | 57.426 | 99 | | | |
| a. Dependent Variable: Satisfaction | | | | | | |
| b. Predictors: (Constant), Service Quality, Facilities, Price | | | | | | |

Source: Processed Data, 2025

Based on the results of the simultaneous test (F Test) in Table 9 above, the calculated f value is 13.849> f table 3.09 and the significance value is 0.000 <0.05. So it can be concluded that the variables Price, Facilities and Service Quality simultaneously have a positive and significant effect on Satisfaction.

## Partial Effect Test (T Test)

Based on the results of the partial hypothesis test (T Test) using SPSS shown in Table 9, it can be seen that each independent variable has a significant effect on the dependent variable. The test results show that the Price variable ($X_1$) has a calculated t value of 2.065 which is greater than the

t table of 1.660 and a significance value of 0.042 <0.05, so it can be concluded that Price ($X_1$) has a positive and significant effect on Satisfaction (Y). Furthermore, the Facilities variable ($X_2$) has a t-value of 3.550> t table 1.660 and a significance value of 0.001 <0.05, so that Facilities ($X_2$) also has a positive and significant effect on Satisfaction (Y). Likewise, the Service Quality variable ($X_3$) shows a t-value of 6.934> t table 1.660 and a significance value of 0.000 <0.05, so that Service Quality ($X_3$) has a positive and significant effect on Satisfaction (Y).

Tabel 10. Summary of T-Test Results (Partial):

| Variabel | t Calculate | t Table | Sig. | Conclusion |
|---|---|---|---|---|
| Price ($X_1$) | 2,065 | 1,660 | 0,042 | Positive and significant influence on Satisfaction |
| Facilities ($X_2$) | 3,550 | 1,660 | 0,001 | Positive and significant influence on Satisfaction |
| Service Quality ($X_3$) | 6,934 | 1,660 | 0,000 | Positive and significant influence on Satisfaction |

## Conclusion

Based on the results of the research instrument testing, all statement items on the variables Price, Facilities, Service Quality, and Satisfaction were declared valid and reliable, so they were suitable for further analysis. The classical assumption test showed that the data was normally distributed, the relationship between variables was linear, there were no symptoms of multicollinearity, and the regression model met the required assumptions. Multiple linear regression analysis produced the equation $Y = 1.381 + 0.146X_1 + 0.301X_2 + 0.615X_3$, with the regression coefficient of each variable being positive, indicating that Price, Facilities, and Service Quality had a positive effect on Satisfaction. The correlation coefficient (R) value of 0.649 indicated a strong relationship between the independent variables and Satisfaction, while the determination coefficient ($R^2$) of 42.1% indicated that the variation in Satisfaction could be explained by the three variables. The results of the F test showed that simultaneously Price, Facilities, and Service Quality had a positive and significant effect on Satisfaction, and the results of the T test showed that partially the three variables also had a positive and significant effect on customer Satisfaction.

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